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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2022
OR

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

For the transition period from _____ to _____

Commission file number 001-40497

CODEX DNA, INC.

(Exact name of registrant as specified in its charter)

Delaware	**45-1216839**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
9535 Waples Street, Suite 100, San Diego, CA	**92121-2993**
(Address of Principal Executive Offices)	(Zip Code)

(858) 228-4115
Registrant's telephone number, including area code

9535 Waples Street, Suite 100
San Diego, CA 92121-2993
(858) 228-4115

(Former name, former address and former fiscal year, if changed since last report)

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, $0.0001 par value per share	DNAY	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 and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	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 Act). Yes ☐ No ☒

APPLICABLE ONLY TO REGISTRANTS INVOLVED IN BANKRUPTCY

PROCEEDINGS DURING THE PRECEDING FIVE YEARS:

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.☐ Yes ☒ No

APPLICABLE ONLY TO CORPORATE ISSUERS:

The registrant had outstanding 29,398,463 shares of common stock as of April 20, 2022.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (Quarterly Report) contains forward-looking statements. All statements other than statements of historical facts contained in this Quarterly Report, including statements regarding our future results of operations and financial position, business strategy, research and development costs, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal” “intend,” “may,” “objective” “plan,” “predict,” “potential,” “project,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. Forward-looking statements contained in this Quarterly Report include, but are not limited to, statements about:

- estimates of the synthetic biology market, market growth, and new market expansion;
- our future revenue, expenses, capital requirements and our needs for additional financing;
- our expectations regarding the rate and degree of market acceptance of our BioXp system, BioXp kits and benchtop reagents;
- the ability of our products to facilitate the design-build-test paradigm of synthetic biology;
- the size and growth of the synthetic biology market and competitive companies and technologies and our industry;
- our ability to manage and grow our business;
- our ability to develop and commercialize new products;our ability to establish and maintain intellectual property protection for our products or avoid or defend claims of infringement;
- the performance of third-party manufacturers and suppliers and our ability to qualify second-source suppliers;
- the potential effects of government regulation;
- our ability to hire and retain key personnel and to manage our future growth effectively;
- our ability to obtain additional financing in future offerings;
- the volatility of the trading price of our common stock;
- the impact of local, regional, and national and international economic conditions and events, including the war between Russia and Ukraine;
- the impact of COVID-19 on our business;
- our expectations about market trends;
- our anticipated use of our existing resources; and
- other risks and uncertainties, including those listed in the section titled “Risk Factors.”

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects, and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this Quarterly Report and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this Quarterly Report. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we undertake no obligation to update or revise any forward-looking statements contained herein to reflect events or circumstances after the date of this Quarterly Report, whether as a result of any new information, future events or otherwise.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

Codex DNA, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except share and per share data)
(Unaudited)

	March 31, 2022	December 31, 2021
Assets		(See Note 2)
Current assets:		
Cash and cash equivalents	$ 31,359	$ 82,806
Short-term investments	45,408	—
Accounts receivable, net of allowance for bad debts of $13 and $0 at March 31, 2022 and December 31, 2021, respectively	4,561	3,665
Inventory	2,536	2,368
Prepaid expenses and other current assets	4,014	4,345
Total current assets	87,878	93,184
Property and equipment, net	3,968	3,456
Right-of-use assets	2,018	2,281
Long-term deposits	656	609
Goodwill	14,330	14,330
Other intangible assets, net	2,284	2,397
Total Assets	$ 111,134	$ 116,257
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,853	$ 2,499
Accrued employee expenses	2,798	3,849
Finance lease liability, current portion	60	81
Operating lease liability, current portion	880	1,156
Deferred revenue, current portion	4,072	205
Other accrued liabilities	1,637	1,005
Notes payable, current portion	2,382	603
Other current liabilities	341	335
Total current liabilities	16,023	9,733
Operating lease liability, net of current portion	1,322	1,394
Notes payable, net of discount and current portion	12,405	14,088
Derivative liabilities	85	108
Deferred revenue, net of current portion	3,199	150
Total liabilities	$ 33,034	$ 25,473
Commitments and contingencies (Note 12)		
Stockholders' equity		
Common stock, $.0001 par value; 100,000,000 shares authorized at March 31, 2022 and December 31, 2021; 29,389,112 and 29,318,578 shares issued and outstanding at March 31, 2022 and December 31, 2021,respectively	5	5
Additional paid-in capital	156,575	156,049
Accumulated other comprehensive loss	(16)	—
Accumulated deficit	(78,464)	(65,270)
Total stockholders' equity	78,100	90,784
Total liabilities and stockholders' equity	$ 111,134	$ 116,257

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

Codex DNA, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)
(Unaudited)

	Three Months Ended March 31,	
	2022	2021
Revenue:		
Product sales	$ 4,128	$ 1,799
Royalties and other revenue	1,508	528
Total revenue	5,636	2,327
Cost of revenue	2,858	1,025
Gross profit	2,778	1,302
Operating expenses:		
Research and development	6,381	2,878
Sales and marketing	3,461	2,275
General and administrative	5,799	2,413
Total operating expenses	15,641	7,566
Loss from operations	(12,863)	(6,264)
Other income (expense), net:		
Interest expense, net	(336)	(241)
Change in fair value of derivative liabilities	23	(296)
Loss on extinguishment of debt	—	(618)
Other expense, net	(12)	(19)
Total other expense, net	(325)	(1,174)
Loss before provision for income taxes	(13,188)	(7,438)
Provision for income taxes	(6)	(4)
Net loss	(13,194)	(7,442)
Other comprehensive loss:		
Unrealized loss on available-for-sale short-term investments	(16)	—
Total comprehensive loss	$ (13,210)	$ (7,442)
Net loss attributable to common stockholders	$ (13,194)	$ (7,442)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.45)	$ (1.43)
Weighted average common stock outstanding—basic and diluted	29,331,325	5,193,098

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

Codex DNA, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share data)
(Unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balances at December 31, 2020	15,079,329	$ 38,914	5,023,957	$ 2	$ 851	$ (26,312)	—	$ (25,459)
Issuance of Common Stock upon exercise of stock options	—	—	223,216	—	133	—	—	133
Stock-based compensation expense	—	—	—	—	67	—	—	67
Net loss	—	—	—	—	—	(7,442)	—	(7,442)
Balances at March 31, 2021	15,079,329	$ 38,914	5,247,173	$ 2	$ 1,051	$ (33,754)	$ —	$ (32,701)
Balances at December 31, 2021	—	$ —	29,318,578	$ 5	$ 156,049	$ (65,270)	$ —	$ 90,784
Issuance of Common Stock upon exercise of stock options	—	—	70,534	—	78	—	—	78
Stock-based compensation expense	—	—	—	—	448	—	—	448
Unrealized loss on available- for-sale short-term investments	—	—	—	—	—	—	(16)	(16)
Net loss	—	—	—	—	—	(13,194)	—	(13,194)
Balances at March 31, 2022	—	$ —	29,389,112	$ 5	$ 156,575	$ (78,464)	$ (16)	$ 78,100

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

Codex DNA, Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(Unaudited)

	Three Months Ended March 31,	
	2022	**2021**
Cash Flows From Operating Activities:		
Net loss	$ (13,194)	$ (7,442)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	217	90
Amortization of intangible assets	113	113
Amortization of debt discount	95	161
Loss on debt extinguishment	—	618
Stock-based compensation	448	67
Amortization of operating lease right-of-use assets	263	156
Change in fair value of derivative liabilities	(23)	296
Non-cash interest on finance leases	(1)	(3)
Changes in assets and liabilities:		
Accounts receivable	(896)	550
Inventories	(168)	(122)
Deposits, prepaid expenses and other current assets	284	(772)
Accounts payable, accrued payroll and accrued liabilities	673	1,330
Deferred revenue	6,915	4
Operating lease liabilities	(348)	(163)
Net cash used in operating activities	(5,622)	(5,117)
Cash Flows From Investing Activities:		
Purchase of property and equipment	(459)	(99)
Purchases of short-term investments	(45,424)	—
Net cash used in investing activities	(45,883)	(99)
Cash Flows From Financing Activities:		
Borrowings on term loan	—	14,872
Repayment of term loan	—	(5,000)
Debt extinguishment costs	—	(391)
Payments on finance leases	(20)	(27)
Proceeds from the exercise of common stock options	78	133
Net cash provided by financing activities	58	9,587
Net (Decrease) Increase In Cash and Cash Equivalents	(51,447)	4,371
Cash and cash equivalents at beginning of period	82,806	13,463
Cash and cash equivalents at end of period	$ 31,359	$ 17,834
Supplemental Disclosure Of Cash Flow Information:		
Cash paid for interest	$ 273	$ 163
Purchases of property and equipment included in accounts payable	$ 269	$ 23
Issuance of preferred stock warrant in connection with term loan	$ —	$ 322
Extinguishment of put option derivative liability in connection with term loan	$ —	$ (51)
Issuance of put option derivative liability in connection with term loan	$ —	$ 303

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

Codex DNA, Inc.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. ORGANIZATION AND OPERATIONS

Business

Codex DNA, Inc. (the Company) was incorporated in the state of Delaware in March 2011, as Synthetic Genomics Solution, Inc., a wholly owned subsidiary of Synthetic Genomics, Inc. (SGI). The Company changed its name to SGI-DNA, Inc. (SGI-DNA) in February 2013, and then to Codex DNA, Inc. in March 2020. SGI-DNA Limited, a United Kingdom company focused on sales and marketing activities, is a wholly owned subsidiary of Codex DNA, Inc. The Company manufactures and sells laboratory equipment, specifically synthetic biology instruments, reagents and associated products and related services, primarily to pharmaceutical and academic laboratories worldwide.

On November 18, 2021, the Company entered into a Share Purchase Agreement, with the stockholders of EtonBio Inc., a California corporation (Eton), pursuant to which, the Company agreed to purchase all of the outstanding shares of capital stock of Eton (see Note 6). The total purchase price was approximately $13.6 million, which was funded with the Company's existing cash on hand. Eton is a San Diego-based biotech company specializing in synthetic biology products and services, including DNA sequencing and oligo synthesis, for the global academic research, pharmaceutical, and biotechnology industries. Eton also markets DNA prep services and products such as antibodies, peptides, and metabolism assay kits.

Since its inception, the Company has devoted substantially all of its efforts to raising capital, commercializing its current products, and developing new product offerings. The Company is subject to a number of risks similar to those of other companies conducting high-risk, early-stage research and development of products. Principal among these risks are a dependence on key individuals and intellectual property, competition from other products and companies, and the technical risks associated with the successful research, development and manufacturing of its products. The Company's success is dependent upon its ability to continue to raise additional capital in order to fund ongoing research and development, commercialize its products, generate revenue, meet its obligations, and, ultimately, become profitable.

Products currently under development will require significant additional research and development efforts. These efforts require significant amounts of additional capital, adequate personnel and infrastructure.

The Company has evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date of the filing of this Form 10-Q.

Since inception, the Company has incurred cumulative operating losses and negative cash flows from operations. These operating losses and negative cash flows have been financed principally from the issuance of equity securities and debt. The Company's ability to continue as a going concern is dependent upon the ability to raise additional debt or equity capital. There can be no assurance that such capital will be available in sufficient amounts or on terms acceptable to the Company. Risks to which the Company is exposed include uncertainties related to the ability to achieve revenue-generating products; current and potential competitors with greater financial, technological, production, and marketing resources; dependence on key management personnel; and raising additional capital, as needed. Based upon the Company's current plans, management believes it has sufficient financial resources to fund the Company's operations for at least twelve months from the issuance date of these condensed consolidated financial statements.

The accompanying condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America (U.S. GAAP) and include the accounts of the Company and its wholly owned subsidiaries after the elimination of all significant intercompany accounts and transactions. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification (ASC) and as amended by Accounting Standards Updates (ASU) of the Financial Accounting Standards Board (FASB).

The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements as of and for the year ended December 31, 2021, and, in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the Company's condensed consolidated balance sheet as of March 31, 2022, the condensed consolidated statements of operations and comprehensive

loss, condensed consolidated statements of convertible preferred stock and stockholders' equity (deficit) and the condensed consolidated statements of cash flows for the three months ended March 31, 2022 and 2021.

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the year ended December 31, 2021 included in the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission (SEC) on March 23, 2022 (the Annual Report). The condensed consolidated balance sheet data as of December 31, 2021 presented for comparative purposes was derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP.

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2021 included in the Annual Report. Since the date of the audited consolidated financial statements for the year ended December 31, 2021 included in the Annual Report, there have been no changes to its significant accounting policies except as noted below.

Unaudited Interim Financial Information

The accompanying condensed consolidated balance sheet as of March 31, 2022, the condensed consolidated statements of operations and comprehensive loss, the condensed consolidated statements of convertible preferred stock and stockholders' equity (deficit) and the condensed consolidated statements of cash flows for the three months ended March 31, 2022 and 2021 are unaudited. The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of March 31, 2022 and the results of its operations for the three months ended March 31, 2022 and 2021, and its cash flows for the three months ended March 31, 2022 and 2021. The financial data and other information disclosed in these notes related to the three months ended March 31, 2022 and 2021 are also unaudited. The results for the three months ended March 31, 2022 are not necessarily indicative of results to be expected for the year ending December 31, 2022, any other interim periods, or any future year or period.

Use of Estimates

The preparation of 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, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods presented. Key estimates in the consolidated financial statements include the Company's ability to continue as a going concern, revenue recognition, impairment assessment for goodwill and intangible assets, allowance for doubtful accounts, estimated useful lives of property and equipment, valuation of inventory, accrued expenses, valuation of deferred income tax assets, valuation of derivative liabilities, share-based compensation, fair value of common stock prior to the Company's initial public offering and accrued warranty are subject to significant estimation. Actual results could differ from those estimates.

Short-term Investments

As of March 31, 2022, short-term investments primarily consisted of corporate debt securities, commercial paper, and U.S. Government securities. The Company classifies its investments in securities as available-for-sale because, for accounting purposes, they are not considered to be either held-to-maturity securities or trading securities. They are not considered to be held-to-maturity securities because the Company does not have the intent to hold those securities to maturity. They are not considered trading securities because they were not acquired with the intent of selling them within hours or days. The Company's investments in securities are classified as current as they are available for use in current operations. Short-term investments are carried at fair value with the unrealized gains and losses included in other comprehensive loss as a component of stockholders' equity until realized. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity and recorded as interest income. Realized gains and losses are determined using the specific identification method and are included in other expense, net.

The Company evaluates its investments in securities that are in an unrealized loss position quarterly to determine if those securities are other-than-temporarily-impaired. If the Company intends to sell or if it is more likely than not that the Company will be required to sell those securities prior to the recovery of their book value, then those securities would be considered other-than-temporarily-impaired, and the Company would record this impairment as a loss through other expense, net. During the three months ended March 31, 2022, the Company concluded that none of its investments in securities were other-than-temporarily-impaired and thus recorded no impairment losses for its investments in securities.

The following tables summarize the short-term investments held at March 31, 2022 (in thousands):

	March 31, 2022			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Assets				
Commercial paper	$ 7,478	$ —	$ —	$ 7,478
Corporate bonds	8,469	2	(5)	8,466
U.S. Government agencies	29,477	—	(13)	29,464
Total	$ 45,424	$ 2	$ (18)	$ 45,408

As of March 31, 2022, all short-term investments held by the Company had remaining contractual maturities of one year or less.

3. FAIR VALUE MEASUREMENT

The following table summarizes the fair values of the Company's assets and liabilities on the condensed consolidated balance sheets which comprise money market funds and the contingent put option liability (in thousands):

	Fair value measurements as of March 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$ 30,083	$ —	$ —	$ 30,083
Commercial paper	—	7,478	—	7,478
Corporate bonds	—	8,466	—	8,466
U.S. Government agencies	—	29,464	—	29,464
Total	$ 30,083	$ 45,408	$ —	$ 75,491
Liabilities				
Contingent put option liability	$ —	$ —	$ 85	$ 85
Total	$ —	$ —	$ 85	$ 85

	Fair value measurements as of December 31, 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$ 79,893	$ —	$ —	$ 79,893
Total	$ 79,893	$ —	$ —	$ 79,893
Liabilities				
Contingent put option liability	$ —	$ —	$ 108	$ 108
Total	$ —	$ —	$ 108	$ 108

During the three months ended March 31, 2022 and the year ended December 31, 2021 there were no transfers between Level 1, Level 2 and Level 3.

Contingent Put Option Liability

The contingent put option liability consists of the fair value of the contingent interest feature and acceleration clause (contingent put option) under the 2019 Loan Agreement and 2021 Loan Agreement (see Note 8). The fair value of the contingent put option liability was based on significant inputs not observable in the market, which represent a Level 3 measurement within the fair value hierarchy. The Company's valuation of the contingent put option liability utilized a risk-neutral valuation model wherein the fair value of the underlying debt facility is estimated, both with and without the presence of the default provisions, holding all other assumptions constant. The Company assesses these assumptions and estimates at least annually as additional information impacting the assumptions are obtained. Changes in the fair value of the contingent put option liability are

recognized in other income (expense) as part of the change in fair value of derivative liabilities in the condensed consolidated statements of operations and comprehensive loss. The significant inputs not observable in the market consist of the adjusted market rate of debt and the probability of default. As of March 31, 2022 and 2021, the adjusted market rate of debt was 5.58% and 8.25%, respectively and the probability of default was 18% and 52%, respectively. A significant change in those inputs could cause a significant change in valuation.

The following table provides a roll-forward of the aggregate fair value of the Company's derivative liabilities for which fair value is determined using Level 3 inputs (in thousands):

	Contingent put option liability
Fair value at December 31, 2021	$ 108
Change in fair value	(23)
Fair value at March 31, 2022	$ 85

	Contingent put option liability
Fair value at December 31, 2020	$ 51
Extinguishment of liability	(51)
Issuance of liability	303
Fair value at March 31, 2021	$ 303

For the three months ended March 31, 2022 and 2021, the Company recorded a change in fair value of the contingent put option liability included in other income of $23,000 and $0, respectively.

4. INVENTORY

Inventories include material, labor and overhead and are stated at the lower of cost (first-in and first-out method) or net realizable value. The components of inventory are as follows as of March 31, 2022 and December 31, 2021 (in thousands):

	March 31, 2022	December 31, 2021
Raw materials	$ 1,130	$ 962
Work in process and sub-assemblies	908	896
Finished goods	498	510
Total	$ 2,536	$ 2,368

5. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following on March 31, 2022 and December 31, 2021 (in thousands):

	March 31, 2022	December 31, 2021
Machinery and equipment	$ 3,257	$ 2,589
Furniture and fixtures	64	—
Computer hardware and software	61	29
Leasehold improvements	95	95
Construction in progress	1,498	1,536
Total	4,975	4,249
Less: Accumulated depreciation and amortization	(1,007)	(793)
Total property and equipment, net	$ 3,968	$ 3,456

Depreciation expense for the three months ended March 31, 2022 and 2021 was $0.2 million and $0.1 million, respectively, and is included in operating expenses.

6. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

In 2019, SGI sold SGI-DNA to GATTACA Mining, LLC. As part of the transaction, the Company acquired its intangible assets with resulting goodwill. The goodwill carries a fair value of approximately $3.5 million. Due to the recent decline in global economic and labor market conditions caused by the global outbreak of the COVID-19 pandemic, the Company considered the effects on its goodwill and determined that there was no significant impact that would cause the goodwill to be impaired. There were no other events or circumstances that have changed since the last annual assessment that could reduce the fair value of the Company's reporting segments below its carrying values.

In connection with the Eton acquisition in November 2021, the excess of the purchase price over the fair value of the net identifiable tangible and intangible assets acquired has been assigned to goodwill at a fair value of $10.8 million.

For the three months ended March 31, 2022 and 2021, the Company did not record any impairment of goodwill.

Other Intangible Assets

Other intangible assets acquired in the sale of SGI-DNA to GATTACA Mining, LLC include the rights to technology and the SGI-DNA trade name. The Company engaged an independent consultant to value the intangible assets and to determine their useful lives. The technology was valued at approximately $3.2 million with a seven year useful life and the SGI-DNA trade name at approximately $0.1 million with a three year useful life. During 2020, the Company changed its name to Codex DNA, Inc., the amount allocated to the trade name of $0.1 million was deemed impaired and written off in April 2020.

Other intangible assets acquired in the Eton acquisition include the Eton trade name, customer relationships and non-competition agreements. The Company engaged an independent consultant to value the intangible assets and to determine their useful lives. The trade name was valued at $0.1 million with a three year useful life, the customer relationships at $0.4 million with a 15 year useful life and the non-competition agreements at approximately $30,000 with a three year useful life.

Amortization expense for each of the three months ended March 31, 2022 and 2021 was approximately $0.1 million.

The following table summarizes the estimated future amortization expense of the intangible assets as of March 31, 2022 (in thousands):

Years ending December 31:		
2022	$	402
2023		515
2024		510
2025		478
2026		103
Thereafter		276
Total	$	2,284

7. LEASES

As of March 31, 2022, the Company had six outstanding leases for office and laboratory space and scientific manufacturing equipment. The leases have terms between 6 and 68 months.

Corporate Headquarters

In September 2021, the Company entered into the Wateridge Pointe lease for future office and laboratory space and concurrently signed a second amendment to the operating lease agreement for its corporate headquarters located at 9535 Waples Street, San Diego, California (the Second Amendment). Under the Second Amendment, the lease at 9535 Waples Street will terminate upon the occupancy of office and laboratory space at 10421 and 10431 Wateridge Circle, San Diego, California, which will occur subsequent to the renovation and build-out of the spaces. The Wateridge Pointe lease provides for a tenant improvement (TI) allowance for the renovation and build-out of the spaces up to $185.00 per square foot, or approximately $12.3 million, with an additional allowance of up to $10.00 per square foot, or approximately $0.7 million if properly requested by the Company. The lessor is solely responsible for the management and payment of the tenant improvements and these expenses will be recorded as lessor improvements per ASC 842 guidance. Rent for the Wateridge Pointe lease will be approximately $3.9 million per year beginning upon lease commencement, subject to annual increases of 3%. The Wateridge Pointe lease provides for a 10 year and 3 month term and the Company is entitled to one option to extend

the lease term for an additional five years. Occupancy of 10421 and 10431 Wateridge Circle and the corresponding termination of the lease at 9535 Waples Street are expected to occur in the second half of 2022.

Upon the execution of the Second Amendment, which was deemed to be a lease modification, the Company re-evaluated the assumptions made at the original lease commencement date. The Company determined the Second Amendment consists of a single contract under ASC 842. Accordingly, the Company bifurcated the components of the modified lease. Upon execution of the Second Amendment the Company adjusted the right-of-use asset and lease liability for the reduced term of the 9535 Waples Street lease component. In addition the Company will record a right-of-use asset and lease liability on the commencement date of the 10421 and 10431 Wateridge Circle lease components.

The components of lease cost under ASC 842 are as follows (in thousands):

	March 31, 2022	March 31, 2021
Lease costs		
Finance lease cost:		
Payment of finance lease liability	$ 20	$ 27
Interest on lease liabilities	1	3
Amortization of right-of-use asset	263	156
Variable lease cost	119	112
Total lease cost	$ 403	$ 298

Supplemental disclosure of cash flow information related to leases are as follows (in thousands):

	March 31, 2022	March 31, 2021
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 396	$ 238
Operating cash flows from finance leases	$ 1	$ 3
Financing cash flows from finance leases	$ 20	$ 27

The weighted-average remaining lease term and discount rate were as follows:

	March 31, 2022	March 31, 2021
Weighted-average remaining lease term		
Finance leases	0.7 years	1.7 years
Operating leases	4.0 years	3.8 years
Weighted-average discount rate		
Finance leases	7.7 %	7.7 %
Operating leases	8.5 %	8.9 %

The following table summarizes the minimum lease payments of the Company's operating and finance lease liabilities as of March 31, 2022 (in thousands):

Year Ending December 31,	Operating	Finance
2022	$ 914	$ 62
2023	388	—
2024	323	—
2025	333	—
2026	343	—
Thereafter	307	—
Total future minimum lease payments	2,608	62
Less: imputed interest	(406)	(2)
Present value of operating lease liability	$ 2,202	$ 60
Less: current portion of lease liability	(880)	(60)
Non-current portion of lease liability	1,322	—

The table above excludes an estimated $45.1 million of legally binding minimum lease payments to be made over a period of approximately 10 years for the lease at 10421 and 10431 Wateridge Circle, San Diego, California that has been executed but not yet commenced as of September 30, 2021. Commencement of the lease at 10421 and 10431 Wateridge Circle is expected to occur in the second half of 2022.

8. NOTES PAYABLE

Loan and Security Agreement

As of March 31, 2022 and December 31, 2021, the loans payable on the condensed consolidated balance sheets pertains to the Loan and Security Agreement with Silicon Valley Bank and the Loan and Security Agreement with Oxford, respectively, and consists of the following (in thousands):

	March 31, 2022	December 31, 2021
Principal amount of loans payable	$ 15,000	$ 15,000
Less: Current portion of loans payable	(2,382)	(603)
Loans payable, net of current portion	12,618	14,397
Accrued Interest	94	94
Final debt payment liability	400	400
Debt discount and financing costs, net of accretion	(707)	(803)
Loans payable, net of discount and current portion	$ 12,405	$ 14,088

2019 Loan and Security Agreement

On September 5, 2019, the Company entered into a Loan and Security Agreement with Oxford Finance LLC as the lender (the 2019 Loan Agreement). Under the 2019 Loan Agreement the Company borrowed a total of $5.0 million in secured loans. These loans were repaid in full in March 2021 with the proceeds from the 2021 Loan Agreement discussed below. In connection with the repayment, the Company recognized a loss on debt extinguishment of $0.6 million. These loans bore interest at the greater of (i) 8.79% per annum and (ii) the sum of (a) the thirty (30) day U.S. LIBOR rate reported in The Wall Street Journal on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) 6.38%. They would have matured on October 1, 2023 and were secured by substantially all of the Company's assets, other than intellectual property, which was subject to a negative pledge. Payments on the loans were interest-only until May 1, 2021, followed by equal monthly principal payments and accrued interest through the scheduled maturity date of October 1, 2023.

In connection with the 2019 Loan Agreement, the Company had a contingent obligation to pay Oxford a success fee of $0.8 million upon the completion of the Company's IPO.The Company had also identified a bifurcated compound derivative liability related to a contingent interest feature and acceleration clause (contingent put option). The fair value of the success fee and the contingent put option were recorded within derivative liabilities on the condensed consolidated balance sheets and

corresponding discount to the loans under the 2019 Loan Agreement. The Company remeasured both liabilities to fair value at each reporting date, and recognized changes in the fair value as a component of other income (expense) in the condensed consolidated statements of operations and comprehensive loss. The Company continued to recognize changes in the fair value of the success fee contingent liability until the success fee was paid. The success fee contingent liability was paid in full during the three months ended September 30, 2021. The contingent put option liability was extinguished when the 2019 Loan Agreement was terminated in March 2021.

2021 Loan Agreement

On March 4, 2021, the Company entered into a Loan and Security Agreement with Silicon Valley Bank (SVB) as the lender (the 2021 Loan Agreement). Under the 2021 Loan Agreement, the Company borrowed a $15.0 million senior secured term loan, the proceeds of which were used to repay all existing obligations under the 2019 Loan Agreement, with the remaining proceeds available for working capital and general corporate purposes. Under the 2021 Loan Agreement, the Company may elect to obtain a second term loan from SVB in a principal amount up to but not exceeding $5.0 million, provided certain revenue milestones are achieved.

In connection with the 2021 Loan Agreement, the Company issued to SVB a warrant to purchase a number of shares of preferred stock (the Preferred Warrant). The Preferred Warrant was exercisable into the number of preferred shares equal to approximately $0.2 million divided by the applicable warrant price. The Preferred Warrant also provides for the grant of additional shares upon the disbursement of an advance under the 2021 Loan Agreement. Such additional shares will be equal to 1.5% of the principal amount of the advance divided by the warrant price. The Preferred Warrant was exercisable at the original purchase price of the Series A-1 convertible preferred stock. When the Series A-1 convertible preferred stock in which the warrant would have been exercisable into converted into common stock, the warrant holder gained the right to exercise the warrant for such number of shares of common stock into which the preferred shares would have converted into had they been exercised prior to the conversion. The Preferred Warrant was exercised in June 2021 in exchange for 51,409 shares of common stock.

The term loan bears interest at a per annum rate equal to the greater of (a) 4.0% above the prime rate and (b) 7.25%. The interest rate as of March 5, 2021 was 7.25% per annum. The loan is secured by substantially all of the Company's assets, other than intellectual property. The Company has agreed not to encumber its intellectual property assets, except as permitted by the 2021 Loan Agreement. For the three months ended March 31, 2022, the effective interest rate on outstanding borrowings was approximately 10.15%.

A final payment (the Final Payment) equal to $0.4 million will be due at the earlier of the maturity date, acceleration of the loans, or a voluntary or mandatory prepayment of the loan. The Final Payment is being accrued through interest expense using the effective interest method.

The Company bifurcated a compound derivative liability related to the contingent interest feature and acceleration clause (contingent put option) under the 2021 Loan Agreement. The contingent put option liability was valued and separately accounted for in the Company's condensed consolidated financial statements. The contingent put option liability is classified as a component of derivative liabilities on the condensed consolidated balance sheet. As of March 31, 2022, the estimated fair value of the contingent put option liability was $0.1 million, which was determined by using a risk-neutral valuation model wherein the fair value of the underlying debt facility is estimated, both with and without the presence of the default provisions, holding all other assumptions constant (see Note 3).

The estimated future principal payments due under the 2021 Loan Agreement were as follows:

	March 31, 2022
Estimated future principal payments due	
2022	$ —
2023	7,500
2024	7,500
Total	$ 15,000

9. STOCKHOLDERS' EQUITY

On June 18, 2021, the Company completed its IPO of 7,666,664 shares of its common stock, including the exercise in full by the underwriters of their option to purchase up to 999,999 additional shares of common stock, for aggregate gross proceeds of $122.7 million. The Company's common stock began trading on the Nasdaq Global Select Market under the ticker symbol "DNAY" on June 18, 2021. The Company received $112.5 million in net proceeds after deducting underwriting discounts and commissions and other offering expenses payable by the Company. Upon closing of the IPO, all outstanding convertible

preferred stock converted into 15,079,329 shares of common stock and SGI's outstanding warrants were automatically exercised into 1,201,059 shares of common stock. Subsequent to the closing of the IPO, all outstanding warrants issued pursuant to the 2021 Loan Agreement were exercised into 51,409 shares of common stock.

10. STOCK-BASED COMPENSATION

For the three months ended March 31, 2022 and 2021, the Company recorded stock-based compensation expense of approximately $0.4 million and $0.1 million, respectively. No income tax benefit was recognized in the accompanying condensed consolidated statements of operations and comprehensive loss for the Company's equity incentive plan.

The Company's Board of Directors approved the adoption of the SGI-DNA, Inc. 2019 Stock Plan (the 2019 Plan) in March 2019. The 2019 Plan permitted the Company to grant up to 5,544,187 shares for options and restricted stock units of the Company's common stock. On March 3, 2021, the Company's Board of Directors and stockholders approved the termination of the 2019 Plan and the adoption of the 2021 Equity Incentive Plan (the 2021 Plan). 6,000,000 shares of common stock were reserved for issuance under the 2021 Plan.

The 2021 Plan provided for the grant of incentive and non-statutory stock options to employees, non-employee directors and consultants of the Company. Options granted under the 2019 Plan and 2021 Plan generally become exercisable over a 4-year period following the date service begins and expire 10 years from the date of grant. The exercise price of incentive stock options granted under the 2019 Plan and 2021 Plan must be at least equal to 100% of the fair value of the Company's common stock at the date of the grant, except for greater than 10% stockholders for which the exercise price of incentive stock options granted under the 2019 Plan and 2021 Plan must be at least equal to 110% of the fair value of the Company's common stock at the date of the grant, as determined by the Board of Directors. The exercise price of non-statutory options granted under the 2019 Plan and 2021 Plan must be at least equal to 100% of the fair value of the Company's common stock at the date of grant, as determined by the Board of Directors. The 2019 Plan and 2021 Plan granted the Company a right of first refusal to repurchase shares issued under the plan at a price set by the optionee, which right terminated upon the IPO. As of March 31, 2022 and December 31, 2021, there were no outstanding shares subject to these repurchase rights.

In June 2021, the Company established the 2021 Stock Incentive Plan (the 2021 SIP). The 2021 SIP became effective on the effective date of the IPO, at which time the Company ceased granting awards under the 2021 Plan. The 2021 SIP allows the Company's compensation committee to grant equity-based awards to the Company's employees, directors and consultants. A total of 3,500,000 shares of common stock were initially reserved for issuance under the 2021 SIP, plus the number of shares (not to exceed 2,459,970 shares) consisting of (i) the shares of common stock that were available for the issuance of awards under the 2021 Plan at the time the 2021 SIP became effective, which ceased to be available for future issuance under the 2021 Plan at such time and (ii) any shares subject to outstanding options or other share awards that were granted under the 2019 Plan and the 2021 Plan that terminate or expire prior to exercise or settlement; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of shares reserved and available for issuance under the 2021 SIP automatically increases each January 1, beginning on January 1, 2022 and each January 1 thereafter by the lesser of 5,250,000 shares or 5% of the outstanding number of shares of common stock on the immediately preceding December 31, or such lesser number of shares as determined by the Company's board of directors. As of March 31, 2022, the number of shares of common stock reserved for issuance under the 2021 SIP was 3,876,659.

Stock option activity under the 2019 Plan, the 2021 Plan and the 2021 SIP for the three months ended March 31, 2022 is as follows:

	Number of options	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Balances at December 31, 2021	2,550,984	$ 6.09	9.1	$ 12,417
Options granted	1,173,550	10.10		
Options exercised	(70,534)	1.15		
Options cancelled	(17,179)	6.74		
Balances at March 31, 2022	3,636,821	$ 7.48	9.2	$ 1,891
Vested and expected to vest at March 31, 2022	2,820,668	$ 7.35	9.2	$ 1,716
Exercisable at March 31, 2022	343,640	$ 3.39	8.4	$ 721

There were 1,173,550 options granted during the three months ended March 31, 2022. The weighted average grant date calculated fair value of options granted during the three months ended March 31, 2022 was $6.02 per share.

The calculated value of option grants during the three months ended March 31, 2022 was estimated using the Black-Scholes option pricing model with the following weighted average assumptions:

	March 31, 2022
Risk free interest rate	1.7 %
Expected dividend yield	— %
Expected term	5.0 years
Expected volatility	53.9 %

The Company has granted restricted stock units with vesting based conditions. Unvested shares of restricted common stock may not be sold or transferred by the holder. They are legally issued and outstanding. These restrictions lapse accordingly to the time-based vesting of each award.

A summary of the restricted stock unit activity during the three months ended March 31, 2022 is as follows:

	Restricted Stock Units	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	—	$ —
Granted	174,400	10.20
Unvested at March 31, 2022	174,400	$ 10.20

No restricted stock units vested during the three months ended March 31, 2022.

Stock-based compensation expense related to stock-based awards was classified in the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended March 31, 2022
Research and development	$ 77
Sales and marketing	43
General and administrative	328
Total	$ 448

Effective in connection with the IPO, the Company established the 2021 Employee Stock Purchase Plan (the ESPP). The maximum number of shares of common stock that may be issued under the ESPP was initially 350,000. Additionally, the number of shares reserved and available for issuance under the ESPP automatically increases each January 1, beginning on January 1, 2022 and each January 1 thereafter, by the lesser of (i) 1,050,000 shares of common stock, (ii) 1.0% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year, or (iii) such smaller number of shares of common stock as the Company's board of directors may designate. As of March 31, 2022, the number of shares of common stock that may be issued under the ESPP is 643,185.

The ESPP enables eligible employees to purchase shares of common stock of the Company at the end of each offering period at a price equal to 85% of the fair market value of the shares on the first business day or the last business day of the offering period, whichever is lower. Participation in the ESPP is voluntary. Eligible employees become participants in the ESPP by enrolling in the plan and authorizing payroll deductions. At the end of each offering period, payroll deductions that have accumulated are used to purchase shares of the Company's shares at the discounted price. The Company makes no contributions to the ESPP. A participant may withdraw from the ESPP or suspend contributions to the ESPP. If the participant elects to withdraw during an offering, all contributions are refunded as soon as administratively practicable. If a participant elects to withdraw or suspend contributions, they will not be able to re-enroll in the current offering but may elect to participate in future offerings. The ESPP purchases only whole shares of the Company's shares. The Company's first ESPP offering period began December 1, 2021 and will end on June 1, 2022, with a second offering period commencing on June 1, 2022. Subsequent offering periods will be on a rolling six-month basis.

As of March 31, 2022, no shares of common stock have been issued under the ESPP. Share-based compensation expense related to the ESPP of $0.1 million for the three months ended March 31, 2022 was recorded in operating expenses.

As of March 31, 2022, total unrecognized stock-based compensation expense related to unvested stock-based awards was $9.2 million, which is expected to be recognized over a weighted average period of 3.5 years.

11. INCOME TAXES

The Company estimates an annual effective tax rate of 0% for the year ending December 31, 2022, as the Company incurred losses for the three months ended March 31, 2022 and is forecasting additional losses through the remainder of fiscal year ending December 31, 2022, resulting in an estimated net loss for both financial statement and tax purposes for the year ending December 31, 2022. Therefore, no federal or state income taxes are expected and none have been recorded at this time. Income taxes have been accounted for using the liability method.

Due to the Company's history of losses since inception, there is not enough evidence at this time to support that the Company will generate future income of a sufficient amount and nature to utilize the benefits of its net deferred tax assets. Accordingly, the deferred tax assets have been reduced by a full valuation allowance, since the Company does not currently believe that realization of its deferred tax assets is more likely than not.

As of March 31, 2022, the Company had no unrecognized income tax benefits that would reduce the Company's effective tax rate if recognized.

12. COMMITMENTS AND CONTINGENCIES

Litigation

The Company may become involved in various claims, suits, and legal proceedings from time to time in the ordinary course of its business. The Company accrues a liability when it believes that it is both probable and the amount of loss can be reasonably estimated. While the outcome of such claims, lawsuits or other proceedings cannot be predicted with certainty, management expects that any liability, to the extent not provided for by insurance or otherwise, will not have a material adverse effect on the Company's consolidated financial position or results of operations.

Codexis Trademark Litigation

In May 2020 Codexis, Inc. (Codexis) filed a complaint against the Company relating to its CODEX DNA name based on Codexis' rights in the CODEX and CODEXIS mark in the U.S. District Court, Northern District of California for federal and common law trademark infringement and unfair competition/false designation (the Complaint). Codexis seeks injunctive relief, including that the Company cease all use of the term CODEX and any other trademark confusingly similar to the marks CODEX and CODEXIS and not apply for registration of or register the CODEX mark or any other mark confusingly similar to the CODEX or CODEXIS marks, transfer to Codexis all domain names and social media accounts/user names that include the term "codex" and pay damages (consisting of Codexis's actual damages, a disgorgement of the Company's profits and punitive damages as permitted by California common law) as well as attorneys' fees and costs.

Eurofins Pharma Non-Competition/Non-Solicitation Litigation

In October 2018, Eurofins Pharma US Holdings II, Inc. (EPUSH II) and Eurofins DiscoverX Corporation (Eurofins DiscoverX) (collectively, Plaintiffs) filed a complaint against Todd R. Nelson, SGI-DNA, Inc. (SGI-DNA, which is the Company's prior name) and Synthetic Genomics, Inc. (the Company's former parent company, and together with Dr. Nelson and SGI-DNA, the Defendants) to enforce non-competition and non-solicitation provisions of an agreement.

The complaint, filed in the Superior Court of California, County of San Diego, charges Dr. Nelson with breach of contract, SGI-DNA with tortious interference, and both with unfair competition. The complaint seeks permanent injunctive relief, monetary damages and other equitable relief (including restitution) against the Defendants. The civil jury trial, initially scheduled for April 24, 2020, and rescheduled to August 27, 2021, is now a bench trial that is scheduled to begin May 6, 2022.

It is not possible at this time to assess whether the outcome of the Eurofins matter will have a material adverse effect on the Company's condensed consolidated results of operations, cash flows or financial position. Therefore, in accordance with ASC 450, the Company has not accrued any contingent liability associated with these legal proceedings based on its belief that a liability, while possible, is not probable nor estimable, and any range of potential contingent liability amounts cannot be reasonably estimated at this time.

Leases

The Company's non-cancelable lease commitments are described in Note 7.

13. NET LOSS PER SHARE

Net loss per share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2022	2021
Numerator:		
Net loss	$ (13,194)	$ (7,442)
Net loss attributable to common stockholders	$ (13,194)	$ (7,442)
Denominator:		
Weighted average common stock outstanding - basic and diluted	29,331,325	5,193,098
Net loss per share attributable to common stockholders - basic and diluted	$ (0.45)	$ (1.43)

The Company's potential dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted-average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded the following potential common shares from the computation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	March 31,	
	2022	2021
Series Z convertible preferred stock (as converted to common stock)	—	2,500,000
Series A convertible preferred stock (as converted to common stock)	—	7,599,274
Series A-1 convertible preferred stock (as converted to common stock)	—	4,980,055
Warrants to purchase common stock	—	1,081,745
Warrants to purchase Series A-1 convertible preferred stock (as converted to common stock)	—	216,428
Stock options to purchase common stock	3,636,821	1,146,750
Restricted stock units that vest into common stock	174,400	—
Total	3,811,221	17,524,252

14. RETIREMENT PLAN

The Company has a retirement saving plan (the 401(k) Plan) that allows participating employees to defer a portion of their annual compensation on a pretax basis. The Company made no contributions to the 401(k) Plan for the three months ended March 31, 2022 and 2021.

15. COLLABORATION

In December 2021, the Company entered into a Research Collaboration and License Agreement (Pfizer Agreement) with Pfizer Inc. (Pfizer), pursuant to which the Company agreed to collaborate with Pfizer to further develop the Company's novel enzymatic DNA synthesis technology for Pfizer's use in its research and development of mRNA-based vaccines and biotherapies. The financial terms of the deal include an upfront payment from Pfizer to the Company, along with success-based technical milestone payments that could be earned in the near term. The Company is also eligible to receive additional milestone payments based on the achievement of specified development, regulatory and commercialization goals associated with any products developed from the application of the Company's technology developed and licensed under the agreement.

The Company granted Pfizer a non-exclusive, worldwide license to use the Company's enzymatic DNA synthesis technology for purposes of researching, developing, manufacturing and commercializing pharmaceutical and biopharmaceutical products and a limited-time option to convert such license to exclusive for specific applications. If Pfizer exercises its option for these application(s) within the applicable period, then the license to Pfizer will become exclusive for products for such application(s); provided that Pfizer may later convert the particular application back to non-exclusive.

Under the Pfizer Agreement, Pfizer made an upfront payment to the Company of $8.0 million and if the Company meets certain technical milestones, the Company will be eligible to receive an additional $10.0 million in near-term milestone payments associated with the Research Plan.

In addition to the upfront payment and technical milestone payments, Pfizer has agreed to make milestone payments to the Company upon the products meeting certain clinical milestones, with each product (other than exclusive products) being eligible for milestone payments up to $20.0 million if it were to meet the applicable clinical milestones and the first exclusive product in each exclusive field being eligible for milestone payments up to $55.0 million if it were to meet the applicable clinical milestones. Pfizer has also agreed to pay the Company up to $60.0 million in sales milestones for products (other than exclusive products) if aggregate net sales of such products meet certain thresholds and up to $180.0 million in sales milestones for exclusive products if aggregate net sales of the exclusive products meet certain thresholds. Provided the Pfizer Agreement remains in place, Pfizer will also pay escalating royalties from a low to mid-fraction of one percent of net sales of all products. Pfizer's obligations to pay royalties with respect to a product within a country will expire after specific criteria including such product no longer being covered by patent rights licensed to Pfizer by the Company in such country. Royalty payments are subject to reduction after the introduction of a biosimilar product in such country by a third party.

The Company assessed the collaboration and license agreement in accordance with ASC 606, Revenue from Contracts with Customers, and concluded that Pfizer is a customer based on the agreement structure. The Company identified a single combined performance obligation under the arrangement which includes performance under the research plan, technology transfer between the parties, participation in the Joint Research Committee, research licenses exchanged by the parties and the non-exclusive commercial license. In addition, the Company identified a material right for the option granted to Pfizer to extend the research term by an additional year. The $8.0 million upfront payment represents the transaction price at inception.

The Company determined that the $8.0 million upfront payment represents the entirety of the consideration to be included in the transaction price as of the outset of the arrangement. The potential milestone payments that the Company may have been eligible to receive were initially excluded from the transaction price at the outset of the arrangement because (i) all technical and development milestone payments did not meet the criteria for inclusion using the most-likely amount method and (ii) the Company recognizes as revenue sales-based milestones and royalties when the related sales occur. As of March 31, 2022 no milestones or royalties have been deemed likely to be achieved or have been achieved.

In accordance with ASC 606, the Company allocated the transaction price, comprising the upfront payment of $8.0 million, based on the standalone selling price of the combined performance obligation and the material right. Based on management's analysis, the material right was allocated $0.3 million of the transaction price, while the combined performance obligation was allocated $7.7 million of the transaction price.

The $7.7 million of revenue allocated to the combined performance obligation will be recognized using the input method based on time elapsed as compared to the research term of 24 months, and the $0.3 million of revenue allocated to the material right will be recognized over the third year of services performed under the research plan in the event the option to extend the research plan is exercised, or when the option expires in the event the option to extend the research plan is not exercised. During the three months ended March 31, 2022, the Company recognized $1.0 million of collaboration revenue.

16. RELATED PARTY TRANSACTIONS

During the three months ended March 31, 2022 and 2021, the Company made payments to related parties of approximately $0.1 million and $25,000, respectively, for services relating to intellectual property matters, including patent filings, patent prosecution, sequencing and oligo services and board members.

17. SUBSEQUENT EVENTS

In April 2022, Codexis and the Company reached a mutually agreeable resolution to the Codexis trademark litigation.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Unless the context otherwise requires, all references in this section to the "Company," "we," "us, or "our" refer to the business of Codex DNA, Inc. and its subsidiaries.

You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and related notes, appearing elsewhere in this Quarterly Report on Form 10-Q and the audited consolidated financial statements and related notes and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2021 included in our Annual Report on Form 10-K (the Annual Report) filed with the Securities and Exchange Commission (the SEC) on March 23, 2022. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report on Form 10-Q, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a leading synthetic biology company focused on enabling researchers to rapidly, accurately and reproducibly build or "write" high-quality synthetic DNA and mRNA that is ready to use in many downstream synthetic biology enabled markets. Our synthetic biology solution addresses the bottlenecks across the multi-step process of building DNA and mRNA, as well as the significant limitations of existing solutions that prevent the rapid building of virtually error-free DNA and mRNA at a useable scale. A key part of our solution is our BioXp system, an end-to-end automated workstation that fits on the benchtop and is broadly accessible due to its ease-of-use and hands-free automation. We believe our BioXp system can democratize synthetic biology by simplifying the process of building DNA and mRNA, thereby accelerating the discovery, development and production of novel high-value products, including antibody-based biologics, mRNA-based vaccines and therapeutics and precision medicines.

Our synthetic biology solution is comprised of our:

- *BioXp system*: which we believe is the first commercially available push-button, walkaway, end-to-end automated workstation that empowers researchers to go from a digital DNA sequence to endpoint-ready synthetic DNA in as few as 8 hours and mRNA in less than 24 hours, exclusive of shipment time;
- *BioXp portal*: a user-friendly online portal that offers an intuitive guided workflow and design tools for building new DNA sequences and assembling them into vector(s) of choice;
- *BioXp kits*: contain all the necessary building blocks and reagents, including our proprietary Gibson Assembly branded reagents, for specific synthetic biology workflow applications;
- *Benchtop reagents*: contain all the reagents necessary to proceed with a specific synthetic biology workflow on the benchtop using products generated on the BioXp system;
- *Biofoundry Services*: enable a customer to order and receive any of the BioXp system endpoint-ready products, such as genes, clones, cell-free amplified DNA and variant libraries; and
- *Short Oligo Ligation Assembly (SOLA) enzymatic DNA synthesis (EDS)*: SOLA EDS is a sustainable, scalable, and cost-effective approach designed to significantly reduce timelines for constructing synthetic DNA, RNA, and proteins compared to traditional chemical synthesis, paving the way for more efficient and effective development of mRNA-based vaccines, diagnostics, therapeutics, and personalized medicines. SOLA EDS technology will be integrated into Codex DNA's future BioXp Oligo Printer and BioXp Digital-to-Biological Converter systems, providing customers with an end-to-end solution for their life science research and synthetic biology needs.

We have developed and commercialized products that include BioXp systems, including our current BioXp 3250 system, BioXp kits for generating a wide array of synthetic DNA and mRNA, and benchtop reagents that complement the automated synthetic biology workflow applications and workflow solutions. We believe that our integrated BioXp systems and BioXp kits represent the industry's leading synthetic biology workflow automation solution and provide us with a first mover advantage in the rapidly growing synthetic biology market. As part of our continuing effort to improve the processes of synthetic biology, we are currently developing next-generation BioXp systems and BioXp kits with the goal of transforming rapid demand-response workflows in synthetic biology and consolidating supply chains and enabling global distributed manufacturing for discovery, preclinical and clinical applications. We also use our BioXp 3250 system, BioXp kits and benchtop reagents to perform services for customers.

We were incorporated in the state of Delaware in March 2011, as Synthetic Genomics Solution, Inc., a wholly owned subsidiary of Synthetic Genomics, Inc. (SGI). We changed our name to SGI-DNA, Inc. (SGI-DNA) in February 2013. On March 8, 2019, SGI sold SGI-DNA to GATTACA Mining, LLC (GATTACA) by entering into a stock purchase agreement to sell all of our outstanding common and preferred stock in exchange for a $10 million non-recourse promissory note (the Purchase Note) and

a warrant to purchase common stock equal to 6% of the shares of common stock issued and outstanding as of the time of exercise, which will automatically be exercised immediately prior to the consummation of an initial public offering. This warrant and participation right were later amended in August 2019 to provide a warrant on 1,081,745 shares of common stock, a participation right to receive property with a value equal to the net proceeds a person would receive as a holder of 1,081,745 shares of common stock in a change of control transaction, and additional warrants equal to 3% of the shares sold in future equity financings prior to an initial public offering or certain change of control transactions. In connection with our Series A-1 convertible preferred stock financing in December 2019, we issued SGI warrants in connection with the participation right described above to purchase Series A-1 convertible preferred stock. These warrants have an exercise price of $3.61 per share. The common stock warrant has an aggregate exercise price of $3.00. We were a co-borrower with GATTACA on the Purchase Note. Subsequently, we focused our efforts on launching new synthetic biology products and expanding our distribution and marketing efforts on our existing research using only products. We also changed our name to Codex DNA, Inc. in March 2020.

We commercially launched our current synthetic biology solution in September 2019, which now includes the BioXp 3250 system, BioXp kits with associated cloud-based application scripts, and benchtop reagent kits. Since the introduction of our solution through March 31, 2022, we have launched eight BioXp kits, three benchtop reagent kits, and several other synthetic biology products, which currently includes 11 SARS-CoV-2 full-length genomes and RNA controls as well as our Vmax X2 cells. We have placed approximately 200 BioXp systems globally. We target customers in the fields of personalized medicine, biologics drug discovery, vaccine development, genome editing and cell and gene therapy. As of March 31, 2022, our customer base was composed of over 450 customers and included 15 of the 25 largest biopharmaceutical companies in the world ranked by 2020 revenue, excluding affiliates of those companies. Our customer base also includes leading academic research institutions, government institutions, CROs and synthetic biology companies.

Since our inception as a stand-alone company on March 8, 2019, we have devoted substantially all of our efforts to raising capital, organizing, and staffing our company, commercializing existing products and developing new products. On June 18, 2021, we completed our IPO of 7,666,664 shares of common stock, including the exercise in full by the underwriters of their option to purchase up to 999,999 additional shares of common stock, for aggregate gross proceeds of $122.7 million. We received $112.5 million in net proceeds after deducting underwriting discounts and commissions and other offering expenses payable by us. Prior to our IPO, we had funded our operations with proceeds from the issuance of convertible notes and convertible preferred stock, payments received from royalties and product sales, and proceeds from borrowings under our credit facilities. Prior to our IPO, we had received gross proceeds of $32.8 million from sales of our convertible preferred stock, $6.8 million from the issuance of our convertible notes and and gross proceeds of $20.0 million through borrowings under our loan and security agreements with Oxford Finance LLC (the 2019 Loan Agreement) and Silicon Valley Bank (the 2021 Loan Agreement).

We have incurred significant operating losses since our inception. During the three months ended March 31, 2022 and 2021, our revenue was $5.6 million and $2.3 million, respectively. As of March 31, 2022, we had cash and cash equivalents of $31.4 million and short-term investments of $45.4 million. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and commercialization of our products. We reported net losses of $13.2 million and $7.4 million for the three months ended March 31, 2022 and 2021, respectively. As of March 31, 2022, we had an accumulated deficit of $156.6 million.

Eton Acquisition

On November 18, 2021 (the Acquisition Date), we entered into a Share Purchase Agreement, with the stockholders of EtonBio Inc. (Eton), a California corporation, pursuant to which we agreed to purchase all of the outstanding shares of capital stock of Eton. The total purchase price was approximately $13.6 million, which was funded with our existing cash on hand.

Eton is a San Diego-based biotech company specializing in synthetic biology products and services, including DNA sequencing and oligo synthesis, for the global academic research, pharmaceutical, and biotechnology industries. Eton also markets DNA prep services and products such as antibodies, peptides, and metabolism assay kits.

Components of Results of Operations

Revenue

Revenue consists of product sales and royalties and other revenue. Net product sales primarily consist of sales of our BioXp systems, BioXp kits, benchtop reagents and biofoundry services. In providing biofoundry services, we use our own instruments and reagents to create DNA products for our customers. Royalties and other revenue consist of fees charged for the license of non-exclusive rights of our patents to third parties and grant revenue received from government entities as reimbursement of

expenses related to the development and use of synthetic biology tools to develop solutions to address various areas of concern. The grants typically require the performance of specific activities and timely reporting of results.

Historically, revenue growth has come from BioXp systems, BioXp kits and biofoundry services. Growth in BioXp systems sales has come from investments in direct and indirect distribution channels and new product introductions. Growth in BioXp kit sales has come from the growth of the installed base of BioXp systems and new application kits. Biofoundry services were launched late in 2019. Growth in biofoundry services has been driven by new product introductions and prospective customers using biofoundry services to validate our BioXp systems. We have also seen an increase in demand for our biofoundry services driven by COVID-19-related access problems to researchers' labs. As we continue to expand our revenue opportunities, we launched our collaboration research program which works with government entities to develop solutions to specific areas of concern.

Cost of Revenue

Cost of revenue primarily consists of material and labor costs, freight and indirect overhead costs associated with sales of our BioXp instruments, BioXp kits, benchtop reagents, biofoundry services and collaboration research programs. Cost of revenue also includes period costs related to certain inventory adjustment charges, and unabsorbed manufacturing and overhead costs, as well as any write-offs of inventory that fail to meet specification or are otherwise no longer suitable for commercial manufacture. Cost of revenue is expected to increase as revenue increases.

Research and Development Expenses

Research and development expenses include pre-production costs related to the design, development and improvement of our products and technologies, including employee compensation, benefits and related costs of sustaining our engineering teams, project material costs, third party fees paid to consultants, prototype development expenses, legal costs related to intellectual property, patent fees, and other costs incurred in the product design and development process. We expense research and development costs as incurred. Non-refundable advance payments that we make for goods or services to be received in the future are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed, or when it is no longer expected that the goods will be delivered or the services rendered.

We expect that our research and development expenses will increase significantly, both in the near term and subsequently, in connection with our planned product development activities. At this time, we cannot accurately estimate or know the nature, timing and costs of the efforts that will be necessary to complete the development of any of our future products. The successful development and commercialization of our future products is highly uncertain. This is due to the numerous risks and uncertainties associated with product development and commercialization, including but not limited to the following:

- we can never be certain that we can solve any technical challenge;
- if such solution can be found, we can never be certain of the timing of such a solution;
- once we find a technical solution, we cannot be certain that the solution will be commercially feasible; and
- any solution may not be desired by our customers.

These uncertainties with respect to the development of any of our future products could significantly impact the costs and timing associated with the development of these products.

Sales and Marketing Expenses

Sales and marketing expenses include employee compensation, including compensation and benefits for sales, marketing, customer service, corporate development personnel and related administrative expenses. In addition, sales and marketing expenses also include costs for international employees and facility overhead based on headcount. We anticipate that our sales and marketing expenses will increase in the future as we increase our headcount to support increasing sales and expanding our international operations. Sales and marketing costs are expensed as incurred.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for personnel in executive, finance, and administrative functions. General and administrative expenses also include legal fees relating to corporate matters; professional fees for accounting, auditing, tax and administrative consulting services; insurance costs, administrative travel expenses, other operating costs; and facility costs not otherwise included in research and development or sales and marketing expenses.

We anticipate that our general and administrative expenses will increase in the future as we increase our administrative headcount to support our continued research, development and commercialization activities. We also anticipate that we will incur significantly increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with operating as a publicly traded company. General and administrative expenses are expensed as incurred.

Other Income (Expense), Net

Interest Expense, Net

Interest expense, net primarily consists of cash and non-cash interest on our term loan facilities and our finance leases and of interest income earned on our cash equivalents and investment balances.

Change in Fair Value of Derivative Liabilities

Change in fair value of derivative liabilities consists of the change in fair value of our SGI participation right liability, warrant liabilities, contingent put option liability, and success fee contingent liability. We classify derivative liabilities as a liability on our condensed consolidated balance sheets that we remeasure to fair value at each reporting date. We recognize changes in the fair value of the derivative liabilities as a component of other income (expense) in our condensed consolidated statements of operations and comprehensive loss. In connection with our IPO in June 2021, the participation right was extinguished and the warrants underlying our warrant liability were exercised. The success fee contingent liability was paid in full in July 2021. At March 31, 2022, the contingent put option liability is listed as a derivative liability on our condensed consolidated balance sheets.

Other Expense, Net

Other expense, net consists primarily of gains on the disposal of fixed assets, losses on the write off of intangible assets and the loss on extinguishment of debt.

Income Taxes

Since our inception, we have not recorded any income tax benefits for the net operating loss carryforwards (NOLs) we have incurred in each year or for our earned research and development tax credits generated in each period, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our NOLs and tax credit carryforwards will not be realized. As of December 31, 2021 and 2020, we had federal NOL carryforwards of $62.1 million and $28.4 million, respectively and state NOL carryforwards of $38.5 million and $15.9 million, respectively. The federal NOL carryforwards of $1.3 million generated before January 1, 2018 will begin to expire in 2034, but can be used to offset up to 100% of taxable income. Amounts generated after December 31, 2017 will carryforward indefinitely, but will be subject to 80% taxable income limitation. We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date.

Results of Operations

Comparison of the Three Months Ended March 31, 2022 and 2021

The following table summarizes our results of operations for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,		
	2022	2021	Change
	(in thousands)		
Revenue			
Product sales	$ 4,128	$ 1,799	$ 2,329
Royalties and other revenue	1,508	528	980
Total revenue	5,636	2,327	3,309
Cost of revenue	2,858	1,025	1,833
Gross profit	2,778	1,302	1,476
Operating expenses:			
Research and development	6,381	2,878	3,503
Sales and marketing	3,461	2,275	1,186
General and administrative	5,799	2,413	3,386
Total operating expenses	15,641	7,566	8,075
Loss from operations	(12,863)	(6,264)	(6,599)
Other income (expense), net:			
Interest expense, net	(336)	(241)	(95)
Change in fair value of derivative liabilities	23	(296)	319
Loss on extinguishment of debt	—	(618)	618
Other expense, net	(12)	(19)	7
Total other income (expense), net	(325)	(1,174)	849
Loss before provision for income taxes	(13,188)	(7,438)	(5,750)
Provision for income taxes	(6)	(4)	(2)
Net loss	$ (13,194)	$ (7,442)	$ (5,752)

Revenue

Revenue for the three months ended March 31, 2022 was $5.6 million, compared to $2.3 million for the three months ended March 31, 2021. The increase of $3.3 million was primarily driven by a $2.3 million increase in product sales consisting of $1.4 million in revenue attributable to the Eton acquisition, mainly from DNA sequencing, a $0.8 million increase in revenue related to our BioXp instruments, and a $0.1 million increase in biofoundry services. Royalties and other revenue increased $1.0 million mainly due to revenue associated with the Pfizer agreement which was signed in December 2021, as well as our existing collaboration research program revenue which began in the second quarter of 2021.

Cost of Revenue

Cost of revenue for the three months ended March 31, 2022 was $2.9 million, compared to $1.0 million for the three months ended March 31, 2021. The increase of $1.8 million was primarily driven by an increased volume of revenue, including $1.0 million in costs primarily related to DNA sequencing, $0.4 million of higher raw material costs associated with sales of reagents and biofoundry services, a $0.2 million increase due to higher instrument sales, $0.1 million of costs related to our collaboration research programs, and $0.1 million in other costs, which are composed of overhead, indirect costs, manufacturing and pricing variances.

Research and Development Expenses

Research and development expenses for the three months ended March 31, 2022 were $6.4 million, compared to $2.9 million for the three months ended March 31, 2021. The $3.5 million increase was primarily due to higher personnel expenses, consulting and professional services, as well as facility and other costs, offset in part by increased allocations of research and development costs attributable to our revenue from collaborations. Personnel expenses increased $2.1 million as we continue to increase our headcount in support of ongoing product development efforts, as well as costs associated with our Eton

acquisition. Consulting and professional services increased $0.8 million, which was related to our ongoing product development efforts, and facility and other costs increased $0.6 million based on increased allocations due to higher headcount over the prior period.

Sales and Marketing Expenses

Sales and marketing expenses for the three months ended March 31, 2022 were $3.5 million, compared to $2.3 million for the three months ended March 31, 2021, an increase of $1.2 million. The increase was primarily attributable to higher personnel related costs of $0.9 million as we continue to expand our global sales and marketing teams to support our increased revenue, $0.1 million in increased marketing activities related to our revenue growth and $0.2 million of higher facility related and travel costs due to increased headcount.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2022 were $5.8 million, compared to $2.4 million for the three months ended March 31, 2021. The $3.4 million increase was primarily due to an increase of $1.6 million in personnel expenses due to higher headcount, including additions to our executive leadership team and costs related to our Eton acquisition, as well as employee stock compensation expense, a $1.1 million increase in professional services due to higher utilization of consultants and legal expenses and $0.7 million in higher insurance costs related to being a publicly traded company.

Other Income (Expense), Net

Other income (expense), net for the three months ended March 31, 2022 was a net expense of $0.3 million, compared to a net expense of $1.2 million for the three months ended March 31, 2021. The decrease of $0.9 million was primarily due to the absence of the one-time $0.6 million loss on extinguishment of debt in 2021 and a $0.3 million reduction in fair value changes of our derivatives, offset in part by higher interest expense as a result of the 2021 Loan Agreement.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have incurred significant operating losses. On June 18, 2021, we completed our IPO of 7,666,664 shares of common stock, including the exercise in full by the underwriters of their option to purchase up to 999,999 additional shares of common stock, for aggregate gross proceeds of $122.7 million. We received $112.5 million in net proceeds after deducting underwriting discounts and commissions and other offering expenses payable by us. Prior to our IPO, we had funded our operations with proceeds from the issuance of convertible notes and convertible preferred stock, payments received from royalties and product sales, and proceeds from borrowings under our credit facilities. Prior to our IPO, we had received gross proceeds of $32.8 million from sales of our convertible preferred stock, $6.8 million from the issuance of our convertible notes and gross proceeds of $20.0 million through borrowings under our loan and security agreements with Oxford Finance LLC (the 2019 Loan Agreement) and Silicon Valley Bank (the 2021 Loan Agreement). As of March 31, 2022, we had cash and cash equivalents of $31.4 million and short-term investments of $45.4 million.

We will continue to incur significant expenses and expect to incur increasing operating losses for the foreseeable future. We also expect that our expenses and capital expenditures will increase substantially in connection with our ongoing activities, particularly as we:

- seek to develop new products and services and hire additional research, development and engineering personnel;
- expand our distribution and marketing infrastructure to further commercialize current and future products and support our growing customer base;
- add operational, financial, and administrative systems and personnel to support growing sales; and
- maintain, expand, enforce, defend and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our patent portfolio;

Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of equity offerings, debt financings, or other capital sources, including collaborations with other companies, and other strategic transactions. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our shareholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common shareholders. Debt financing and equity offerings, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, or other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common shares. If we are unable to raise additional funds through equity or debt financings when

needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

The field of synthetic biology is rapidly developing and subject to numerous risks and uncertainties associated with new technologies and novel products. Consequently, we are unable to accurately predict the timing or amount of increased product sales or expenses or when, or if, we will be able to achieve or maintain profitability. Even if we are able to continue to generate significant product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

Cash Flows

Comparison of the Three Months Ended March 31, 2022 and 2021

The following table summarizes our consolidated cash flows for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,	
	2022	2021
	(in thousands)	
Net cash used in operating activities	$ (5,622)	$ (5,117)
Net cash used in investing activities	(45,883)	(99)
Net cash provided by financing activities	58	9,587
Net (decrease) increase in cash	$ (51,447)	$ 4,371

Operating Activities

During the three months ended March 31, 2022, operating activities used $5.6 million of cash, primarily resulting from our net loss of $13.2 million, partially offset by changes in our operating assets and liabilities of $6.5 million and non-cash charges of $1.1 million. Net changes in our operating assets and liabilities for the three months ended March 31, 2022 consisted primarily of a $6.9 million increase in deferred revenue related to the Pfizer Agreement and a $0.7 million increase in accounts payable, accrued payroll and accrued liabilities, partially offset by a $0.9 million increase in accounts receivable. Non-cash charges consisted primarily of $ 0.4 million in stock-based compensation, depreciation and amortization expense of $0.3 million, and amortization of our right-of-use operating lease asset of $0.3 million.

During the three months ended March 31, 2021, operating activities used $5.1 million of cash, primarily resulting from our net loss of $7.4 million, partially offset by non-cash charges of $1.5 million and net cash provided by changes in our operating assets and liabilities of $0.8 million. Non-cash charges consisted primarily of the loss on debt extinguishment of $0.6 million, depreciation and amortization expense of $0.2 million, amortization of our right-of-use operating lease asset of $0.2 million, and change in fair value of derivative liabilities of $0.3 million. Net changes in our operating assets and liabilities for the three months ended March 31, 2021 consisted primarily of a $1.3 million increase in accounts payable, accrued payroll and accrued liabilities, and a $0.6 million decrease in accounts receivable, partially offset by a $0.8 million increase in deposits, prepaid expenses and other current assets.

Investing Activities

During the three months ended March 31, 2022, net cash used in investing activities was $45.9 million, consisting primarily of purchases of short-term investments.

During the three months ended March 31, 2021, net cash used in investing activities was $0.1 million, consisting of purchases of property and equipment.

Financing Activities

During the three months ended March 31, 2022, net cash provided by financing activities was $0.1 million, consisting primarily of proceeds from the exercise of common stock options.

During the three months ended March 31, 2021, net cash provided by financing activities was $9.6 million, consisting primarily of proceeds from borrowings of $14.9 million from the issuance of debt from the 2021 Loan Agreement, partially offset by the $5.0 million repayment of debt from the 2019 Loan Agreement

2019 Loan and Security Agreement

On September 5, 2019, we entered into a Loan and Security Agreement with Oxford Finance LLC (Oxford) as the lender (the 2019 Loan Agreement). Under the 2019 Loan Agreement we borrowed a total of $5.0 million in secured loans. These loans were repaid in full in March 2021. These loans bore interest at the greater of (i) 8.79% per annum and (ii) the sum of (a) the thirty day U.S. LIBOR rate reported in The Wall Street Journal on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) 6.38%. They would have matured on October 1, 2023 and were secured by substantially all of our assets, other than our intellectual property, which was subject to a negative pledge. In connection with the 2019 Loan Agreement, we had a contingent obligation to pay Oxford a success fee of $0.8 million upon the completion of our initial public offering. Upon the loan's inception and on December 31, 2019, the fair value of this success fee contingent liability was estimated to be $0.4 million and was recorded as a derivative liability on our condensed consolidated balance sheets with the corresponding discount applied against the notes. Issuance costs related to the loans, inclusive of the success fee contingent liability, were $0.5 million.

Payments on the loans were interest-only until May 1, 2021, followed by equal monthly principal payments and accrued interest through the scheduled maturity date of October 1, 2023.

We had identified a contingent liability to pay a success fee to the lender as well as a bifurcated compound derivative liability related to a contingent interest feature and acceleration clause (contingent put option). The success fee contingent liability and the bifurcated embedded derivative were valued and separately accounted for in the accompanying condensed consolidated financial statements. The fair value of the success fee was recorded as a contingent liability within derivative liabilities on our condensed consolidated balance sheets and corresponding discount to the loans under the 2019 Loan Agreement. We classified the contingent put option liability within derivative liabilities on our condensed consolidated balance sheets. We remeasured both liabilities to fair value at each reporting date, and we recognized changes in the fair value as a component of other income (expense) in our condensed consolidated statements of operations and comprehensive loss. We continued to recognize changes in the fair value of the success fee contingent liability until the success fee was paid. The contingent put option liability was extinguished when the 2019 Loan Agreement was repaid in full in March 2021. The success fee contingent liability was paid in full in July 2021.

2021 Loan Agreement

On March 4, 2021, we entered into a Loan and Security Agreement with Silicon Valley Bank (SVB) as the lender (the 2021 Loan Agreement). Under the 2021 Loan Agreement, on March 5, 2021, we borrowed a $15.0 million senior secured term loan, the proceeds of which were used to repay all of our existing obligations under the 2019 Loan Agreement, with the remaining proceeds available for our working capital and general corporate purposes. Under the 2021 Loan Agreement, we may elect to obtain a second term loan from SVB in a principal amount up to but not exceeding $5.0 million, provided certain revenue milestones are achieved.

In connection with the 2021 Loan Agreement, we issued to SVB a warrant to purchase a number of shares of preferred stock (the Preferred Warrant). The Preferred Warrant was exercisable into the number of preferred shares equal to approximately $0.2 million divided by the applicable warrant price. The Preferred Warrant was initially exercisable for Series A-1 convertible preferred stock at an exercise price of $3.61 per share. The Preferred Warrant also provides for the grant of additional shares upon the disbursement of an advance under the 2021 Loan Agreement. Such additional shares will be equal to 1.5% of the principal amount of the advance divided by the warrant price. The Preferred Warrant is exercisable at the original purchase price of the Series A-1 convertible preferred stock. When the Series A-1 convertible preferred stock in which the warrant would have been exercisable into converted into common stock, the warrant holder gained the right to exercise the warrant for such number of shares of common stock into which the preferred shares would have converted into had they been exercised prior to the conversion. The Preferred Warrant may be exercised at any time, in whole or in part. Unless previously exercised, the Preferred Warrant will expire on March 4, 2031. The Preferred Warrant was exercised in June 2021 in exchange for 51,409 shares of common stock.

The term loans bear interest at a per annum rate equal to the greater of (a) 4.0% above the prime rate and (b) 7.25%. The interest rate as of March 5, 2021 was 7.25% per annum. The loans are secured by substantially all of our assets, other than our intellectual property. We have also agreed not to encumber our intellectual property assets, except as permitted by the 2021 Loan Agreement.

A final payment (the Final Payment) equal to $0.4 million will be due at the earlier of the maturity date, acceleration of the loans, or a voluntary or mandatory prepayment of the loans. The Final Payment is being accrued through interest expense using the effective interest method.

The 2021 Loan Agreement also includes customary indemnification obligations and customary events of default, including, among other things, payment defaults, breaches of covenants following any applicable cure period, material misrepresentations, a failure of the loans or the lender's security interest in the collateral to have the priority as required under the 2021 Loan Agreement, a material adverse change as defined in the 2021 Loan Agreement (including without limitation as a result of a

government approval having been revoked, rescinded, suspended, modified or not renewed), certain material judgments and attachments, and events relating to bankruptcy or insolvency. The 2021 Loan Agreement also contains a cross default provision under which, if a third party (under any agreement) has a right to accelerate indebtedness greater than $0.5 million, we would be in default of the 2021 Loan Agreement. During the continuance of an event of default, SVB may apply a default interest rate of an additional 5% to the outstanding loan balances, and SVB may declare all outstanding obligations immediately due and payable and may exercise other rights and remedies as set forth in the 2021 Loan Agreement and related loan documents. Acceleration would result in the payment of all outstanding loans, any default interest charged by the lender, all expenses of the lender and the Final Payment.

Funding Requirements

We expect our expenses to increase significantly in connection with our ongoing activities, particularly with respect to research and development efforts related to our future products and our efforts to expand sales of current products and to commercialize future products. The timing and amount of our operating and capital expenditures will depend largely on:

- the cost of developing new products that are commercially viable;
- the costs of marketing and selling our products globally; and
- the potential additional expenses attributable to adjusting our development plans (including any supply-related matters) due to the COVID-19 pandemic.

We believe that our existing cash and available borrowings will enable us to fund our operating expenses and capital expenditure requirements for the next twelve months

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. If we are unable to raise additional funds through equity offerings or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our research, product development or future commercialization efforts, or grant rights to develop and market products that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Commitments

The following table summarizes our commitments to settle contractual obligations at March 31, 2022:

	Payments Due by Period				
	Total	Less than 1 Year	1 to 3 Years	4 to 5 Years	More than 5 Years
	(in thousands)				
Operating lease commitments [1]	$ 2,609	$ 1,014	$ 694	$ 681	$ 220
Finance lease commitments [2]	62	62	—	—	—
Debt obligations [3]	17,380	2,967	14,413	—	—
Total	$ 20,051	$ 4,043	$ 15,107	$ 681	$ 220

(1) Consists of payments due for our leases of office space and laboratory space in San Diego, California and Durham County, North Carolina that expire between September 2022 and November 2027.
(2) Consists of payments due for our leases of two pieces of equipment that expire between October 2022 and December 2022.
(3) Consists of the contractually required principal and interest payable under the 2021 Loan Agreement. For purposes of this table, the interest due under the 2021 Loan Agreement was calculated using an assumed interest rate of 7.25% per annum, which was the interest rate in effect as of March 31, 2022 and assumes no borrowings under the second term loan.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have any, off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Critical Accounting Policies and Significant Judgments and Estimates

This management's discussion and analysis is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these unaudited condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets and liabilities,the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements and the reported amounts of expenses during the reported periods. We base our estimates on historical

experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the consolidated financial statements prospectively from the date of change in estimates.

There have been no significant changes to our critical accounting policies from those described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in the Annual Report.

Recently Issued Accounting Pronouncements

See Note 2 to our annual consolidated financial statements included in the Annual Report for a description of recent accounting pronouncements applicable to our consolidated financial statements.

Emerging Growth Company Status

In April 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an “emerging growth company,” or an EGC, can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (ii) the date we qualify as a “large accelerated filer,” with at least $700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

As of March 31, 2022, we had cash and cash equivalents of $31.4 million and short-term investments of $45.4 million. Interest income is sensitive to changes in the general level of interest rates; however, due to the nature of these investments, an immediate 10% change in market interest rates would not have a material effect on the fair market value of our cash balance.

As of March 31, 2022, we had $15.0 million of borrowings outstanding under the 2021 Loan Agreement. Borrowings under the 2021 Loan Agreement bear interest at a rate equal to the greater of (a) 4.0% above the prime rate and (b) 7.25%. The prime interest rate as of March 31, 2022 was 3.50% per annum. An immediate 10% change in the 30-day prime rate would not have a material impact on our debt-related obligations, financial position or results of operations.

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates. Our operations may be subject to fluctuations in foreign currency exchange rates in the future. We do not believe that inflation has had a material effect on our business, financial condition, or results of operations during the three months ended March 31, 2022 and 2021. Our operations may be subject to inflation in the future.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer (CEO), and Chief Financial Officer (CFO), we evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including the CEO and the CFO, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our CEO and CFO have concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of March 31, 2022.

Inherent Limitations on Effectiveness of Controls

Our management, including our CEO and CFO, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. The design of a

control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within a company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) under the Exchange Act) during the three months ended March 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Part II - Other Information

Item 1. Legal Proceedings

From time to time, we are involved in claims and legal proceedings or investigations, that arise in the ordinary course of business. Such matters could have an adverse impact on our reputation, business and financial condition and divert the attention of our management from the operation of our business. These matters are subject to many uncertainties and outcomes that are not predictable.

Codexis Trademark Litigation

In May 2020 Codexis, Inc. (Codexis) filed a complaint against us relating to our CODEX DNA name based on its rights in the CODEX and CODEXIS mark in the U.S. District Court, Northern District of California for federal and common law trademark infringement and unfair competition/false designation (the Complaint). Codexis seeks injunctive relief, including that we cease all use of the term CODEX and any other trademark confusingly similar to the marks CODEX and CODEXIS and not apply for registration of or register the CODEX mark or any other mark confusingly similar to the CODEX or CODEXIS marks, transfer to Codexis all domain names and social media accounts/user names that include the term “codex” and pay damages (consisting of Codexis’s actual damages, a disgorgement of our profits and punitive damages as permitted by California common law) as well as attorneys’ fees and costs. In April 2022, we reached a mutually agreeable resolution of the lawsuit with Codexis.

Eurofins Pharma Non-Competition/Non-Solicitation Litigation

In October 2018, Eurofins Pharma US Holdings II, Inc. (EPUSH II) and Eurofins DiscoverX Corporation (Eurofins DiscoverX) (collectively, Plaintiffs) filed a complaint against Todd R. Nelson, SGI-DNA, Inc. (SGI-DNA, which is our prior name) and Synthetic Genomics, Inc. (our former parent company, and together with Dr. Nelson and SGI-DNA, the Defendants) to enforce non-competition and non-solicitation provisions of an agreement.

In September 2017, EPUSH II acquired DiscoveRx (now Eurofins DiscoverX), with Dr. Nelson as the acting Chief Executive Officer. As a condition of the closing, in July 2017, Dr. Nelson signed a Confirmation of Sales of Shares of Stock and Goodwill by Merger with Covenant Not to Compete Agreement (the Non-Compete Agreement). The Non-Compete Agreement established that Dr. Nelson would transfer stock and goodwill. In addition, the Non-Compete Agreement stipulated that for a period of three years, Dr. Nelson agreed not to hire, influence or solicit any employee of DiscoveRx or its affiliates. He also agreed to disclose the Non-Compete Agreement and its restrictions to any future employer and to notify EPUSH II of any employment with another entity during the three-year period. According to the complaint, in July 2018, Dr. Nelson became the Chief Executive Officer of SGI-DNA but failed to provide notice of the employment to EPUSH II. Subsequently, Dr. Nelson allegedly also solicited and hired two Eurofins DiscoverX employees. In August 2018, Plaintiffs sent a letter to Dr. Nelson and SGI-DNA claiming that Dr. Nelson breached the Non-Compete Agreement and seeking concessions from Defendants. Defendants have denied liability, challenged the enforceability of the Non-Compete Agreement and rejected Plaintiffs’ demands.

The complaint, filed in the Superior Court of California, County of San Diego, charges Dr. Nelson with breach of contract, SGI-DNA with tortious interference, and both with unfair competition. The complaint seeks permanent injunctive relief, monetary damages and other equitable relief (including restitution) against the Defendants.

On April 9, 2021, the Defendants filed a motion for summary judgment, or in the alternative, summary adjudication, with regard to all causes of action. A hearing on this motion was held on June 25, 2021, at which time the court granted the motion in summary judgement on behalf of SGI-DNA and Dr. Nelson on three of the four claims. The court directed the parties back to mediation on the remaining claim but there was no resolution. The civil jury trial, initially scheduled for April 24, 2020, is now a bench trial that is scheduled to begin May 6, 2022.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this Quarterly Report, including our unaudited condensed consolidated financial statements and the related notes and the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this Quarterly Report, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations and the market price of our common stock.

Summary Risk Factor

Our business is subject to numerous risks and uncertainties that you should consider before investing in our company. These risks are described more fully below. These risks include, but are not limited to, the following:

- we are an early-stage synthetic biology technology company with a history of net losses, which we expect to continue, and we may not be able to generate meaningful revenues or achieve and sustain profitability in the future;
- we have a limited operating history, which may make it difficult to evaluate the prospects for our future viability and predict our future performance;
- our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide;
- we may not be able to achieve or maintain satisfactory pricing and margins for our products;
- the size of the markets for our products may be smaller than estimated, and new market opportunities may not develop as quickly as we expect, or at all, thus limiting our ability to successfully meet our anticipated revenue projections;
- we have limited experience in sales and marketing of our products;
- we will need to raise additional capital to fund our operations, which may be unavailable to us or, even if consummated, may cause dilution or place significant restrictions on our ability to operate;
- we rely on a single contract manufacturer to manufacture and supply our instruments and single source suppliers for certain components of our instruments and raw materials. If this manufacturer or these suppliers should fail or not perform satisfactorily, our ability to commercialize and supply our products would be adversely affected; and
- if we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products and build a strong brand identity may be impaired.

Risks Related to Our Business

We are an early-stage synthetic biology technology company with a history of net losses, which we expect to continue, and we may not be able to generate meaningful revenues or achieve and sustain profitability in the future.

We are an early-stage synthetic biology technology company, and we have incurred significant losses since separating from Synthetic Genomics, Inc. (SGI) and beginning to operate as a stand-alone entity in March 2019, and expect to continue incurring losses in the future. We incurred net losses of $8.3 million for the period from March 8, 2019 through December 31, 2019, $18.0 million for the year ended December 31, 2020 and $39.0 million for the year ended December 31, 2021. We incurred net losses of $7.4 million and $13.4 million in the three months ended March 31, 2021 and 2022, respectively. As of March 31, 2022, we had an accumulated deficit of $78.6 million. These losses and accumulated deficit were primarily due to the substantial investments we have made to develop, commercialize and market our technology and products. Over the next several years, we expect to continue to devote a significant portion of our resources towards the continued development and commercialization of our synthetic biology products. These efforts may prove more costly than we currently anticipate. In addition, as a public company, we will incur significant legal, accounting, administrative, insurance and other expenses that we did not incur as a private company. Accordingly, we cannot assure you that we will achieve profitability in the future or that, if we do become profitable, we will remain profitable.

We have a limited operating history, which may make it difficult to evaluate the prospects for our future viability and predict our future performance.

Our prospects must be considered in light of the uncertainties, risks, expenses, and difficulties frequently encountered by companies in their early stages of operations. For example, our management team has had a limited time working together and many of our key employees are new to our company. Predictions about our future success or viability are highly uncertain and may not be as accurate as they could be if we had a longer operating history or a longer history of successfully developing and commercializing products.

In addition, as a business with a limited operating history, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown obstacles. We have encountered in the past, and will encounter in the future, risks and uncertainties frequently experienced by growing companies with limited operating histories in emerging and rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address these risks successfully, our results of operations could differ materially from our expectations, and our business, financial condition and results of operations could be adversely affected.

Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- the level of demand for our commercialized products, which may vary significantly from period to period;
- our ability to drive adoption of our products in our target markets and our ability to expand into any future target markets, including internationally;
- the prices at which we will be able to sell our products;
- the volume and mix of our sales between our BioXp systems, BioXp kits, benchtop reagents, other products and biofoundry services, or changes in the manufacturing or sales costs related to our products;
- the length of time of the sales cycle for purchases of, or royalties on, our products, including lead time needed to procure critical raw materials from suppliers and finished goods from our third-party contract suppliers and manufacturers;
- the extent to which we succeed in developing, commercializing and supporting new products;
- potential shortages, or increases in costs, of our product components or raw materials for existing and new products, or other disruptions to our supply chain;
- the timing and cost of, and level of investment in, research and development and commercialization activities relating to our products, which may change from time to time;
- our ability to successfully manage relationships with customers, third-party distributors and suppliers of our products;
- the timing and amount of expenditures that we may incur to develop, commercialize or acquire additional products and technologies;
- changes in governmental funding sources;
- cyclical changes to the research and development budgets within the pharmaceutical, biotechnology and industrial segments of synthetic biology;
- seasonal spending patterns of our customers;
- the expenses needed to attract and retain skilled personnel;
- future accounting pronouncements or changes in our accounting policies;
- the outcome of any litigation or governmental investigations involving us, our industry or both;
- higher than anticipated service, replacement and warranty costs;
- the costs associated with being a public company;
- changes in the regulatory environment;
- the impact of the COVID-19 pandemic on the economy, investment in synthetic biology and research industries, our business operations, and resources and operations of our customers, suppliers, and distributors; and
- general industry, economic and market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

The cumulative effects of the factors discussed above could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period of time. If our operating results fall below the expectations of analysts or investors or below any guidance we may provide, or if the guidance we provide is below the expectations of analysts or investors, it could cause the market price of our common stock to decline.

We may not be able to achieve or maintain satisfactory pricing and margins for our products.

The synthetic biology industry has a history of price competition, and we can give no assurance that we will be able to achieve satisfactory prices for our products or maintain prices at the levels we have historically achieved. If we are forced to lower the price we charge for our products, our gross margins will decrease, which will adversely affect our ability to invest in and grow our business. We believe that we will continue to be subject to significant pricing pressure, which may limit our ability to maintain or increase our prices.

Our cost of goods is dependent upon the pricing we are able to negotiate with our suppliers of raw materials, instruments and components. In particular, we have experienced price increases for certain raw materials, such as oligonucleotides, and expect these raw materials to continue to be in high demand. We have also experienced price increases for certain raw materials

directly as a result of supply chain issues associated with the COVID-19 pandemic and we are uncertain how long those constraints could continue to impact our raw material pricing. We do not have long term supply contracts for any of our raw materials. If our costs increase and we are unable to offset such increases with a proportionate increase in our prices, our margins would erode, which would harm our business and results of operations.

We will need to raise additional capital to fund our operations, which may be unavailable to us or, even if consummated, may cause dilution or place significant restrictions on our ability to operate.

Based on our current plans, we believe that our current cash, available borrowings and anticipated cash flow from operations will be sufficient to meet our anticipated cash requirements for at least twelve months. If our available cash resources and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements, including because of lower demand for our products or the realization of other risks described herein, we will be required to raise additional capital prior to such time through issuances of equity or convertible debt securities, or seek debt financing or other form of third-party funding.

We will likely seek to raise additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons, including:

- increasing our sales and marketing and other commercialization efforts to drive market adoption of our products;
- funding development and marketing efforts of our current or any future products;
- expanding our technologies into additional markets;
- acquiring, licensing or investing in technologies and other intellectual property rights;
- acquiring or investing in complementary businesses or assets; and
- financing capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our rate of progress in increasing penetration of our target markets with current and new products, and the cost of the sales and marketing activities associated with establishing adoption of our products;
- our rate of progress in, and cost of research and development activities associated with, products in research and development; and
- the effect of competing technological and market developments.

If we are unable to obtain adequate financing or financing on terms satisfactory to us when needed, our ability to continue to pursue our business objectives and to respond to business opportunities, challenges, or unforeseen circumstances could be significantly limited, and could have a material adverse effect on our business, financial condition, results of operations and prospects.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders would result. Since our initial public offering, our stock price has dropped significantly. As a result, our ability to raise capital by selling our equity has been greatly diminished. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations or licensing arrangements, we might be required to relinquish significant rights to our technologies or products or grant licenses on terms that are not favorable to us.

Our Loan and Security Agreement with Silicon Valley Bank contains restrictive covenants that limit our operations.

Pursuant to the terms of the 2021 Loan Agreement, we have borrowed $15.0 million and may become eligible to borrow up to an additional $5.0 million, upon achievement of certain revenue thresholds. If we are not in compliance with the financial covenants of the 2021 Loan Agreement, it is unlikely that SVB will offer to extend the additional $5.0 million of debt financing. The 2021 Loan Agreement contains various restrictive covenants and other restrictions, including, among other things:

- a minimum revenue covenant when our cash balance is below a certain threshold;
- on our ability to transfer all or part of our business or property, except for inventory in the ordinary course of business, surplus or obsolete equipment, permitted liens, transfers of cash permitted by the agreement or transfers involving less than $250,000 in any fiscal year;
- on our ability to change our business or move our offices;
- on our ability to liquidate or dissolve or merge or consolidate with another entity, or acquire another entity;
- on our ability to incur debt or encumber our assets; and
- on our ability to pay dividends or make investments, other than permitted investments.

These restrictions may restrict our current and future operations, particularly our ability to respond to certain changes in our business or industry or take future actions. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources” for additional information.

Our ability to meet these restrictive covenants can be impacted by events beyond our control. The 2021 Loan Agreement provides that our breach or failure to satisfy certain covenants constitutes an event of default. Upon the occurrence of an event of default, our lenders could elect to declare all amounts outstanding under the 2021 Loan Agreement to be immediately due and payable. If the outstanding debt under the 2021 Loan Agreement was to be accelerated, we may not have sufficient cash on hand to repay it, which would have an immediate adverse effect on our business and operating results. This could potentially cause us to cease operations and result in a complete loss of your investment in our common stock.

We depend on our key personnel and other highly qualified personnel, and if we are unable to recruit, train and retain our personnel, we may not achieve our goals.

Our future success depends upon our ability to recruit, train, retain and motivate key personnel. Our senior management team, including Todd R. Nelson, Ph.D., our President and Chief Executive Officer; Daniel Gibson, Ph.D., our Chief Technology Officer; Jennifer I. McNealey, our Chief Financial Officer; Decky Goodrich, our Senior Vice President, Commercial Operations; and Laurence Warden, our Senior Vice President of Engineering and Instrumentation, is critical to our vision, strategic direction, product development and commercialization efforts. We have entered into at-will employment agreements with each of Dr. Nelson, Dr. Gibson, Ms. McNealey, Mr. Goodrich and Mr. Warden, and such agreements may be terminated by either party at any time without cause. The departure of one or more of our executives officers, senior management team members or other key employees could be disruptive to our business unless we are able to hire qualified successors. We do not maintain “key man” life insurance on our senior management team.

Our continued growth depends, in part, on attracting, retaining and motivating qualified personnel, including highly trained sales personnel with the necessary scientific background and ability to understand our systems at a technical level to effectively identify and sell to potential new customers. New hires require significant training and, in most cases, take significant time before they achieve full productivity. Our failure to successfully integrate these key personnel into our business could adversely affect our business. In addition, competition for qualified personnel is intense, particularly in the San Diego area, where our operations are headquartered. We compete for qualified scientific and information technology personnel with other life science and information technology companies as well as academic institutions and research institutions.

We do not maintain fixed-term employment contracts with any of our employees. As a result, our employees could leave our company with little or no prior notice and would be free to work for a competitor. Due to the complex and technical nature of our products and technology and the dynamic market in which we compete, any failure to attract, train, retain and motivate qualified personnel could materially harm our business, results of operations, financial condition and prospects.

If we do not sustain or successfully manage our anticipated growth, our business and prospects will be harmed.

Our anticipated growth will place significant strains on our management, operational and manufacturing systems and processes, sales and marketing team, financial systems and internal controls and other aspects of our business. As of March 31, 2022, we had 252 employees in the United States and 12 full-time employees internationally. We expect that we will need to hire additional accounting, finance and other personnel in connection with our becoming, and our efforts to comply with the requirements of being, a public company. As a public company, our management and other personnel will need to devote a substantial amount of time towards maintaining compliance with these requirements and effectively manage these growth activities. We may face challenges integrating, developing and motivating our rapidly growing employee base. To effectively manage our growth, we must continue to improve our operational and manufacturing systems and processes, our financial systems and internal controls and other aspects of our business and continue to effectively expand, train and manage our personnel. Our ability to successfully manage our expected growth is uncertain given the fact that we have only been in operation as a stand-alone company since March 2019. As our organization continues to grow, we will be required to implement more complex organizational management structures, and we may find it increasingly difficult to maintain the benefits of our corporate culture, including our ability to quickly develop and launch new and innovative products. If we do not successfully manage our anticipated growth, our business, results of operations, financial condition and prospects will be harmed.

A significant portion of our revenue in the near term will be generated from the sale of our current products.

While we anticipate that a substantial contributor to our growth will come from new product introductions, we expect that we will generate in the near term, a significant portion of our revenue from the sale of our BioXp systems and the increased sale of BioXp kits and benchtop reagents to our current customers. There can be no assurance that our current customers will increase their BioXp kit and benchtop reagent purchases. There can also be no assurance that we will be able to design other products that will meet the expectations of our customers or that any of our future products will become commercially viable. As

technologies change in the future for synthetic biology research tools, we will be expected to upgrade or adapt our products in order to maintain the latest technology.

While concentrating our research and development and commercialization efforts on our synthetic biology solution, we may forego other opportunities that may provide greater revenue or be more profitable. If our research and product development efforts do not result in additional commercially viable products within the anticipated timelines, or at all, our business and results of operations will be adversely affected. Any delay or failure by us to develop and release our new products or product enhancements would have a substantial adverse effect on our business and results of operations.

If we fail to timely introduce compelling new products, our revenues and our prospects could be harmed.

Our ability to attract new customers and increase revenue from existing customers will depend in large part on our ability to timely introduce compelling new products and pursue new market opportunities that develop as a result of technological and scientific advances. The success of any enhancement to our existing commercialized products or introduction of new products depends on several factors, including timely completion and delivery, cost-effective development and manufacturing, competitive pricing, adequate quality testing, integration with existing technologies, appropriately timed and staged introduction and overall market acceptance. We have experienced supply chain delays and increases in raw material cost for several of our products in development, including the BioXp 9600 system, that have caused delays in our commercial timelines. If we continue to experience these delays and increases in cost, introduction of the BioXp 9600 or other products could be further delayed. Moreover, any other new product that we develop may not be introduced in a timely or cost-effective manner, may contain defects, errors, vulnerabilities or bugs, or may not achieve the market acceptance necessary to generate significant revenue.

The typical development cycle of new synthetic biology products can be lengthy and complicated, and may require new scientific discoveries or advancements, considerable resources and complex technology and engineering. Such developments may involve external suppliers and service providers, making the management of development projects complex and subject to risks and uncertainties regarding timing, timely delivery of required components or services and satisfactory technical performance of such components or assembled products. If we do not achieve the required technical specifications or successfully manage new product development processes, or if development work is not performed according to schedule, then the development of such new technologies or products may be adversely impacted.

In addition, there is extensive competition in the synthetic biology industry, which is characterized by rapid and significant technological changes, frequent new product introductions and enhancements and evolving industry demands and standards. Our future success will depend on our ability to maintain a competitive position, including technologically superior and less expensive products compared to those of our competitors. Technological development by others may result in our technologies, as well as products developed using our technologies, becoming obsolete. If we are unable to successfully develop new products, compete with alternative products, or otherwise gain and maintain market acceptance, our business, results of operations and financial condition could be harmed.

Rapidly changing technology in synthetic biology could make the products we are developing obsolete unless we continue to develop and manufacture new and improved products and pursue new market opportunities.

Our industry is characterized by rapid and significant technological changes, frequent new product introductions and enhancements and evolving industry standards. The preferences and needs of our customers may change over time. Our future success will depend on our ability to continually improve the products we are developing, to develop and introduce new products that address the evolving needs of our customers on a timely and cost-effective basis, and to pursue new market opportunities that develop as a result of technological and scientific advances. These new market opportunities may be outside the scope of our proven expertise or in areas which have unproven market demand, and the utility and value of new products developed by us may not be accepted in the markets served by the new products. Our inability to gain market acceptance of new products could harm our future operating results. Our future success also depends on our ability to manufacture these new and improved products to meet customer demand in a timely and cost-effective manner, including our ability to resolve manufacturing issues that may arise as we commence production of these complex products. Unanticipated difficulties or delays in replacing existing products with new products we introduce or in manufacturing improved or new products in sufficient quantities to meet customer demand could diminish future demand for our products and harm our future operating results.

We may acquire other companies or technologies, which could divert our management's attention, result in additional dilution to our stockholders, disrupt our operations and harm our operating results.

In 2021, we announced the acquisition of EtonBio, Inc. We may in the future seek to acquire or invest in other businesses, applications or technologies that we believe could complement or expand our current or future products, enhance our technical capabilities or otherwise offer growth opportunities. Any acquisitions may divert the attention of management and cause us to incur various costs and expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are

consummated. We may not be able to identify desirable acquisition targets or be successful in entering into an agreement with any particular target or obtain the expected benefits of any acquisition or investment.

To date, the growth of our operations has been organic, and we have limited experience in acquiring other businesses or technologies. We may not be able to successfully integrate acquired personnel, operations and technologies, or effectively manage the combined business following an acquisition. Acquisitions could also result in dilutive issuances of equity securities, the use of our available cash, or the incurrence of debt, which could harm our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial condition may suffer.

If we experience a significant disruption in our information technology systems or breaches of data security, our business could be adversely affected.

We rely, and will continue to rely, on multiple information technology systems to operate the systems that allow our company to function, including cloud-based and on-premises information technology systems. We rely extensively on information technology systems to facilitate our principal company activities, including to operate the cloud-based platform on which the services offered to our customers rely. In addition, we also use information technology systems for a variety of key business functions, including to keep financial records, facilitate our research and development initiatives, manage our manufacturing operations, maintain quality control, fulfill customer orders, maintain corporate records, communicate with staff and external parties, and operate other critical functions.

Like all companies that rely on information technology systems, our information technology systems and those of our vendors and partners are potentially vulnerable to failures of confidentiality, integrity, and availability. Such failures could include, for example, malicious intrusion, corruption of data, and disruptive events, including but not limited to natural disasters and catastrophes. Such failures, if they occur, could compromise company, vendor or partner systems and employee, company, vendor, or partner data. A wide range of cyber attacks, including cyber intrusions, denial of service, and other malicious internet-based activity, such as social engineering and phishing scams, continue to increase. Cloud-based platform providers of services have been and are expected to continue to be targeted by a variety of threat actors, including sophisticated nation-state and nation-state-supported actors. Such threat actors use attack methods that change frequently, are increasingly complex and sophisticated, including social engineering and phishing scams, and can originate from a wide variety of sources, including insider threats or external actors. In addition to traditional computer “hackers,” malicious code, such as viruses and worms, employee theft or misuse, denial-of-service attacks and sophisticated nation-state and nation-state supported actors now engage in attacks, including advanced persistent threat intrusions. In addition, we have not finalized our information technology and data security policies and procedures and therefore, our information technology systems may be more susceptible to such failures and attacks than if such security policies and procedures were finalized. Despite our efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks and there is no guarantee that our efforts are or will be adequate to safeguard against all such threats. Moreover, despite our current and future efforts, it is possible that we may not be able to anticipate, detect, appropriately react and respond to, or implement effective preventative measures against, all cybersecurity incidents. Such cybersecurity incidents can be difficult to detect and any delay in identifying such incidents may lead to increased harm and legal exposure of the type described below.

If our security measures, or those of our vendors and partners, are compromised for any reason, including negligence, error, or malfeasance, our principal company activities could cease to function, or be significantly degraded, until such cybersecurity incidents are remediated. Further, our business could be harmed, our reputation could be damaged, and we could become subject to regulatory inquiries or litigation, all of which could result in significant liability. In addition, if we were to experience a prolonged system disruption in our information technology systems or those of certain of our vendors and partners, it could negatively impact our ability to serve our customers, which could adversely impact our business, financial condition, results of operations and prospects. If operations at our facilities were disrupted and could not be promptly restored, such disruption could cause a material disruption in our business, financial condition, results of operations, and prospects. Moreover, there could be public announcements regarding any cybersecurity incidents and, if securities analysts or investors perceive these announcements to be negative, it could, among other things, have a material adverse effect on our business, reputation, financial condition, results of operations and prospects.

Our information technology systems, and those of our vendors and partners, are potentially vulnerable to cybersecurity incidents such as data security breaches, which could lead to the loss and exposure of information, including personal, sensitive, and confidential data, to unauthorized persons, resulting in a data security breach. Any such data security breaches could, among other things, lead to the loss of trade secrets or other intellectual property, or could lead to the exposure of personal information, including sensitive personal information, of our employees, customers and others, any of which could have a material adverse effect on our business, reputation, financial condition, results of operations and prospects. In addition, any such data security breaches could result in legal claims or proceedings, regulatory inquiries, investigations, or actions, and other types of liability under laws that protect the privacy and security of personal information, including federal, state and foreign data protection, privacy, data security, and consumer protection regulations, violations of which could result in significant penalties and fines. Additionally, the introduction and passage of new privacy laws, including but not limited to the California Privacy Rights Act

(CPRA), which was approved by California voters in the election on November 3, 2020 and will modify the California Consumer Privacy Act (CCPA), creates further uncertainty and may require us to incur additional costs and expenses in an effort to comply. In addition, U.S. and international laws and regulations that have been applied to protect user privacy (including laws regarding unfair and deceptive practices in the U.S. and GDPR in the EU) may be subject to evolving interpretations or applications. This area of law is continuing to evolve and is subject to significant uncertainty, which may require us to incur additional costs and expenses in order to comply. Furthermore, responding to a legal claim or proceeding or a regulatory inquiry, investigation, or action, regardless of its merit, could be costly, divert management's attention and harm our reputation.

The cost of protecting against, investigating, mitigating and responding to cybersecurity incidents and data security breaches, and complying with applicable breach notification obligations to individuals, regulators, vendors, partners, and others can be significant. As threats related to cybersecurity incidents and data security breaches continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to detect, appropriately react to, and respond to such cybersecurity incidents and data security breaches. The inability to implement, maintain and upgrade adequate safeguards could have a material adverse effect on our business, financial condition, results of operations and prospects. Should such disruptions occur, our current insurance policies may not be adequate to compensate us for the potential costs and other losses arising from such disruptions, failures, or security breaches and it is possible that an insurer could deny coverage on any future claim. In addition, such insurance may not be available to us in the future on economically reasonable terms or at all. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, financial condition, results of operations and prospects.

A customer may unintentionally misuse our products or a bad actor may intentionally use our products with intent to create harm and, in either case, third parties may seek to hold us liable for the resulting harm.

All orders for our products that we receive are processed through a security filter. We verify that the shipping addresses of our customers are valid, screen the customer versus known agent lists and comply in all material respects with the know your customer rules. Despite these precautions it is possible that one of our customers may unintentionally misuse our products or a bad actor may attempt to misuse our products to create harm. If misuse of our products were to occur, the terms and conditions of our invoices may be insufficient to protect us from liability. Any indemnification that our customers are required to provide to us may be insufficient to cover the costs and damages resulting from the misuse of our products. Further, any product liability insurance we may obtain could specifically exclude bad acts of our customers from coverage or coverage limits may be insufficient to protect us from the amount of the liability we could incur. Any unintentional or intentional misuse of our products could result in liability or require us to expend costs to defend ourselves, may not be covered by insurance and may have a material and adverse effect on our business or results of operations.

Risks Related to Supply, Manufacturing and Distribution of Our Products

We rely on a single contract manufacturer to manufacture and supply our instruments and single source suppliers for certain components of our instruments and raw materials. If this manufacturer or these suppliers should fail or not perform satisfactorily, our ability to commercialize and supply our products would be adversely affected.

We do not own or operate, and currently do not plan to own or operate, facilities for manufacturing our BioXp systems. We rely and expect to continue to rely on third parties for the production and packaging of our instruments. We rely on a single contract manufacturer, D&K Engineering, Inc. (D&K), located in San Diego, to manufacture and supply our BioXp systems. Since our contract with D&K does not commit it to carry inventory or make available any particular quantities of instruments outside of accepted purchase orders, D&K may give other customers' needs higher priority than ours, and we may not be able to obtain adequate supplies in a timely manner or on commercially reasonable terms. We do not have a long-term supply agreement with D&K. Instead, we typically issue purchase orders for our BioXp systems on a six-month rolling basis. Our purchase orders with D&K are terminable without cause upon sixty days' notice in writing to the other party.

Our reliance on a third party for the manufacture of our instruments increases the risk that we will not have sufficient quantities of our instruments or will not be able to obtain such quantities at an acceptable cost or quality, which could delay, prevent or impair commercialization of our instruments. In the event it becomes necessary to utilize a different contract manufacturer for our BioXp systems, we would experience additional costs, delays and difficulties as a result of having to identify and enter into an agreement with a new manufacturer. We would also have to prepare such new manufacturer to meet the technical and logistical requirements associated with manufacturing our instruments, and our business could suffer as a result.

In addition, certain of the components used in our instruments are sourced from limited or single-source suppliers. If we were to lose such suppliers, there can be no assurance that we will be able to identify or enter into agreements with alternative suppliers on a timely basis on acceptable terms, if at all. An interruption in our ability to sell and deliver instruments to customers could occur if we encounter delays or difficulties in securing these components, or if the quality of the components

supplied do not meet our specifications, or if we cannot then obtain an acceptable substitute. If any of these events occur, our business, results of operations, financial condition and prospects could be harmed.

We also rely on third parties for certain components of our BioXp kits and benchtop reagents, including the nucleotides we use in our BioXp kits, which are primarily sourced from Integrated DNA Technologies, Inc. (IDT), a division of Danaher Corporation. In the past, supply issues with IDT have caused us to rely on an alternative supplier for these components and raw materials. We cannot guarantee that we will be able to source these materials at similar quantities and on similar terms if our preferred suppliers were to become unable or unwilling to fulfill our requirements.

Our reliance on third party manufacturers subjects us to risks associated with their businesses and operations. This dependence on others may harm our ability to develop and commercialize our products on a timely and competitive basis. Any such failure may result in decreased product sales and lower product revenue, which would harm our business. For example, even if we have agreements with third parties, they may not perform their obligations to us and they may be unable or unwilling to establish or increase production capacity commensurate with our needs. Disputes may also arise between us and our suppliers that result in the delay or termination of commercialization or that result in costly litigation or arbitration that diverts management's attention and resources. Also, third party manufacturers are subject to their own operational and financial risks that are outside of our control, and potentially their control also, that may cause them to suffer liquidity or operational problems and that could interfere with their business operations. For example, our suppliers have also been impacted by the COVID-19 pandemic and some of our raw materials and components originate in China. We have also experienced supply delays for critical hardware, instrumentation and supplies that we use for product development, as these other components and supplies are otherwise diverted to COVID-19-related testing and other uses.

We have limited experience producing and supplying our products. We may be unable to consistently manufacture or source our products to the necessary specifications or in quantities necessary to meet demand on a timely basis and at acceptable performance and cost levels.

Our BioXp systems, BioXp kits and benchtop reagents comprise an integrated solution with many different components that work together. As such, a quality defect in a single component can compromise the performance of the entire system. In order to successfully generate revenue from this product line, we need to supply our customers with products that meet their expectations for quality and functionality in accordance with established specifications on a timely basis. Our instruments are manufactured by D&K using complex processes, sophisticated equipment and strict adherence to specifications and quality systems procedures. Given the complexity of this instrumentation, individual units may occasionally require additional installation and service prior to becoming available for customer use. We have experienced quality issues with certain of our mRNA BioXp kits and are currently working to resolve those issues. If we are unable to resolve quality issues with these particular kits, we may be unable to recognize projected revenue from them and our business could be harmed.

As we continue to scale commercially and develop new products, and as our products incorporate increasingly sophisticated technology, it will become more difficult to ensure our products are produced in the necessary quantities while maintaining quality. There is no assurance that we or our third-party manufacturers will be able to continue to manufacture our products so that our technology consistently achieves the product specifications and produces results with acceptable quality. In addition, our BioXp kits and benchtop reagents have a limited shelf life, after which their performance is not ensured and many of our products must be shipped and stored at controlled temperatures. Shipment of BioXp kits and benchtop reagents that exceed their shelf life or shipment of defective products to customers may result in recalls and warranty replacements, which would increase our costs and may damage our reputation, and depending upon current inventory levels and the availability and lead time for additional inventory, could lead to availability issues. Any future design issues, unforeseen manufacturing problems, such as contamination of our or our manufacturers' facilities, equipment malfunctions, aging components, quality issues with components and materials sourced from third-party suppliers, or failures to strictly follow procedures or meet specifications, may have a material adverse effect on our brand, business, reputation, results of operations and financial condition and could result in us or our third-party manufacturers losing International Organization for Standardization (ISO) or quality management certifications. If our third-party manufacturers fail to maintain ISO quality management certifications, our customers might choose not to purchase products from us.

In addition, as we scale our commercial operations, we will also need to make corresponding improvements to other operational functions, such as our customer support, service and billing systems, compliance programs and internal quality assurance programs. We cannot assure you that any increases in scale, related improvements and quality assurance will be successfully implemented or that appropriate personnel will be available. As we develop additional products, we may need to bring new equipment online, implement new systems, technology, controls and procedures and hire personnel with different qualifications.

An inability to manufacture products and components that consistently meet specifications, in necessary quantities, at commercially acceptable costs and without significant delays, may have a material adverse effect on our business, results of operations, financial condition and prospects.

We must continue to secure and maintain sufficient and stable supplies of components and raw materials.

Certain disruptions in supply of, and changes in the competitive environment for, components and raw materials integral to the manufacturing of our products may adversely affect our profitability. We use a broad range of materials and supplies in our products. A significant disruption in the supply of these materials could decrease production and shipping levels, materially increase our operating costs and materially and adversely affect our revenues and profit margins. Shortages of materials or interruptions in transportation systems, labor strikes, work stoppages, war, acts of terrorism or other interruptions to or difficulties in the employment of labor or transportation in the markets in which we purchase materials, components and supplies for the production of our products, in each case, may adversely affect our ability to maintain production of our products and achieve profitability. Unforeseen discontinuation or unavailability of certain components, such as enzymes or nucleotides, each of which we currently primarily source from single supplier, could cause backorders as we modify our product specifications to accommodate replacement components. If we were to experience a significant or prolonged shortage of critical components from any of our suppliers and could not procure the components from other sources, we would be unable to manufacture our products and ship them to our customers in a timely fashion, or at all, which would adversely affect our sales, margins and customer relations. Any supply interruption of our materials could limit our ability and the ability of our suppliers to manufacture our products and could therefore harm our business, financial condition and results of operations.

Our products could have defects or errors, giving rise to claims against us, adversely affecting market adoption and negatively impacting our business, financial condition, and results of operations.

Our products utilize novel and complex technology related to writing synthetic DNA and mRNA and may develop or contain undetected defects or errors. We cannot assure you that material performance problems, defects, or errors will not arise, and as we commercialize our products, these risks may increase. We provide warranties at the point of sale that our products will meet performance expectations and will be free from defects. We also provide extended warranties at an additional cost to the customer. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins.

In manufacturing our products, we depend upon third parties for the supply of our instruments and various components, many of which require a significant degree of technical expertise to produce. If our suppliers fail to make our products or their components to specification or provide defective products to us, and our quality control tests and procedures fail to detect such errors or defects, or if we or our suppliers use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

If our products contain defects, we may experience:

- a failure to achieve market acceptance for our products;
- loss of customer orders and delay in order fulfillment;
- damage to our reputation;
- increased warranty and customer service and support costs due to product repair or replacement;
- product recalls or replacements;
- inability to attract new customers;
- diversion of resources from our manufacturing and research and development departments into our service department; and
- legal claims against us, including product liability claims, which could be costly and time consuming to defend and result in substantial damages.

If we become subject to product liability claims, we may be required to pay damages out of our cash reserves.

Our business exposes us to potential product liability claims that are inherent in the production, marketing and sale of biotechnological and genetic products. We do not currently have product liability insurance and any product liability claim, or recall of one of our products, would have to be paid out of our cash reserves.

Shipping is a critical part of our business. Any changes in our shipping arrangements or damages or losses sustained during shipping could adversely affect our business, financial condition, results of operations and prospects.

We currently rely on commercial carriers for our shipping. If we are not able to negotiate acceptable pricing and other terms with these carriers, or if they experience performance problems or other difficulties, it could negatively impact our operating results and our customers' experience. If a product is damaged in transit, it may result in a substantial delay in the fulfillment of the customer's order, and depending on the type and extent of the damage and whether the incident is covered by insurance, it may result in a substantial financial loss to us. If our products are not delivered in a timely fashion or are damaged or lost during the delivery process, our customers could become dissatisfied and cease using our products or services, which would adversely affect our business, financial condition, results of operations and prospects.

Our business depends on our ability to quickly and reliably deliver our products and in particular, our BioXp kits and benchtop reagents, to our customers. Certain of these products are perishable and must be kept below certain temperatures and, therefore, we ship these products on dry ice and only ship such products on certain days of the week to reach customers without spoilage. Disruptions in the delivery of these products, whether due to labor disruptions, bad weather, natural disasters, terrorist acts or threats or for other reasons could result in our customers receiving products that are not fit for use, and if used, could result in inaccurate results or ruined experiments. While we work with customers to replace any products that are impacted by delivery disruptions, our reputation and our business may be adversely impacted even if we replace products free of charge. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be adversely affected.

In addition, should our commercial carriers encounter difficulties in delivering our products to customers, particularly at the end of any financial quarter, it could adversely impact our ability to recognize revenue for those products in that period and accordingly adversely affect our financial results for that period.

Risks Related to Our Sales, Marketing and Customer Support

We have limited experience in sales and marketing of our products.

We have limited experience in sales and marketing our products. Our ability to achieve profitability depends on our being able to attract customers for our products. To meet our sales objectives, we must expand our sales, marketing, distribution and customer service and support capabilities with personnel with the appropriate technical expertise. In undertaking expansion efforts, we will face a number of risks relating to:

- our ability to attract, retain and manage the sales, marketing and customer service and support personnel necessary to commercialize and gain market acceptance for our technology;
- the time and cost of maintaining specialized sales, marketing and customer service and support personnel; and
- the relative success of our sales, marketing and customer service and support personnel.

We currently enlist, and may in the future seek to enlist one or more third parties to assist with sales, distribution and customer service and support. There is no guarantee that we will be successful in attracting effective sales and distribution partners or that we will be able to enter into such arrangements on favorable terms. If our sales and marketing efforts, or those of any third-party sales and distribution partners, are not successful, our products may not gain market acceptance, which could materially impact our business operations.

A substantial proportion of our sales are through distributors, and we do not control their efforts to sell our products. If our relationships with these third-party distributors deteriorate, or if these third-party distributors fail to sell our products or engage in activities that harm our reputation, our financial results may be negatively affected.

Our current sales model includes direct sales in North America and parts of Europe, and relationships with third party distributors in other parts of Europe and various countries in the Middle East, Africa and Asia Pacific regions. We believe that our reliance on distributors improves the economics of our business, as we do not carry the high fixed costs of a direct sales force in many of the countries in which our products are sold. If we are unable to maintain or enter into such distribution arrangements on acceptable terms, or at all, we may not be able to successfully commercialize our products in certain countries.

Furthermore, distributors can choose the level of effort that they apply to selling our products relative to others in their portfolio. The selection, training, and compensation of distributors' sales personnel are within their control rather than our own and may vary significantly in quality from distributor to distributor. They may experience their own financial difficulties, or distribution relationships may be terminated or allowed to expire, which could increase the cost of or impede commercialization of our products in applicable countries. Disputes may also arise between us and our distributors that result in the delay or termination of commercialization or that result in costly litigation or arbitration that diverts management's attention and resources. Distributors may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation. Distributors could move forward with competing products developed either independently or in collaboration with others, including our competitors.

In addition, although our contract terms require our distributors to comply with all applicable laws regarding the sale of our products, including regulatory labelling, protection of personal data, U.S. export regulations and the U.S. Foreign Corrupt Practices Act (FCPA), we may not be able to ensure proper compliance. If our distributors fail to effectively market and sell our products in full compliance with applicable laws and regulations, our results of operations and business may suffer.

The size of the markets for our products may be smaller than estimated, and new market opportunities may not develop as quickly as we expect, or at all, thus limiting our ability to successfully meet our anticipated revenue projections.

The market for synthetic biology technologies and products is evolving, making it difficult to predict with any accuracy the size of the markets for our current and future products, including our BioXp systems, BioXp kits and benchtop reagents. Our estimates of the total addressable market for our current and future products are based on a number of internal and third-party estimates and assumptions. In particular, our estimates are based on our expectations that researchers in the market for certain synthetic biology research tools and technologies will view our products as competitive alternatives to, or better options than, existing tools and technologies. We also expect researchers will recognize the ability of our products to complement, enhance and enable new applications of their current tools and technologies. Underlying each of these expectations are a number of estimates and assumptions that may be incorrect, including the assumptions that government or other sources of funding will continue to be available to synthetic biology researchers at times and in amounts necessary to allow them to purchase our products and that researchers have an unmet need for performing synthetic biology applications. As a result, the sizes of the annual total addressable market for new markets and new products are even more difficult to predict. The synthetic biology market may develop more slowly or differently than we expect. While we believe our assumptions and the data underlying our estimates of the total addressable market for our products are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates, or those underlying the third-party data we have used, may change over time, thereby reducing the accuracy of our estimates. As a result, our estimates of the total addressable market for our products may be incorrect.

The future growth of the market for our current and future products depends on many factors beyond our control. For example, in 2020, 11% of our revenue was from products specifically targeting research and development efforts related to COVID-19 vaccines and therapeutic products. As effective COVID-19 vaccines or treatments are developed, approved and rolled out to protect against and treat the COVID-19 virus, demand for these products and biofoundry services may decline, the size of our market opportunity for such products may be impacted and our revenue may be significantly and adversely affected as a result. In 2021, our revenue from COVID-19 related products was 3% of total revenue.

We expect that our products will be subject to the market forces and adoption curves common to other new technologies. The market for synthetic biology technologies and products is in its early stages of development. Sales of new products into new market opportunities may take years to develop and mature and we cannot be certain that these market opportunities will develop as we expect. If the markets for our current and future products are smaller than estimated or do not develop as we expect, our growth may be limited and our business, financial condition and operational results of operations could be adversely affected.

Our success depends on broad scientific and market acceptance of our products, which we may fail to achieve.

Our ability to achieve and maintain scientific and commercial market acceptance of our products will depend on a number of factors. If widespread adoption of our products takes longer than anticipated, we will continue to experience operating losses.

The success of life sciences products is due, in large part, to recognition and acceptance by the scientific community, their adoption of these products in the applicable field of research and the growth, prevalence and costs of competing products. Such recognition and acceptance of our products may not occur in the near term, or at all. New synthetic biology technology, including our own, may not be adopted until the consistency and accuracy of such technology has been proven.

Other factors in achieving commercial market acceptance of our products include:

- our ability to market and increase awareness of the capabilities of our products;
- our customers' willingness to adopt new products and workflows;
- whether early adopters and key opinion leaders (KOLs) publish research involving the use of our products;
- our products' ease-of-use and whether it reliably provides advantages over alternative technologies;
- the rate of adoption of our products and services by academic institutions, laboratories, biopharmaceutical companies and others;
- the prices we charge for our products;
- our ability to develop new products and workflows;
- whether competitors commercialize products that perform similar functions as our products; and
- the impact of our investments in product innovation and commercial growth.

We cannot assure you that we will be successful in addressing each of these criteria or other criteria that might affect the market acceptance of any products we commercialize. If we are unsuccessful in achieving and maintaining scientific and market acceptance of our products, our business, financial condition and results of operations would be adversely affected.

The synthetic biology technology market is highly competitive. If we fail to compete effectively, our business and results of operation will suffer.

We face significant competition in the synthetic biology technology market. We currently compete with synthetic biology technology companies and the companies that are supplying components, products and services that serve customers engaged in synthetic biology research. These companies include Thermo Fisher Scientific Inc.; Danaher Corporation; CureVac N.V.; GENEWIZ Group, which was acquired by Brooks Automation, Inc., which subsequently changed their name to Azenta; GenScript Biotech Corporation; DNA Script SAS; Integrated DNA Technologies, Inc.; Molecular Assemblies, Inc.; Nuclera Nucleics Ltd; Nutcracker Therapeutics, Inc.; Twist Bioscience Corporation; Aldevron, LLC; TriLink BioTechnologies, Inc.; Evonetix Ltd. and others.

Some of our current competitors are large, publicly-traded companies, or are divisions of large publicly-traded companies, and may enjoy a number of competitive advantages over us, including:

- greater name and brand recognition;
- greater financial and human resources;
- broader product lines;
- larger sales forces and more established distributor networks;
- substantial intellectual property portfolios;
- larger and more established customer bases and relationships; and
- better established, larger scale and lower cost manufacturing capabilities.

We cannot assure investors that our products will compete favorably or that we will be successful in the face of increasing competition from products and technologies introduced by our existing or future competitors or companies entering our markets. In addition, we cannot assure investors that our competitors do not have or will not develop products or technologies that currently or in the future will enable them to produce competitive products with greater capabilities or at lower costs than ours. Any failure to compete effectively could materially and adversely affect our business, financial condition and operating results.

Our revenue, results of operations and cash flows would be adversely affected by the loss of a significant customer.

We have derived, and we may continue to derive, a significant portion of our revenues from a limited number of large customers. We estimate that our twenty largest customers accounted for 85%, 60% and 47% of our revenue for the period March 8, 2019 through December 31, 2019 and the years ended December 31, 2020 and December 31, 2021, respectively. The loss of key customers, or the reduction in the amount of product ordered by them may adversely affect our revenue, results of operations, cash flows and reputation in the marketplace.

One customer, New England Biolabs, Inc., accounted for 14% of our revenue for the year ended December 31, 2021, based on royalties paid under a Confidential Settlement Agreement. This royalty will expire upon the earlier of the expiration of all licensed patents or the entry of a final judgment declaring the licensed patents invalid or unenforceable. Also under the terms of the Confidential Settlement Agreement, NEB has only agreed to continue to offer the royalty-bearing products for sale through September 30, 2025, after which time it may stop selling the royalty bearing products upon sixty days' notice.

We generally do not have long-term contracts with our customers requiring them to purchase any specified quantities of products from us.

We generally do not have long-term contracts with our customers requiring them to purchase any specified quantities of products from us. Without such contracts, our customers are not obligated to order our products. We cannot accurately predict our customers' decisions to reduce or cease purchasing our products. Additionally, even where we enter into contracts with our customers, there is no guarantee that such agreements will be negotiated on terms that are commercially favorable to us in the long term. If many of our customers were to substantially reduce their purchase volume or cease ordering products from us, this could materially and adversely affect our financial performance.

Our business will depend significantly on research and development spending by the pharmaceutical, biotechnology and industrial agricultural customers, as well as academic institutions and other research institutions. Any reduction in spending could limit demand for our products and adversely affect our business, results of operations, financial condition and prospects.

We expect that substantially all of our sales revenue in the near term will be generated from sales to pharmaceutical, biotechnology and industrial agricultural customers, as well as academic institutions and other research institutions. Much of these customers' funding is dependent on annual research and development budgets and in the case of academic and other research institutions will be, in turn, provided by various state, federal and international government agencies. As a result, the

demand for our products will depend upon the research and development budgets of these customers, which are impacted by factors beyond our control, such as:

- research and development budgets within the pharmaceutical, biotechnology, agricultural and other industries;
- government funding of research and development;
- changes to programs that provide funding to research laboratories and institutions, including changes in the amount of funds allocated to different areas of research or changes that have the effect of increasing the length of the funding process;
- macroeconomic conditions and the political climate;
- potential changes in the regulatory environment;
- differences in budgetary cycles, especially government- or grant-funded customers, whose cycles often coincide with government fiscal year ends;
- market-driven pressures to consolidate operations and reduce costs; and
- scientific and market acceptance of relatively new synthetic biology products.

In addition, various state, federal and international agencies that provide grants and other funding may be subject to stringent budgetary constraints that could result in spending reductions, reduced grant making, reduced allocations or budget cutbacks, which could jeopardize the ability of funding organizations or the organizations to whom they provide funding, to purchase our products. For example, congressional appropriations to the National Institutes of Health (NIH), have generally increased year-over-year for the last 19 years, and reached a new high in 2020, but the NIH also experiences occasional year-over-year decreases in appropriations, including as recently as 2013. In addition, funding for life science research has increased more slowly during the past several years compared to previous years and has actually declined in some countries. There is no guarantee that NIH appropriations will not decrease in the future, and a decrease may be more likely under the current administration, whose annual budget proposals have repeatedly decreased NIH appropriations. A decrease in the amount of, or delay in the approval of, appropriations to NIH or other similar United States or international organizations, such as the Medical Research Council in the United Kingdom, could result in fewer grants benefiting synthetic biology research. These reductions or delays could also result in a decrease in the aggregate amount of grants awarded for synthetic biology research or the redirection of existing funding to other projects or priorities, any of which in turn could cause our customers and potential customers to reduce or delay purchases of our products. Our operating results may fluctuate substantially due to any such reductions and delays. Any decrease in our customers' budgets or expenditures, or in the size, scope or frequency of their capital or operating expenditures, could materially and adversely affect our business, results of operations, financial condition and prospects.

Our success depends on our ability to service and support our products directly or in collaboration with our strategic partners.

To the extent that we or our strategic partners fail to maintain a high quality level of service and support for our products, there is a risk that the perceived quality of our products will be diminished in the marketplace. Likewise, we may fail to provide the level, quantity or quality of service expected by the marketplace. This could result in slower adoption rates and lower than anticipated utilization of our products, which could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to the COVID-19 Pandemic and Other Natural Disasters

The COVID-19 pandemic and efforts to reduce its spread have adversely impacted, and are expected to continue to adversely impact, our business and operations.

The COVID-19 pandemic has had, and is expected to continue to have, an adverse impact on our operations, particularly as a result of preventive and precautionary measures that we, other businesses and governments are taking. Governmental mandates related to COVID-19 have impacted, and we expect similar infectious diseases or public health crises may continue to impact, our personnel and personnel at third-party manufacturers in the United States and other countries. Such mandates have impacted and likely will continue to impact the availability and cost of materials, which disrupts or delays our receipt of components and supplies from the third parties we rely on to, among other things, manufacture our BioXp systems, BioXp kits and benchtop reagents or source and timely receive parts and components from third parties. For instance, from time to time during the COVID-19 pandemic, there were standing "stay-at-home" orders in California, and specifically San Diego County where our headquarters is located, that required businesses to implement certain distancing, masking and other health and safety protocols and measures, which have affected productivity and morale. Future implementation of these governmental mandates could further impact our ability to operate effectively and conduct ongoing research and development or other activities. The COVID-19 pandemic has also had an adverse effect on our ability to attract, recruit, interview and hire at the pace we would typically expect to support our rapidly expanding operations. Moreover, the COVID-19 pandemic has had a significant impact on our ability to retain employees and has forced us to fill positions more frequently than we have had to do so in the past. We cannot assure you that in the future we will be able to fill these positions quickly. To the extent that any governmental

authority imposes additional regulatory requirements or changes existing laws, regulations and policies that apply to our business and operations, such as additional workplace safety measures, our product development plans may be delayed, and we may incur further costs in bringing our business and operations into compliance with changing or new laws, regulations and policies.

Our ability to drive the adoption of our products will depend upon our ability to attend trade shows and conferences, visit customer sites, the ability of our customers to access laboratories, install our products and train their personnel on our products and conduct research in the face of the COVID-19 pandemic. Additionally, the research and development budgets of these customers, the ability of such customers to receive funding for research, and the ability of such customers to receive instrument installations and visitors to their facilities and to travel to our facilities, other laboratories and industry events, will become increasingly important to the adoption of our products. All of these considerations are impacted by factors beyond our control, such as:

- reductions in capacity or shutdowns of laboratories and other institutions as well as other impacts stemming from the COVID-19 pandemic, such as reduced or delayed spending on instruments or reagents as a result of such shutdowns and delays before re-opened laboratories and institutions resume previous levels of research activities that require new purchases of our products;
- decreases in government funding of research and development; and
- changes to programs that provide funding to research laboratories and institutions, including changes in the amount of funds allocated to different areas of research, changes that have the effect of increasing the length of the funding process or the impact of the COVID-19 pandemic on our customers and potential customers and their funding sources.

The ultimate impact of the COVID-19 pandemic is highly uncertain and subject to sudden change. This impact could have a material, adverse impact on our liquidity, capital resources, operations and business and those of the third parties on which we rely, and could worsen over time. The extent to which the COVID-19 pandemic impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID-19 and the actions to contain COVID-19 or treat its impact, among others. While we do not yet know the full extent of potential impacts on our business, any of these occurrences could significantly harm our business, results of operations and financial condition.

Unfavorable U.S. or global economic conditions as a result of the COVID-19 pandemic, or otherwise, could adversely affect our ability to raise capital and our business, results of operations and financial condition.

While the potential economic impact brought by, and the duration of, the COVID-19 pandemic is difficult to assess or predict, the COVID-19 pandemic has resulted in, and may continue to result in, extreme volatility and disruptions in the capital and credit markets in general and has negatively impacted our stock price since becoming a public company in 2021. Should this impact continue, our ability to raise additional capital through equity, equity-linked or debt financings, will be futher reduced, which could negatively impact our short-term and long-term liquidity and our ability to operate in accordance with our operating plan, or at all. Additionally, our results of operations could be adversely affected by general conditions in the global economy, including inflation, and financial markets. The capital markets or general economic conditions may continue to be adversely affected by geopolitical risks, hostilities, terrorist attacks or wars, including the current war between Russia and Ukraine. A severe or prolonged economic downturn could result in a variety of risks to our business, including weakened demand for our products and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our customers' budgets or cause delays in their payments to us. Any of the foregoing could harm our business. We cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our ability to raise capital, business, results of operations and financial condition.

If our facilities or our third-party manufacturers' facilities become unavailable or inoperable, our research and development program and commercialization of our products could be adversely impacted and manufacturing of our products could be interrupted.

Our San Diego, California, facilities house our corporate, research and development and quality assurance teams. Our instruments are manufactured at our third-party manufacturer's facilities in San Diego, and our BioXp kits and benchtop reagents are manufactured at various locations in the United States and internationally, including our San Diego facilities. We do not have a second or back-up facility to use if our San Diego facility becomes inoperable.

Our facilities in San Diego and those of our third-party manufacturers are vulnerable to natural disasters, public health crises, including the impact of the COVID-19 pandemic, and catastrophic events. For example, our San Diego facilities are located near earthquake fault zones and are vulnerable to damage from earthquakes as well as other types of disasters, including fires, floods, power loss, communications failures and similar events. If any disaster, public health crisis or catastrophic event were to occur, our ability to operate our business would be seriously, or potentially completely, impaired. If our facilities or our third-

party manufacturer's facilities become unavailable for any reason, we cannot provide assurances that we will be able to secure alternative manufacturing facilities with the necessary capabilities and equipment on acceptable terms, if at all. We may encounter particular difficulties in replacing our San Diego facilities given the specialized equipment housed within it. The inability to manufacture our products, combined with our limited inventory of finished products, may result in the loss of future customers or harm our reputation, and we may be unable to re-establish relationships with those customers in the future.

If our research and development program or commercialization program were disrupted by a disaster or catastrophe, the launch of new products, including our workflow automation and reagent solutions, and the timing of improvements to our products could be significantly delayed and could adversely impact our ability to compete with other available products and solutions. If our or our third-party manufacturer's capabilities are impaired, we may not be able to manufacture and ship our products in a timely manner, which would adversely impact our business. Although we possess insurance for damage to our property and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all.

Risks Related to Doing Business Internationally

Doing business internationally creates operational and financial risks for our business.

We estimate that during the period ended December 31, 2019 and the fiscal years ended December 31, 2020 and December 31, 2021, approximately 14%, 25% and 30%, respectively, of our revenue was generated from customers located outside of the United States. In connection with our growth strategy, we intend to further expand in international markets. Conducting and launching operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. If we fail to coordinate and manage these activities effectively, our business, financial condition or results of operations could be adversely affected. International sales entail a variety of risks, including longer payment cycles and difficulties in collecting accounts receivable outside of the United States, currency exchange fluctuations, challenges in staffing and managing foreign operations, tariffs and other trade barriers, unexpected changes in legislative or regulatory requirements of foreign countries into which we sell our products, difficulties in obtaining export licenses or in overcoming other trade barriers, laws and business practices favoring local companies, political and economic instability, difficulties protecting or procuring intellectual property rights, and restrictions resulting in delivery delays and significant taxes or other burdens of complying with a variety of foreign laws.

Changes in the value of the relevant currencies may affect the cost of certain items required in our operations. Changes in currency exchange rates may also affect the relative prices at which we are able to sell products in the same market. Our revenue from international customers may be negatively impacted as increases in the U.S. dollar relative to our international customers' local currency could make our products more expensive, impacting our ability to compete. Our costs of materials from international suppliers may increase if in order to continue doing business with us they raise their prices as the value of the U.S. dollar decreases relative to their local currency. Foreign policies and actions regarding currency valuation could result in actions by the United States and other countries to offset the effects of such fluctuations. The recent global financial downturn has led to a high level of volatility in foreign currency exchange rates and that level of volatility may continue, which could adversely affect our business, financial condition or results of operations.

Our international business could expose us to business, regulatory, political, operational, financial, and economic risks associated with doing business outside of the United States.

Engaging in international business inherently involves a number of difficulties and risks, including:

- required compliance with existing and changing foreign regulatory requirements and laws that are or may be applicable to our business in the future, such as the European Union's General Data Protection Regulation (GDPR), and other data privacy requirements, labor and employment regulations, anti-competition regulations, the U.K. Bribery Act of 2010 and other anti-corruption laws;
- required compliance with U.S. laws such as the FCPA, and other U.S. federal laws and regulations, including those established by the Office of Foreign Asset Control;
- export requirements and import or trade restrictions;
- laws and business practices favoring local companies;
- foreign currency exchange fluctuations, longer payment cycles and difficulties in enforcing agreements and collecting accounts receivables through certain foreign legal systems;
- hyperinflation or economic or political instability in foreign countries, including the war between Russia and Ukraine;
- changes in social, economic, and political conditions or in laws, regulations and policies governing foreign trade, manufacturing, research and development, and investment, including as a result of the separation of the United Kingdom from the European Union, commonly referred to as Brexit;
- the imposition of inconsistent laws or regulations;

- changes in or interpretations of foreign law that may adversely affect our ability to sell our products, perform services or repatriate profits to the United States;
- potentially adverse tax consequences, tariffs, customs charges, bureaucratic requirements and other trade barriers;
- difficulties and costs of staffing and managing foreign operations; and
- difficulties protecting, maintaining, enforcing or procuring intellectual property rights.

If one or more of these risks occurs, it could require us to dedicate significant resources to remedy such occurrence, and if we are unsuccessful in finding a solution, our financial results will suffer.

We may be subject to fines or other penalties for potential past violations of U.S. export control and economic sanctions laws.

Our international business activities must comport with U.S. export controls and other international trade restraints, including the U.S. Department of Commerce's Export Administration Regulations and economic sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control.

In late 2021, following a voluntary internal review of our compliance with U.S. export control and sanctions laws, we became aware that certain of our products had been sold indirectly into embargoed countries via our distributors and resellers, potentially in violation of U.S. export control and economic sanctions laws. These laws restrict or prohibit the sale of certain products, including our BioXp systems, into certain countries, including Russia. In the past, we may have exported products prior to receiving these required authorizations. We believe that these potential violations were inadvertent and occurred because we and certain of our resellers did not have sufficient compliance procedures in place to prevent the transactions at issue. As a result, we were unable to preclude certain of our channel partners and resellers from selling our solutions into countries subject to a U.S. embargo until late 2021. Commencing in late 2021, we took a series of corrective actions intended to remediate the effect of any unauthorized past actions, including actions to permanently stop supporting the use of our BioXp systems in sanctioned countries.

We are subject to various U.S. and international anti-corruption laws and other anti-bribery and anti-money laundering laws and regulations.

We are subject to the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, and other anti-corruption, anti-bribery, and anti-money laundering laws in the jurisdictions where we do business, both domestic and abroad. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly. These laws generally prohibit companies, their employees, business partners, third-party intermediaries, representatives, and agents from authorizing, offering, or providing, directly or indirectly, improper payments or benefits to government officials or commercial parties to obtain or retain business, direct business to any person, or gain any improper advantage. We sometimes leverage third parties to conduct our business abroad. We and our employees, business partners, third-party intermediaries, representatives, and agents may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and we may be held liable for their corrupt or other illegal activities even if we do not explicitly authorize those activities. We cannot assure you that our employees and agents will not take actions that violate applicable law, for which we may be ultimately held responsible. These laws also require that we keep accurate books and records and maintain internal accounting controls and compliance procedures designed to prevent any such actions. While we have policies and procedures to address compliance with these laws, we cannot assure you that our employees, business partners, third-party intermediaries, representatives, and agents will not take actions that violate our policies or applicable law, for which we may be ultimately held responsible. Our exposure for violating these laws increases as our international presence expands and as we increase sales and operations in foreign jurisdictions.

Any violation of the FCPA or other applicable anti-bribery, anti-corruption, and anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions, settlements, prosecution, enforcement actions, fines, damages, or suspension or debarment from government contracts, all of which may have an adverse effect on our reputation, business, stock price, financial condition, prospects, and results of operations. In addition, responding to any investigation or action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees.

Risks Related to Our Regulatory Environment

If we elect to label and promote any of our products as clinical diagnostics tests or medical devices, we would be required to obtain prior approval or clearance by the U.S. Food and Drug Administration (FDA), which would take significant time and expense and could fail to result in FDA clearance or approval for the intended uses we believe are commercially attractive.

Our products are currently labeled and promoted, and are, and in the near-future will be, sold primarily to academic and research institutions and research companies as research use only (RUO) products. They are not currently designed, or intended to be used, for clinical diagnostic tests or as medical devices. If we elect to label and market our products for use as, or in the performance of, clinical diagnostics in the United States, thereby subjecting them to FDA regulations as medical

devices, we would be required to obtain premarket 510(k) clearance or premarket approval from the FDA, unless an exception applies.

We may in the future register with the FDA as a medical device manufacturer and list some of our products with the FDA pursuant to an FDA Class I listing for general purpose laboratory equipment. While this regulatory classification is exempt from certain FDA requirements, such as the need to submit a premarket notification commonly known as a 510(k), and some of the requirements of the FDA's Quality System Regulations (QSRs), we would be subject to ongoing FDA "general controls," which include compliance with FDA regulations for labeling, inspections by the FDA, complaint evaluation, corrections and removals reporting, promotional restrictions, reporting adverse events or malfunctions for our products, and general prohibitions against misbranding and adulteration.

In addition, we may in the future submit 510(k) premarket notifications to the FDA to obtain FDA clearance of certain of our products. It is possible, in the event we elect to submit 510(k) applications for any of our products, that the FDA would take the position that a more burdensome premarket application, such as a premarket approval application or a de novo application, is required for those same products. If such applications were required, greater time and investment would be required to obtain FDA approval. Even if the FDA agreed that a 510(k) was appropriate, FDA clearance can be expensive and time consuming. Notwithstanding the effort and expense, FDA clearance or approval could be denied for some or all of our products for which we choose to market as a medical device or a clinical diagnostic device. There can be no assurance that future products for which we may seek premarket clearance or approval will be approved or cleared by FDA or a comparable foreign regulatory authority on a timely basis, if at all, nor can there be assurance that labeling claims will be consistent with our anticipated claims or adequate to support continued adoption of such products. Compliance with FDA or comparable foreign regulatory authority regulations would require substantial costs, and subject us to heightened scrutiny by regulators and substantial penalties for failure to comply with such requirements or the inability to market our products. The lengthy and unpredictable premarket clearance or approval process, as well as the unpredictability of the results of any required clinical studies, may result in our failing to obtain regulatory clearance or approval to market such products, which would significantly harm our business, results of operations, reputation, and prospects.

If we sought and received regulatory clearance or approval for any of our products, we would be subject to ongoing FDA obligations and continued regulatory oversight and review, including the general controls listed above and the FDA's QSRs for our development and manufacturing operations. We could also be subject to additional FDA post-marketing obligations for such products, any or all of which would increase our costs and divert resources away from other projects. If we sought and received regulatory clearance or approval and are not able to maintain regulatory compliance with applicable laws, we could be prohibited from marketing our products for use as, or in the performance of, clinical diagnostics and be subject to enforcement actions, including warning letters and adverse publicity, fines, injunctions, and civil penalties, recalls or seizure of products, operating restrictions and criminal prosecution.

In addition, we could decide to seek regulatory clearance or approval for certain of our products in countries outside of the United States. Sales of such products outside the United States will likely be subject to foreign regulatory requirements, which can vary greatly from country to country. As a result, the time required to obtain clearances or approvals outside the United States may differ from that required to obtain FDA clearance or approval and we may not be able to obtain foreign regulatory approvals on a timely basis or at all. In Europe, we would need to comply with the new Medical Device Regulation 2017/745 and In Vitro Diagnostic Regulation 2017/746, which became effective May 26, 2017, with application dates of May 26, 2021 (postponed from 2020) and May 26, 2022 respectively. This will increase the difficulty of regulatory approvals in Europe in the future. In addition, the FDA regulates exports of medical devices. Failure to comply with these regulatory requirements or obtain and maintain required approvals, clearances and certifications could impair our ability to commercialize our products for diagnostic use outside of the United States.

Our products could become subject to government regulation as medical devices by the FDA and other regulatory agencies even if we do not elect to seek regulatory clearance or approval to market our products for diagnostic purposes, which would adversely impact our ability to market and sell our products and harm our business. If our products become subject to FDA regulation, the regulatory clearance or approval and the maintenance of continued and post-market regulatory compliance for such products will be expensive, time-consuming and uncertain both in timing and in outcome.

We do not currently expect our workflow automation and reagent solutions to be subject to the clearance or approval of the FDA, as it is not intended to be used for the diagnosis, treatment or prevention of disease. However, as we expand our product line and the applications and uses of our current or products into new fields, certain of our future products could become subject to regulation by the FDA, or comparable international agencies, including requirements for regulatory clearance or approval of such products before they can be marketed. Also, even if our products are labeled, promoted and intended as RUO, the FDA or comparable agencies of other countries could disagree with our conclusion that our products are intended for research use only or deem our sales, marketing and promotional efforts as being inconsistent with RUO products. For example, our customers may independently elect to use our RUO labeled products in their own laboratory developed tests (LDTs) for clinical diagnostic use, which could subject our products to government regulation, and the regulatory clearance or approval

and maintenance process for such products may be uncertain, expensive, and time-consuming. Regulatory requirements related to marketing, selling and distribution of RUO products could change or be uncertain, even if clinical uses of our RUO products by our customers were done without our consent. If the FDA or other regulatory authorities assert that any of our RUO products are subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

The FDA has historically exercised enforcement discretion in not enforcing the medical device regulations against laboratories offering LDTs. However, on October 3, 2014, the FDA issued two draft guidance documents that set forth the FDA's proposed risk-based framework for regulating LDTs, which are designed, manufactured and used within a single laboratory. The draft guidance documents provide the anticipated details through which the FDA would propose to establish an LDT oversight framework, including premarket review for higher-risk LDTs, such as those that have the same intended use as FDA-approved or cleared companion diagnostic tests currently on the market. In January 2017, the FDA announced that it would not issue final guidance on the oversight of LDTs and manufacturers of products used for LDTs, but would seek further public discussion on an appropriate oversight approach, and give Congress an opportunity to develop a legislative solution.

As manufacturers develop more complex diagnostic tests and diagnostic software, the FDA may increase its regulation of LDTs. Any future legislative or administrative rule making or oversight of LDTs, if and when finalized, may impact the sales of our products and how customers use our products, and may require us to change our business model in order to maintain compliance with these laws. We cannot predict how these various efforts will be resolved, how Congress or the FDA will regulate LDTs in the future, or how that regulatory system will impact our business. Changes to the current regulatory framework, including the imposition of additional or new regulations, including regulation of our products, could arise at any time during the development or marketing of our products, which may negatively affect our ability to obtain or maintain FDA or comparable regulatory approval of our products, if required. Further, sales of devices for diagnostic purposes may subject us to additional healthcare regulation and enforcement by the applicable government agencies. Such laws include, without limitation, state and federal anti-kickback or anti-referral laws, healthcare fraud and abuse laws, false claims laws, privacy and security laws, Physician Payments Sunshine Act and related transparency and manufacturer reporting laws, and other laws and regulations applicable to medical device manufacturers.

Additionally, on November 25, 2013, the FDA issued Final Guidance "Distribution of In Vitro Diagnostic Products Labeled for Research Use Only." The guidance emphasizes that the FDA will review the totality of the circumstances when it comes to evaluating whether equipment and testing components are properly labeled as RUO. The final guidance states that merely including a labeling statement that the product is for research purposes only will not necessarily render the device exempt from the FDA's clearance, approval, and other regulatory requirements if the circumstances surrounding the distribution, marketing and promotional practices indicate that the manufacturer knows its products are, or intends for its products to be, used for clinical diagnostic purposes. These circumstances may include written or verbal sales and marketing claims or links to articles regarding a product's performance in clinical applications and a manufacturer's provision of technical support for clinical applications.

As part of the United States' efforts to combat COVID-19 and consistent with Executive Orders 13771 and 13924, the Department of Health and Human Services (HHS) announced rescission of guidance and other informal issuances of the FDA regarding premarket review of LDT absent notice-and-comment rulemaking, stating that, absent notice-and-comment rulemaking, those seeking approval or clearance of, or an emergency use authorization, for an LDT may nonetheless voluntarily submit a premarket approval application, premarket notification or an Emergency Use Authorization request, respectively, but are not required to do so. However, laboratories opting to use LDTs without FDA premarket review or authorization would not be eligible for liability protection under the Public Readiness and Emergency Preparedness Act. While this action by HHS is expected to reduce the regulatory burden on clinical laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 that develop LDTs, it is unclear how this action as well as future legislation by federal and state governments and the FDA will impact the industry, including our business and that of our customers. Such HHS measure may compel the FDA to formalize earlier enforcement discretionary policies and informal guidance through notice-and-comment rulemaking and impose further restrictions on LDTs. HHS' rescission policy may change over time. Congress could also enact legislation restricting LDTs. Any restrictions on LDTs by the FDA, HHS, Congress or state regulatory authorities may decrease the demand for our products. The adoption of new restrictions on RUO products, whether by the FDA or Congress, could adversely affect demand for our products. Further, we could be required to obtain premarket clearance or approval before we can sell our products to certain customers.

Ethical, legal and social concerns surrounding the use of genetic information could reduce demand for our technology.

Our products may be used to create DNA sequences of humans, agricultural crops and other living organisms. Our products could be used in a variety of applications, which may have underlying ethical, legal and social concerns. Governmental authorities could, for safety, social or other purposes, impose limits on or implement regulation of the use of gene synthesis. Such concerns or governmental restrictions could limit the use of our DNA synthesis products, which could have a material adverse effect on our business, financial condition and results of operations. In addition, public perception about the safety and

environmental hazards of, and ethical concerns over, genetically engineered products and processes could influence public acceptance of our technologies, products and processes. These concerns could result in increased expenses, regulatory scrutiny, delays or other impediments to our programs.

We use biological and hazardous materials that require considerable expertise and expense for handling, storage and disposal and may result in claims against us.

We work with materials, including chemicals, biological agents, and compounds and DNA samples that could be hazardous to human health and safety or the environment. Our operations and research and development processes also produce hazardous and biological waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental laws and regulations may restrict or have a material effect on our operations and research and development programs. If we do not comply with applicable regulations, we may be subject to fines and penalties.

In addition, accidental injury or contamination from these materials or wastes could interrupt our commercialization efforts, research and development programs and business operations, as well as cause environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance.

While our property insurance policy provides limited coverage in the event of contamination from hazardous and biological products and the resulting cleanup costs, we do not currently have any additional insurance coverage for legal liability for claims arising from the handling, storage or disposal of hazardous materials. Accordingly, in the event of contamination or injury, we could be liable for damages or penalized with fines in an amount exceeding our resources, and our operations could be suspended or otherwise adversely affected. We may not be able to maintain insurance on acceptable terms, if at all.

We could inadvertently develop DNA sequences or engage in other activity that contravenes biosecurity requirements, or regulatory authorities could promulgate more far reaching biosecurity requirements that our standard business practices cannot accommodate, which could give rise to substantial legal liability, impediments to our business and reputational damage.

The Federal Select Agent Program (FSAP) involves rules administered by the Centers for Disease Control and Prevention and the Animal and Plant Health Inspection Service that regulate possession, use and transfer of biological select agents and toxins that have the potential to pose a severe threat to public, animal or plant health or to animal or plant products.

We have established a biosecurity program under which we follow biosafety and biosecurity best practices and avoid DNA synthesis activities that implicate FSAP rules; however, we could inadvertently fail to comply with FSAP or other biosecurity rules. In addition, authorities could promulgate new biosecurity requirements that restrict our operations. One or more resulting legal penalties, restraints on our business or reputational damage could have material adverse effects on our business and financial condition.

We are currently subject to, and may in the future become subject to additional, U.S. federal and state laws and regulations imposing obligations on how we collect, store and process personal information. Our actual or perceived failure to comply with such obligations could harm our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our future customer base, and thereby decrease our revenue.

In the ordinary course of our business, we currently, and in the future will, collect, store, transfer, use or process sensitive data, including personally identifiable information of employees, and intellectual property and proprietary business information owned or controlled by ourselves and other parties. The secure processing, storage, maintenance, and transmission of this critical information are vital to our operations and business strategy. We are, and may increasingly become, subject to various laws and regulations, as well as contractual obligations, relating to data privacy and security in the jurisdictions in which we operate. The regulatory environment related to data privacy and security is increasingly rigorous, with new and constantly changing requirements applicable to our business, and enforcement practices are likely to remain uncertain for the foreseeable future. These laws and regulations may be interpreted and applied differently over time and from jurisdiction to jurisdiction, and it is possible that they will be interpreted and applied in ways that may have a material adverse effect on our business, financial condition, results of operations and prospects.

We are in the process of evaluating compliance needs, but we do not currently have in place formal policies and procedures related to the storage, collection and processing of information, and have not conducted any internal or external data privacy audits, to ensure our compliance with all applicable data protection laws and regulations. Additionally, we do not currently have policies and procedures in place for assessing our third-party vendors' compliance with applicable data protection laws and regulations. All of these evolving compliance and operational requirements impose significant costs, such as costs related to organizational changes, implementing additional protection technologies, training employees and engaging consultants, which are likely to increase over time. In addition, such requirements may require us to modify our data processing practices and

policies, distract management or divert resources from other initiatives and projects, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Any failure or perceived failure by us or our third-party vendors, collaborators, contractors and consultants to comply with any applicable federal, state or similar foreign laws and regulations relating to data privacy and security, or could result in damage to our reputation, as well as proceedings or litigation by governmental agencies or other third parties, including class action privacy litigation in certain jurisdictions, which would subject us to significant fines, sanctions, awards, penalties or judgments, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products and build a strong brand identity may be impaired.

We rely on patent protection as well as trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary products and technologies. Each of these types of measures provides limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. If we fail to obtain, maintain and protect our intellectual property, third parties may be able to compete more effectively against us. In addition, we may incur substantial litigation costs in our attempts to enforce our right in, defend against challenges to, or recover or restrict use of our intellectual property.

To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition. If our intellectual property does not adequately cover competitors' products, our competitive position could be adversely affected, as could our business, financial condition, results of operations and prospects. Both the patent application process and the process of managing patent and other intellectual property disputes can be time-consuming and expensive.

Our success depends in large part on our ability to obtain and maintain protection of the intellectual property, particularly patents we may own solely or jointly with, or license from, third parties, in the United States and in other countries of interest, with respect to our products and technologies. However, obtaining and enforcing patents is costly, time-consuming and complex. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner or in all jurisdictions. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, we may not develop additional proprietary products, methods and technologies that are patentable. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed from or to third parties; such patents and applications may not be prosecuted and enforced by such third parties in our best interests.

The patent position of synthetic biology technology companies is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. Changes in either the patent laws or in interpretations of patent laws in the United States or other jurisdictions may diminish the value of our intellectual property. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. It is possible that none of our pending patent applications will result in issued patents in a timely fashion or at all, and even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or services, may not provide us with any competitive advantages. We cannot predict the breadth of claims that may be granted or enforced in our patents or in third-party patents. It is possible that third parties will design around our current or future patents such that we cannot prevent such third parties from using similar technologies and commercializing similar products to compete with us. Some of our owned or licensed patents or patent applications may be challenged, and we may not be successful in defending any such challenge. Any successful third-party challenge to our patents could result in the narrowing, unenforceability or invalidity of such patents and increased competition with our business. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, regardless of success, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business. Any of the foregoing events could have a material adverse effect on our business, financial condition and results of operations.

The U.S. law relating to the patentability of certain inventions in the synthetic biology technology industry is uncertain and rapidly changing, which may adversely impact our existing patents or our ability to obtain patents in the future.

Changes in either the patent laws or interpretation of the patent laws in the United States or in other jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. The U.S. Congress has recently passed legislation implementing significant changes to U.S. patent law.

Various courts including the U.S. Supreme Court have rendered decisions that impact the patentability and patent eligibility of inventions or discoveries relating to synthetic biology technology, including by narrowing the scope and strength of patent protection in some instances. In light of these developments and depending on actions by the U.S. Congress, the federal courts and the United States Patent and Trademark office (the USPTO), the laws and regulations governing patents could be interpreted and applied, or could change, in unpredictable ways that may have a material adverse effect on our ability to obtain new patents and to defend and enforce our existing patents and patents that we might obtain in the future.

We cannot assure you that our patent portfolio will not be negatively impacted by the current uncertain state of the law, new court rulings or changes in guidance or procedures issued by the USPTO or other patent offices around the world. From time to time, the U.S. Supreme Court, other federal courts, the U.S. Congress or the USPTO may change the standards of patentability, scope and validity of patents in areas including synthetic biology technology and any such changes, or any similar adverse changes in the patent laws and procedures of other jurisdictions, could have a negative impact on our business, financial condition, prospects and results of operations.

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

Filing, prosecuting and defending patents on our products in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. We may encounter difficulties in protecting and defending such rights in foreign jurisdictions. Consequently, we may not be able to prevent third parties from practicing our inventions in competition with us in some or all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors and other third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and technologies and may also export infringing products to territories where we do have patent protection but where enforcement may not be as strong as in the United States. Our patents or other intellectual property rights may not be effective or sufficient to prevent such third-party products from competing with our products. In addition, certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. Furthermore, many countries limit the enforceability of patents against certain kinds of third parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of any patents.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to gain any meaningful competitive advantage from our patents or other intellectual property rights. The legal systems in certain countries may also favor state-sponsored or domestic companies over foreign companies, even though we may have patents and other intellectual property protection in these countries. The absence of harmonized intellectual property protection laws makes it difficult to ensure consistent treatment and enforcement of patent, trade secret, and other intellectual property rights on a worldwide basis. As a result, it is possible that we will not be able to enforce our rights against third parties that misappropriate our proprietary technology or otherwise violate our intellectual property rights in any given country around the world.

Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, or that are initiated against us, and any damages or other remedies awarded to us may not be commercially meaningful. In addition, changes in the law and legal decisions by courts in foreign countries may affect our ability to obtain adequate protection for our products, services and other technologies and the enforcement of intellectual property. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

Issued patents covering our products could be found invalid or unenforceable if challenged.

Our owned and licensed patents and patent applications may be subject to validity, enforceability and priority disputes. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability. Some of our patents or patent applications (including licensed patents and patent applications) may be challenged in opposition, interference or derivation, ex parte re-examination, inter partes review, post-grant review or other similar proceedings. Any successful third-party challenge to our patents in this or any other proceeding could result in the unenforceability or invalidity of such patents, which may lead to increased competition to our business, which could have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, if we initiate legal proceedings against a third party to enforce a patent covering our products, the defendant could counterclaim that the patent we are asserting in the proceeding is invalid or unenforceable. In

patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. There are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, outside the context of litigation per se. Such proceedings could result in revocation of or amendment to our patents in such a way that they no longer protect our products. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. If a defendant or other third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on certain aspects of our products and technologies, which could have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license intellectual property or to develop or commercialize current or future products.

We may not be aware of all third-party intellectual property rights potentially relevant to our products, technology and services. Publications of discoveries in the scientific literature lag behind the discoveries, and patent applications in the United States and other jurisdictions are typically not published until approximately 18 months after the earliest effective filing date or, in some cases, not until such patent applications issue as patents. We might not have been the first to make the inventions claimed in each of our pending patent applications and we might not have been the first to file patent applications for these inventions. To determine the priority of these inventions, we may have to participate in interference or derivation proceedings in the U.S. or analogous proceedings in non-U.S. jurisdictions, which could result in substantial cost to us and the loss of valuable patent protection. No assurance can be given that other patent applications will not have priority over our patent applications. In addition, changes to the patent laws of the United States allow for various post-grant proceedings that have not been extensively tested, and their outcome is therefore uncertain. Furthermore, if third parties bring these proceedings against our patents, regardless of the merit of such proceedings and regardless of whether we are successful, we could experience significant costs and our management may be distracted. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

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

We rely heavily on trade secrets and confidentiality agreements to protect our unpatented know-how, technology and other proprietary information and to maintain our competitive position. However, trade secrets and know-how can be difficult to protect. In particular, we expect that with respect to our technologies, certain know how will over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology, and the movement of personnel from academic to industry scientific positions.

In addition to pursuing patents on our technology, we take steps to protect our intellectual property and proprietary technology by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, academic institutions, corporate partners and, when needed, our advisers. However, we cannot be certain that such agreements have been entered into with all relevant parties, and we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors or other third parties will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of the foregoing parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure, which could adversely impact our ability to establish or maintain a competitive advantage in the market, business, financial condition, results of operations and prospects.

Monitoring unauthorized disclosure is difficult, and we cannot guarantee that the steps we have taken to prevent such disclosure are adequate. If we were to enforce a claim that a third party had wrongfully obtained and was using our trade secrets, it could be expensive and time-consuming, it could distract our personnel, and the outcome would be unpredictable. In addition, courts outside the United States may be less effective in protecting trade secrets.

We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor or other third party, absent patent protection, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. Competitors or third parties could purchase our products and attempt to replicate the competitive advantages we derive from our development efforts with their own competitive technologies that fall outside the scope of our intellectual property rights. They might also independently develop our technologies without reference to our trade secrets. If any of our trade secrets were to be disclosed to or independently discovered by a competitor or other third party, it could materially and adversely affect our business, financial condition, results of operations and prospects.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in-licensed patents, trade secrets or other intellectual property as an inventor or co-inventor. For example, we may have inventorship or ownership disputes arising from conflicting obligations of employees, consultants or others who are involved in developing our products. In addition, counterparties to our consulting, sponsored research, software development and other agreements may assert that they have an ownership interest in intellectual property developed under such arrangements. In particular, certain software development agreements pursuant to which third parties have developed parts of our proprietary software may not include provisions that expressly assign to us ownership of all intellectual property developed for us by such third parties. Furthermore, certain of our sponsored research agreements pursuant to which we provide research services for third parties do not assign to us all intellectual property developed under such agreements. As such, we may not have the right to use all such developed intellectual property under such agreements, we may be required to obtain licenses from third parties and such licenses may not be available on commercially reasonable terms or at all, or they may be non-exclusive. If we are unable to obtain such licenses and such licenses are necessary for the development, manufacture and commercialization of our products and technologies, we may need to cease the development, manufacture and commercialization of our products and technologies. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership of our owned or in-licensed patents, trade secrets or other intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. In such an event, we may be required to obtain licenses from third parties and such licenses may not be available on commercially reasonable terms or at all, or they may be non-exclusive. If we are unable to obtain and maintain such licenses, we may need to cease the development, manufacture and commercialization of the relevant products and technologies. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees, and certain customers or partners may defer engaging with us until the particular dispute is resolved. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may not be able to protect and enforce our trademarks and trade names, or build name recognition in our markets of interest, thereby harming our competitive position.

The registered or unregistered trademarks or trade names that we use may be challenged, infringed, circumvented, declared generic, opposed, invalidated, cancelled or determined to be infringing on or dilutive of other marks. As a consequence, we may not be able to protect, register or maintain our rights in these trademarks and trade names.

Third parties may have prior rights in, or have filed, and may in the future file, for registration of, trademarks similar or identical to our trademarks in certain markets of interest that may block our ability to use or to register, or that may limit the scope of protection afforded to, our trademarks and trade names in such markets, thereby impeding our ability to protect, register, maintain or enforce our trademarks and trade names in all markets of interest and to build brand identity and possibly leading to litigation risks and market confusion.

If a third party succeeds in registering or developing common law rights in trademarks similar or identical to our trademarks that predate our rights, and if we are not successful in overcoming any objection from the USPTO or such third party based on or in challenging such rights and defending against challenges to our trademarks, we may not be able to use such trademarks to develop brand recognition of our technologies, products or services.

A third party with prior rights in a similar or identical trademark could challenge our use and registration of our trademarks and trade names by filing a trademark infringement court action or by seeking to block or cancel any registration for our trademarks through an opposition, cancellation, invalidity or other administrative proceeding. For example, Codexis, Inc. (Codexis), filed a complaint against us relating to our CODEX DNA name based on its rights in the CODEX and CODEXIS mark in the U.S. District Court, Northern District of California for federal and common law trademark infringement and unfair competition/false designation. Codexis seeks injunctive relief, including that we cease all use of the term CODEX and any other trademark confusingly similar to the marks CODEX and CODEXIS and not apply for registration of or register the CODEX mark or any other mark confusingly similar to the CODEX or CODEXIS marks, transfer to Codexis all domain names and social media accounts/user names that include the term “codex” and pay damages (consisting of Codexis’s actual damages, a disgorgement of our profits and punitive damages as permitted by California common law) as well as attorneys’ fees and costs.

The outcome of any such trademark litigation or other proceeding can be uncertain. If we are unable to successfully defend against any such challenge, in addition to not being able to secure or maintain a registration for our trademark, we may be required, including by court order, to cease all further use of such trademark. Moreover, in the case of a trademark infringement action, a court may require us to issue corrective advertising or to take other steps as the court may deem necessary to remove or reduce the risk of consumer confusion, including changing our company name and rebranding our products. Any of these actions could take time, would be expensive and could lead to a loss of brand recognition or customer confusion as a result. The court may also order us to pay damages (actual damages demonstrated at trial and a disgorgement of our profits), including treble damages and attorneys’ fees if the court finds that we willfully infringed such third party

trademark. Regardless of success, any such litigation or other proceeding may take substantial time and effort and result in substantial cost, and may divert our efforts and attention from other aspects of our business and could have a material adverse effect on our business, financial condition and results of operations.

Further, we have and may in the future enter into agreements with owners of such third party trade names or trademarks to avoid potential trademark litigation, which may limit our ability to use, register or enforce our trade names or trademarks in certain fields of business or in certain markets or which may place certain other restrictions on the use of our trademarks and trade names that could limit our ability to build a strong brand identity. If we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively, and our business, financial condition, results of operations and prospects may be adversely affected.

Patent terms may be inadequate to protect our competitive position on our workflow automation and reagent solutions for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the basic term of a utility patent is 20 years from its earliest effective non-provisional filing date. In the United States, the basic term of a patent may be lengthened by patent term adjustment, which compensates the patentee for certain administrative delays by the USPTO in examining and granting a patent, and it may be shortened by filing a terminal disclaimer over an earlier expiring patent. Even if a patent covering our products is obtained, once the patent life has expired, we would no longer be able to use the patent to exclude others from making or selling competitive products. If one of our products requires extended development, testing or regulatory review, patent protection for the product might expire soon after or even before the product is commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours, which could have a material adverse effect on our business, financial condition and results of operations.

We may become involved in lawsuits to defend against third-party claims of infringement, misappropriation or other violations of intellectual property or to protect or enforce our intellectual property, any of which could be expensive, time consuming and unsuccessful, and may prevent or delay our development and commercialization efforts.

Our commercial success depends in part on our ability and the ability of future collaborators to develop, manufacture, market and sell our product and use our products and technologies without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the synthetic biology technology sector, as well as other proceedings for challenging patents, including interference, derivation, inter partes review, post grant review, reexamination proceedings, and pre- and post-grant oppositions. We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our products, manufacturing methods, software or technologies infringe, misappropriate or otherwise violate their intellectual property rights. Numerous issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our products and technologies. It is not always clear to industry participants, including us, the claim scope that may issue from pending patent applications owned by third parties or which patents cover various types of products, technologies or their methods of use or manufacture. Because of the large number of patents issued and patent applications filed in our fields, there may be a risk that third parties, including our competitors, may allege that they have patent rights encompassing our products, technologies or methods and that we are employing their proprietary technology without authorization.

If third parties, including our competitors, believe that our products or technologies infringe, misappropriate or otherwise violate their intellectual property, such third parties may seek to enforce their intellectual property, including patents against us by filing an intellectual property-related lawsuit, including a patent infringement lawsuit, against us. Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of misappropriation, infringement, validity, enforceability, or priority. If any third parties were to assert patents against us and we are unable to successfully defend against any such assertion, we may be required, including by court order, to cease the development and commercialization of the infringing products or technology and we may be required to redesign such products and technologies so they do not infringe such patents, which may not be possible or may require substantial monetary expenditures and time. We could also be required to pay damages, which could be significant, including treble damages and attorneys' fees if we are found to have willfully infringed such patents. We could also be required to obtain a license to such patents in order to continue the development and commercialization of the infringing product or technology; however such a license may not be available on commercially reasonable terms or at all, including because certain of these patents are held by or may be licensed to our competitors. Even if such license were available, it may require substantial payments or cross-licenses under our intellectual property rights, and it may only be available on a nonexclusive basis, in which case third parties, including our competitors, could use the same licensed intellectual property to compete with us. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operation or prospects.

We may choose to challenge, including in connection with any allegation of patent infringement by a third party, the validity or enforceability of any third-party patent that we believe may have applicability in our field, and any other third-party patent that may be asserted against us. Such challenges may be brought either in court or by requesting that the USPTO, European Patent Office (EPO), or other patent offices review the patent claims, such as in an ex-parte reexamination, inter partes review, post-grant review proceeding or opposition proceeding. However, there can be no assurance that any such challenge by us will be successful. Even if such proceedings are successful, these proceedings are expensive and may consume our time or other resources, distract our management and technical personnel, and the costs of the proceedings could be substantial.

Third parties, including our competitors, could be infringing, misappropriating or otherwise violating our owned and in-licensed intellectual property rights. Monitoring unauthorized use of our intellectual property is difficult and costly. We may not be able to detect unauthorized use of, or take effective steps to enforce, our intellectual property rights. From time to time, we seek to analyze our competitors' products and services, and may in the future seek to enforce our rights against potential infringement, misappropriation or violation of our intellectual property. However, the steps we have taken to protect our intellectual property rights may not be effective to enforce our rights as against such infringement, misappropriation or violation of our intellectual property. Any inability to meaningfully enforce our intellectual property rights could harm our ability to compete and reduce demand for our products and technologies.

Litigation proceedings may be necessary for us to enforce our patent and other intellectual property rights. In any such proceedings, a court may refuse to stop the other party from using the technology at issue on the grounds that our owned and in-licensed patents do not cover the technology in question. Further, in such proceedings, the defendant could counterclaim that our intellectual property is invalid or unenforceable and the court may agree, in which case we could lose valuable intellectual property rights, which could allow third parties to commercialize technology or products similar to ours and compete directly with us, without payment to us, or could require us to obtain license rights from the prevailing party in order to be able to manufacture or commercialize our products without infringing such party's intellectual property rights, and if we unable to obtain such a license, we may be required to cease commercialization of our products and technologies, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. The outcome in any such proceedings is unpredictable.

Regardless of whether we are the defending party or the party seeking to enforce rights in any intellectual property-related proceeding, and regardless of outcome, such proceedings that may be necessary in the future could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition, results of operations and prospects. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Some of our competitors and other third parties may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. We may not have sufficient financial or other resources to adequately conduct these types of litigation or proceedings. Any of the foregoing, or any uncertainties resulting from the initiation and continuation of any litigation, could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar adverse effect on our business, financial condition, results of operations and prospects.

Obtaining and maintaining our patent protection depends on compliance with various required procedures, document submissions, fee payments and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Various official fees, including renewal fees, must be paid to the respective patent authorities to apply for, prosecute, and maintain patents and patent applications. The USPTO and other patent authorities also variously require compliance with a number of procedural and substantive provisions under local law and practice during and sometimes after the patent application process. In many cases, an inadvertent lapse in paying a fee or fulfilling another requirement can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors may be able to enter the market without infringing our patents and this circumstance would have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

We have employed and expect to employ individuals who were previously employed at universities or at other companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, advisors and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that our employees, advisors, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of their former employers or other third parties, or to claims that we have improperly used or obtained such trade secrets. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights and face increased competition to our business. Any such litigation or the threat thereof may adversely affect our ability to hire employees or contract with advisors, contractors and consultants. A loss of key research personnel work product could hamper or prevent our ability to commercialize potential products, which could harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development activities. Some of our competitors may be able to sustain the costs of this type of litigation or proceedings more effectively than we can because of their substantially greater financial resources.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Furthermore, individuals executing agreements with us may have pre-existing or competing obligations to a third party, such as an academic institution, and thus an agreement with us may be disputed or ineffective in perfecting ownership of inventions developed by that individual, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Furthermore, we may in the future be subject to claims by former employees, consultants or other third parties asserting an ownership right in our owned or licensed patents or patent applications. An adverse determination in any such proceeding may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar technology, without payment to us, or could limit the duration of the overall patent protection covering our technology and products. Such challenges may also result in our inability to develop, manufacture or commercialize our products without infringing third-party patent rights. Any of the foregoing could harm our business, financial condition, results of operations and prospects.

If we cannot license rights to use technologies on reasonable terms, we may not be able to commercialize new products in the future.

We may identify third-party technology that we may need to license or acquire in order to develop or commercialize our products or technologies, including our workflow automation and reagent solutions. However, we may be unable to secure such licenses or acquisitions. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us.

We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. In return for the use of a third party's technology, we may agree to pay the licensor royalties based on sales of our products or services. Royalties are a component of cost of products or technologies and affect the margins on our products. We may also need to negotiate licenses to patents or patent applications before or after introducing a commercial product. We may not be able to obtain necessary licenses to patents or patent applications, and our business may suffer if we are unable to enter into the necessary licenses on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensor fails to abide by the terms of the license or fails to prevent infringement by third parties, or if the licensed intellectual property rights are found to be invalid or unenforceable.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to products and technologies we may develop or utilize similar technology that are not covered by the claims of the patents that we own or license now or in the future;
- we might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or may own in the future;
- we might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing, misappropriating or otherwise violating our owned or licensed intellectual property rights;
- it is possible that our pending licensed patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents of others may harm our business; and
- we may choose not to file a patent for certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could materially adversely affect our business, financial condition, results of operations and prospects.

Risks Related to Ownership of Our Common Stock

The market price of our common stock has been volatile and may continue to be volatile in the future, which could result in substantial losses for investors purchasing our common stock in the market.

The market price of our common stock has been volatile since our initial public offering any may continue to be volatile. As a result, you may not be able to sell your common stock at or above the price at which you purchased the stock. Some of the factors that may cause the market price of our common stock to continue fluctuating include, but are not limited to:

- actual or anticipated fluctuations in our operating results, including fluctuations in our quarterly and annual results;
- operating expenses being more than anticipated;
- supply chain and production disruption due to our moving primary manufacturing facilities to a new location;
- the failure or discontinuation of any of our product development and research programs;
- changes in the structure or funding of research at academic and research laboratories and institutions, including changes that would affect their ability to purchase our products;
- the success of existing or new competitive businesses or technologies;
- announcements about new research programs or products of our competitors;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- litigation and governmental investigations involving us, our industry or both;
- regulatory or legal developments in the United States and other countries;
- variations in market conditions in the synthetic biology technology sector;
- investor perceptions of us or our industry;
- changes in estimates or recommendations by securities analysts, if any, that cover our common stock or companies that are perceived to be similar to us;
- whether our financial results meet the expectations of securities analysts or investors;
- the level of expenses related to any of our research and development programs or products;
- actual or anticipated changes in our estimates as to our financial results or development timelines;
- variations in our financial results or those of companies that are perceived to be similar to us;
- the announcement or expectation of additional financing efforts;
- sales of our common stock by us or sales of our common stock by our insiders or other stockholders;

- general economic, industry and market conditions, including deteriorating market conditions due to investor concerns regarding inflation and the war between Russia and the Ukraine; and
- the COVID-19 pandemic, natural disasters or major catastrophic events.

Recently, stock markets in general, and the market for life sciences technology companies in particular, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations, particularly in light of the COVID-19 pandemic. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. Following periods of such volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources from our business.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our common stock, the price of our common stock could decline.

The trading market for our common stock relies in part on the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain extensive research coverage by industry or securities analysts. If more analysts do not commence coverage of us, the trading price of our common stock could decrease. If one or more of the analysts covering our business downgrade their evaluations of our common stock, the price of our common stock could decline. If one or more of these analysts cease to cover our common stock, we could lose visibility in the market for our common stock, which in turn could cause the price of our common stock to decline.

Our directors, officers and principal stockholders have significant voting power and may take actions that may not be in the best interests of our other stockholders.

As of March 31, 2022, our directors, officers and stockholders holding 5% or more of our outstanding common stock and their affiliates beneficially owned over 66% of our outstanding common stock in the aggregate, assuming the exercise of all options and warrants held by such persons. As a result, these stockholders, if they act together, will be able to exert significant influence over the management and affairs of our company and most matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change in control, might adversely affect the market price of our common stock and may not be in the best interests of our other stockholders.

Sales of a substantial number of shares of our common stock by our existing stockholders could cause the price of our common stock to decline.

Sales of a substantial number of shares of our common stock in the public market could occur at any time or the perception in the market that the holders of a large number of shares of common stock intend to sell shares and could reduce the market price of our common stock.

Holders of an aggregate of 15,079,329 shares of our common stock have rights, subject to conditions, to require us to file registration statements with the SEC covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also have registered all shares of common stock that we may issue under our equity compensation and employee stock purchase plans, making them freely tradeable in the public market upon issuance and, if applicable, vesting, subject to volume limitations applicable to affiliates. Sales of common stock in the public market as restrictions end or pursuant to registration rights may make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. These sales also could cause the trading price of our common stock to fall and make it more difficult for you to sell shares of our common stock.

We do not expect to pay any dividends for the foreseeable future. Investors may never obtain a return on their investment.

You should not rely on an investment in our common stock to provide dividend income. We do not anticipate that we will pay any dividends to holders of our common stock in the foreseeable future. Instead, we plan to retain any earnings to maintain and expand our existing operations, fund our research and development programs and continue to invest in our commercial infrastructure. In addition, our current credit facility with SVB contains, and any future credit facility or financing we obtain may contain, terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any return on their investment. As a result, investors seeking cash dividends should not purchase our common stock.

Our amended and restated bylaws designate a state or federal court located within the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, and also provide that the federal district courts will be the

exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, each of which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders, or employees.

Our amended and restated certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum for (a) any derivative action or proceeding brought on our behalf, (b) any action asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, stockholders, officers, or other employees to us or our stockholders, (c) any action or proceeding asserting a claim arising pursuant to, or seeking to enforce any right, obligation or remedy under, any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation, or our amended and restated bylaws, (d) any action or proceeding as to which the Delaware General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware, or (e) any action or proceeding asserting a claim that is governed by the internal affairs doctrine shall be the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court in Delaware or, if no state court in Delaware has jurisdiction, the federal district court for the District of Delaware) and any appellate court therefrom, in all cases subject to the court having jurisdiction over the claims at issue and the indispensable parties; provided that the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act.

Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated bylaws also provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Any person or entity purchasing or otherwise acquiring or holding or owning (or continuing to hold or own) any interest in any of our securities shall be deemed to have notice of and consented to the foregoing bylaw provisions. Although we believe these exclusive forum provisions benefit us by providing increased consistency in the application of Delaware law and federal securities laws in the types of lawsuits to which each applies, the exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or any of our directors, officers, stockholders, or other employees, which may discourage lawsuits with respect to such claims against us and our current and former directors, officers, stockholders, or other employees. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder as a result of our exclusive forum provisions. Further, in the event a court finds either exclusive forum provision contained in our amended and restated bylaws to be unenforceable or inapplicable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our results of operations.

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

Our status as a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our restated certificate of incorporation and restated bylaws contain provisions that may make the acquisition of our company more difficult, including the following:

- our board of directors is classified into three classes of directors with staggered three-year terms and directors may only be able to be removed from office for cause by the affirmative vote of holders of at least a majority of the voting power of our then outstanding capital stock;
- certain amendments to our amended and restated certificate of incorporation require the approval of a majority of our board of directors and stockholders holding two-thirds of the voting power of our then outstanding capital stock;
- stockholder-proposed amendments to our amended and restated bylaws require the approval of a majority of the stockholders entitled to vote, except certain provisions would require the affirmative vote of stockholders holding two-thirds of the voting power of our then outstanding capital stock;
- our stockholders may only take action at a meeting of stockholders and are not able to take action by written consent for any matter;
- vacancies on our board of directors may only be filled only by our board of directors and not by stockholders;
- only the chair of the board of directors, chief executive officer, president or a majority of the board of directors are authorized to call a special meeting of stockholders;
- certain litigation against us can only be brought in Delaware;
- our restated certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established and shares of which may be issued, without the approval of the holders of our capital stock; and

- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders.

These anti-takeover defenses could discourage, delay, or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors of their choosing and to cause us to take other corporate actions they desire, any of which, under certain circumstances, could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

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

As of March 31, 2022, we had U.S. federal and state net operating loss carryforwards (NOLs) of $62.1 million and $38.5 million, respectively. The federal NOLs of $1.3 million, generated before January 1, 2018, will begin to expire in 2034, but can be used to offset up to 100% of taxable income. Amounts generated after December 31, 2017 will carryforward indefinitely, but will be subject to a 80% taxable income limitation. State NOLs, if not utilized, will begin to expire in 2029. We may use these NOLs to offset against taxable income for U.S. federal and state income tax purposes. Additionally, Section 382 of the Internal Revenue Code of 1986, as amended (the Code), may limit the NOLs we may use in any year for U.S. federal income tax purposes in the event of certain changes in ownership of our company. A Section 382 “ownership change” generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company’s stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. We have not conducted a 382 study to determine whether the use of our NOLs is impaired. We may have previously undergone an “ownership change.” In addition, future issuances or sales of our stock, including certain transactions involving our stock that are outside of our control, could result in future “ownership changes.” “Ownership changes” that have occurred in the past or that may occur in the future could result in the imposition of an annual limit on the amount of pre-ownership change NOLs and other tax attributes we can use to reduce our taxable income, potentially increasing and accelerating our liability for income taxes, and also potentially causing those tax attributes to expire unused. States may impose other limitations on the use of our NOLs. Any limitation on using NOLs could, depending on the extent of such limitation and the NOLs previously used, result in our retaining less cash after payment of U.S. federal and state income taxes during any year in which we have taxable income, rather than losses, than we would be entitled to retain if such NOLs were available as an offset against such income for U.S. federal and state income tax reporting purposes, which could adversely impact our operating results.

We are an “emerging growth company” and a “smaller reporting company” and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC registered public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes Oxley Act, not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In our public filings, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. To the extent that we continue to qualify as a “smaller reporting company,” as such term is defined in Rule 12b-2 under the Exchange Act, after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We incur significantly increased costs and management resources as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives.

As a public company, we incur significant legal, accounting, compliance and other expenses that we did not incur as a private company and these expenses may increase even more after we are no longer an "emerging growth company." Our management and other personnel need to devote a substantial amount of time and incur significant expense in connection with compliance initiatives. As a public company, we also bear all of the internal and external costs of preparing and distributing periodic public reports in compliance with our obligations under the securities laws.

In addition, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes Oxley Act, and the related rules and regulations implemented by the SEC and Nasdaq, have increased legal and financial compliance costs and will make some compliance activities more time-consuming. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment will result in increased general and administrative expenses and may divert management's time and attention from our other business activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us, and our business may be harmed. In the future, it may be more expensive or more difficult for us to obtain director and officer liability insurance as a public company, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile. The stock market in general, and the Nasdaq Stock Market and life sciences technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

Our actual operating results may differ significantly from any guidance that we provide.

From time to time, we may provide guidance in our quarterly earnings conference calls, quarterly earnings releases, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which would include forward-looking statements, would be based on projections prepared by our management. Neither our registered public accountants nor any other independent expert or outside party would compile or examine the projections. Accordingly, no such person would express any opinion or any other form of assurance with respect to the projections. Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic, and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. The principal reason that we would release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such third parties. Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying any guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance would be only an estimate of what management believes is realizable as of the date of release. Actual results may vary from our guidance and the variations may be material.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results in a timely manner or prevent fraud, which would adversely affect investor confidence in our company and harm our business.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations in a timely manner, or at all. In addition, any testing by us conducted in connection with Section 404(a) of the Sarbanes Oxley Act or any subsequent testing by our independent registered public accounting firm in connection with Section 404(b) of the Sarbanes Oxley Act, may reveal deficiencies in our internal controls over financial reporting that are deemed to be significant deficiencies or material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Ineffective internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

In addition, as of December 31, 2020, we identified a significant deficiency in our internal controls over financial reporting that existed as a result of the technical categorization of transactions with a supplier. A significant deficiency is a deficiency, or a

combination of deficiencies, in internal controls over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of the company's financial reporting. We undertook steps to remedy this significant deficiency by our engagement of technical accounting consultants to assist management in determining the accounting treatment of unusual transactions and in evaluating new accounting positions and remediated this significant deficiency prior to the issuance date of our 2020 consolidated financial statements.

We will be required to disclose material changes made in our internal controls over financing reporting and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. Beginning with our second Annual Report on Form 10-K, we will be required to make a formal assessment of the effectiveness of our internal control over financial reporting, and once we cease to be an emerging growth company, we will be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. However, for as long as we are an “emerging growth company” under the JOBS Act, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404(b).

To achieve compliance with Section 404(a) within the prescribed period, we will be engaging in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a plan to assess and document the adequacy of our internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are designed and operating effectively and implement a continuous reporting and improvement process for internal control over financial reporting.

We could be an “emerging growth company” for up to five years. An independent assessment of the effectiveness of our internal controls could detect problems that our management’s assessment might not identify. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operation could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. We base our estimates on historical experience and estimates and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. For example, in connection with the implementation of the new revenue accounting standard related to product sales, management makes judgments and assumptions based on our interpretation of the new standard. The new revenue standard is principle-based and interpretation of those principles may vary from company to company based on their unique circumstances. It is possible that interpretation, industry practice and guidance may evolve as we apply the new standard. If our assumptions underlying our estimates and judgements relating to our critical accounting policies change or if actual circumstances differ from our assumptions, estimates or judgements, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

None during the three months ended September 30, 2021.

Use of Proceeds from Public Offering of Common Stock

On June 22, 2021, we closed our initial public offering of 7,666,664 shares of common stock (inclusive of 999,999 shares of common stock from the full exercise of the overallotment option of shares granted to the underwriters). The offer and sale of all of the shares in the initial public offering were registered under the Securities Act pursuant to a registration statement on Form S-1 (File Nos. 333-256644), which was declared effective by the SEC on June 17, 2021. Jefferies LLC, Cowen and Company, LLC and KeyBanc acted as the underwriters. The public offering price of the shares sold in the offering was $16.00 per share. The total gross proceeds from the offering were $122.7 million.

After deducting underwriting discounts and commissions of $8.6 million and offering expenses paid or payable by us of approximately $1.6 million, the net proceeds from the offering were approximately $112.5 million.

There has been no material change in the planned use of proceeds from our IPO as described in our final IPO prospectus filed with the SEC on June 17, 2021 pursuant to rule 424(b) of the Securities Act. We invested the funds received in short-term and long-term, interest-bearing investment-grade securities and government securities.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	Description	Form	File No.	Exhibit	Filing Date
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1†	Certifications of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS	XBRL Instance Document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				

† The certifications attached as Exhibit 32.1 that accompany this Quarterly Report on Form 10-Q, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURES

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

CODEX DNA, INC.

Date: May 11, 2022

By: /s/ Todd R. Nelson
Todd R. Nelson
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 11, 2022

By: /s/ Jennifer I. McNealey
Jennifer I. McNealey
Chief Financial Officer
(Principal Financial Officer)

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Pursuant to
Securities Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Todd Nelson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codex DNA, 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(s) 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 evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) 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.

/s/ Todd Nelson

Todd Nelson
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: May 11, 2022

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Pursuant to
Securities Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Jennifer McNealey, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codex DNA, 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(s) 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 evaluation; and
   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) 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.

/s/ Jennifer McNealey

Jennifer McNealey
Chief Financial Officer
(Principal Financial Officer)

Date: May 11, 2022

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Codex DNA, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2022, as filed with the Securities and Exchange Commission (the "Report"), Todd Nelson, as Chief Executive Officer of the Company, and Jennifer McNealey, as Chief Financial Officer of the Company, each hereby certifies, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350), to his or her knowledge:

1.The Report, fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act of 1934, as amended; and

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

/s/ Todd Nelson

Todd Nelson
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: May 11, 2022

/s/ Jennifer McNealey

Jennifer McNealey
Chief Financial Officer
(Principal Financial Officer)

Date: May 11, 2022