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 June 30, 2020

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: 001-36571

T2 Biosystems, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**20-4827488**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
101 Hartwell Avenue Lexington, Massachusetts	**02421**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (781) 761-4646

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001	TTOO	The Nasdaq Global Market

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

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

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☐		

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

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

As of August 6, 2020, the registrant had 147,949,302 shares of common stock outstanding.

T2 BIOSYSTEMS, INC.

TABLE OF CONTENTS

PART I.
FINANCIAL INFORMATION

Item 1. Financial Statements

T2 BIOSYSTEMS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)
(Unaudited)

	June 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 26,549	$ 11,033
Marketable securities	9,247	—
Accounts receivable	1,300	2,825
Inventories	4,111	3,599
Prepaid expenses and other current assets	6,165	1,438
Total current assets	47,372	18,895
Property and equipment, net	3,900	5,845
Operating lease right-of-use assets	2,076	3,360
Restricted cash	160	180
Other assets	206	206
Total assets	$ 53,714	$ 28,486
Liabilities and stockholders' deficit		
Current liabilities:		
Notes payable	$ —	$ 42,902
Accounts payable	1,779	3,753
Accrued expenses and other current liabilities	5,971	11,207
Derivative liability	—	2,425
Deferred revenue	199	285
Total current liabilities	7,949	60,572
Notes payable, net of current portion	44,000	—
Operating lease liabilities, net of current portion	924	1,873
Deferred revenue, net of current portion	17	46
Derivative liability	2,391	—
Other liabilities	2,821	—
Commitments and contingencies (see Note 13)		
Stockholders' deficit:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued and outstanding at June 30, 2020 and December 31, 2019	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized; 128,461,279 and 50,651,535 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	128	51
Additional paid-in capital	397,295	342,121
Accumulated deficit	(401,811)	(376,177)
Total stockholders' deficit	(4,388)	(34,005)
Total liabilities and stockholders' deficit	$ 53,714	$ 28,486

See accompanying notes to condensed consolidated financial statements.

T2 BIOSYSTEMS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue:				
Product revenue	$ 1,041	$ 1,274	$ 2,086	$ 2,588
Research revenue	11	71	11	213
Contribution revenue	1,500	459	3,000	788
Total revenue	2,552	1,804	5,097	3,589
Costs and expenses:				
Cost of product revenue	2,300	4,820	6,971	9,208
Research and development	3,980	4,048	8,918	7,949
Selling, general and administrative	5,111	6,722	11,608	13,776
Total costs and expenses	11,391	15,590	27,497	30,933
Loss from operations	(8,839)	(13,786)	(22,400)	(27,344)
Interest expense, net	(1,843)	(2,000)	(3,260)	(3,782)
Other income, net	(3)	139	26	332
Net loss and comprehensive loss	$ (10,685)	$ (15,647)	$ (25,634)	$ (30,794)
Net loss per share — basic and diluted	$ (0.09)	$ (0.35)	$ (0.27)	$ (0.69)
Weighted-average number of common shares used in computing net loss per share — basic and diluted	120,292,543	44,426,402	94,464,933	44,354,771

See accompanying notes to condensed consolidated financial statements.

T2 BIOSYSTEMS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(In thousands, except share data)
(Unaudited)

	Common Stock		Additional Paid-In	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Deficit	Deficit
Balance at December 31, 2018	44,175,441	$ 44	$ 328,514	$ (317,171)	$ 11,387
Stock-based compensation expense	—	—	2,033	—	2,033
Issuance of common stock from vesting of restricted stock, exercise of stock options and employee stock purchase plan	163,802	—	—	—	—
Change in fair value of warrants upon modification	—	—	147	—	147
Net loss	—	—	—	(15,147)	(15,147)
Balance at March 31, 2019	44,339,243	$ 44	$ 330,694	$ (332,318)	$ (1,580)
Stock-based compensation expense	—	—	1,277	—	1,277
Issuance of common stock from vesting of restricted stock, exercise of stock options and employee stock purchase plan	196,329	—	330	—	330
Net loss	—	—	—	(15,647)	(15,647)
Balance at June 30, 2019	44,535,572	$ 44	$ 332,301	$ (347,965)	$ (15,620)

	Common Stock		Additional Paid-In	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Deficit	Deficit
Balance at December 31, 2019	50,651,535	$ 51	$ 342,121	$ (376,177)	$ (34,005)
Stock-based compensation expense	—	—	1,160	—	1,160
Issuance of common stock from vesting of restricted stock	370,417	—	—	—	—
Issuance of common stock from secondary offering, net	68,150,678	68	40,029	—	40,097
Net loss	—	—	—	(14,949)	(14,949)
Balance at March 31, 2020	119,172,630	$ 119	$ 383,310	$ (391,126)	$ (7,697)
Stock-based compensation expense	—	—	994	—	994
Issuance of common stock from vesting of restricted stock, exercise of stock options and employee stock purchase plan	407,183	—	180	—	180
Issuance of common stock from secondary offering, net	8,881,466	9	12,811	—	12,820
Net loss	—	—	—	(10,685)	(10,685)
Balance at June 30, 2020	128,461,279	$ 128	$ 397,295	$ (401,811)	$ (4,388)

See accompanying notes to condensed consolidated financial statements.

T2 BIOSYSTEMS, INC.

CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2020	2019
Cash flows from operating activities		
Net loss	$ (25,634)	$ (30,794)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	905	1,172
Non-cash lease expense	802	697
Stock-based compensation expense	2,154	3,310
Change in fair value of derivative instrument	(34)	361
Gain on disposal of property and equipment	(2)	(3)
Impairment of operating lease asset	523	—
Impairment of property and equipment	636	—
Non-cash interest expense	1,474	1,154
Changes in operating assets and liabilities:		
Accounts receivable	1,525	607
Prepaid expenses and other assets	(4,727)	627
Inventories	19	(882)
Accounts payable	(1,983)	2,017
Accrued expenses and other liabilities	(2,811)	1,211
Deferred revenue	(115)	(55)
Operating lease liabilities	(963)	(1,129)
Net cash used in operating activities	(28,231)	(21,707)
Cash flows from investing activities		
Purchases of marketable securities	(9,247)	—
Proceeds from sale of property and equipment	4	—
Purchases and manufacture of property and equipment	(127)	(444)
Net cash used in investing activities	(9,370)	(444)
Cash flows from financing activities		
Proceeds from issuance of shares from employee stock purchase plan and stock option exercises, net	180	330
Proceeds from issuance of common stock in public offering, net of offering costs	52,917	—
Principal repayments of finance leases	—	(562)
Net cash provided by (used in) financing activities	53,097	(232)
Net increase (decrease) in cash, cash equivalents and restricted cash	15,496	(22,383)
Cash, cash equivalents and restricted cash at beginning of period	11,213	50,985
Cash, cash equivalents and restricted cash at end of period	$ 26,709	$ 28,602
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 1,820	$ 2,267
Supplemental disclosures of noncash activities		
Transfer of T2 owned instruments and components to (from) inventory	$ 531	$ (459)
Change in fair value of warrants issued and modified	$ —	$ 147
Right-of-use assets obtained in exchange for new operating lease liabilities	$ —	$ 4,805
Purchases of property and equipment included in accounts payable and accrued expenses	$ 94	$ 193

	June 30, 2020	December 31, 2019
Reconciliation of cash, cash equivalents and restricted cash at end of period		
Cash and cash equivalents	$ 26,549	$ 11,033
Restricted cash	160	180
Total cash, cash equivalents and restricted cash	$ 26,709	$ 11,213

See accompanying notes to condensed consolidated financial statements.

1. Nature of Business

T2 Biosystems, Inc. (the "Company") was incorporated on April 27, 2006 as a Delaware corporation with operations based in Lexington, Massachusetts. The Company is an *in vitro* diagnostics company that has developed an innovative and proprietary technology platform that offers a rapid, sensitive and simple alternative to existing diagnostic methodologies. The Company is using its T2 Magnetic Resonance technology ("T2MR") to develop a broad set of applications aimed at lowering mortality rates, improving patient outcomes and reducing the cost of healthcare by helping medical professionals make targeted treatment decisions earlier. T2MR enables rapid detection of pathogens, biomarkers and other abnormalities in a variety of unpurified patient sample types, including whole blood, plasma, serum, saliva, sputum, cerebral spinal fluid and urine, and can detect cellular targets at limits of detection as low as one colony forming unit per milliliter ("CFU/mL"). The Company's initial development efforts target sepsis and Lyme disease, which are areas of significant unmet medical need in which existing therapies could be more effective with improved diagnostics. On September 22, 2014, the Company received market clearance from the U.S. Food and Drug Administration ("FDA") for its first two products, the T2Dx® Instrument (the "T2Dx") and T2Candida® Panel ("T2Candida"). On May 24, 2018, the Company received market clearance from the FDA for its T2Bacteria® Panel ("T2Bacteria"). On February 6, 2019, the FDA granted the Company's T2Resistance™ Panel ("T2Resistance") designation as a Breakthrough Device. On August 2, 2019, the Center for Medicare & Medicaid Services (CMS) granted approval for a New Technology Add-on Payment for the T2Bacteria Panel for fiscal year 2020. On November 20, 2019, the Company's T2Resistance Panel was granted a CE-Mark. On June 30, 2020, the Company announced the US launch of its COVID-19 molecular diagnostic test, the T2SARS-CoV-2 Panel, after validation of the test meeting the FDA's requirements for an Emergency Use Authorization (EUA). On July 1, 2020, the Company submitted an EUA request to the FDA for the T2SARS-CoV-2 Panel. The test is designed to detect the presence of the SARS-CoV-2 virus in a nasopharyngeal swab sample.

Liquidity and Going Concern

At June 30, 2020, the Company had cash and cash equivalents of $26.5 million, marketable securities of $9.2 million, an accumulated deficit of $401.8 million, a stockholders' deficit of $4.4 million, and has experienced cash outflows from operating activities over the past years. The future success of the Company is dependent on its ability to successfully commercialize its products, obtain regulatory clearance for and successfully launch its future product candidates, obtain additional capital and ultimately attain profitable operations. Historically, the Company has funded its operations primarily through its August 2014 initial public offering, its December 2015 public offering, its September 2016 private investment in public equity ("PIPE") financing, its September 2017 public offering, its June 2018 public offering, its July 2019 establishment of an Equity Distribution Agreement and Equity Purchase Agreement, private placements of redeemable convertible preferred stock and through debt financing arrangements.

The Company is subject to a number of risks similar to other newly commercial life science companies, including, but not limited to commercially launching the Company's products, development and market acceptance of the Company's product candidates, development by its competitors of new technological innovations, protection of proprietary technology, and raising additional capital.

The COVID-19 pandemic has impacted and may continue to impact operations. The Company has established protocols for continued manufacturing, distribution and servicing of its products with safe social distancing and personal protective equipment measures and for remote work for employees not essential to on-site operations. To date these measures have been successful but may not continue to function should the pandemic escalate and impact personnel. The Company's hospital customers have restricted the sales team's access to their facilities and as a result, the Company significantly reduced its sales and general and administrative staffing levels to reduce expenses. The Company's customers may reduce their purchases of products. Customers may cease to comply with the terms of sales agreements and this may impact the ability to recognize revenue and hinder receivables collections. The Company has a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects, the Company's ability to continue its future product development may be impacted. The ability of the Company's shipping carriers to deliver products to customers may be disrupted. The Company has reviewed its suppliers and quantities of key materials and believes that it has sufficient stocks and alternate sources of critical materials including personal protective equipment should the supply chains become disrupted. As further described in Note 5., the Company believes the pandemic's impact on its sales has impacted the recoverability of the value of T2-owned instruments and components. The COVID-19 pandemic also caused the Company to reassess its build plan and evaluate its inventories accordingly, which resulted in an additional charge to cost of product revenue.

Having obtained authorization from the FDA to market the T2Dx, T2Candida, and T2Bacteria, the Company has incurred significant commercialization expenses related to product sales, marketing, manufacturing and distribution. The Company may seek to fund its operations through public equity, private equity or debt financings, as well as other sources. However, the Company may be unable to raise additional funds or enter into such other arrangements when needed, on favorable terms, or at all. The Company's failure to raise capital or enter into such other arrangements if and when needed would have a negative impact on the Company's business, results of operations, financial condition and the Company's ability to develop and commercialize T2Dx, T2Candida, T2Bacteria and other product candidates.

Pursuant to the requirements of Accounting Standards Codification ("ASC") 205-40, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, management must evaluate whether there are conditions or 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 that the financial statements are issued. This evaluation initially does not take into consideration the potential mitigating effect of management's plans that have not been fully implemented as of the date the financial statements are issued. When substantial doubt exists under this methodology, management evaluates whether the mitigating effect of its plans sufficiently alleviates substantial doubt about the Company's ability to continue as a going concern. The mitigating effect of management's plans, however, is only considered if both (1) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (2) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued.

Management believes that its existing cash and cash equivalents and marketable securities at June 30, 2020, along with the $33.4 million of additional funding available through the Company's Equity Distribution Agreement (the "Sales Agreement") with Canaccord Genuity LLC, as agent ("Canaccord") (Note 7) which was raised in July 2020, will be sufficient to allow the Company to fund its current operating plan, at least a year from issuance of these financial statements. Certain elements of the Company's operating plan are outside of the Company's control, those elements cannot be considered probable; under ASC 205-40, the future receipt of potential funding from the Company's Co-Development partners and other resources cannot be considered probable at this time because none of the plans are entirely within the Company's control. During the three months ended March 31, 2020, management implemented a cost improvement strategy which is focused on reducing operating expenses and improving our cost of goods sold. The Company reduced its total employee headcount by 22% as compared to headcount at December 31, 2019, resulting in severance of $0.4 million, all of which was paid by June 30, 2020. The Term Loan Agreement with CRG Servicing LLC ("CRG") (Note 6) has certain covenants which require the Company to achieve certain annual revenue targets, whereby the Company is required to pay double the amount of any shortfall as an acceleration of principal payments, and maintain a minimum cash balance of $5.0 million. As of the date of these financial statements, it is probable the Company will not achieve the revenue target of $15.0 million for the twenty-four month period ended December 31, 2020, and there are no assurances that the Company will achieve the revenue target of $43.0 million for the twenty-four month period ended December 31, 2021. Should the Company fail to meet the revenue target, it would seek a waiver of this provision. There can be no assurances that the Company would be successful in obtaining a waiver. If the Company is unsuccessful in obtaining a waiver, it would pay the cure amount set forth under the Term Loan Agreement. While the Company believes it can continue as a going concern for at least a year from issuance of these financial statements, there can be no assurances the Company will continue to be in compliance with the cash covenant in future periods without additional funding.

On April 7, 2020, the Company received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that, for the last thirty consecutive business days, the bid price for the Company's common stock had closed below the minimum $1.00 per share requirement for continued listing on the Nasdaq Global Market under Nasdaq Listing Rule 5450(a)(1). On June 16, 2020, the Company received a letter from the Nasdaq stating that the Company had regained compliance.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative United States GAAP as defined in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB"). The Company's condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, T2 Biosystems Securities Corporation. All intercompany balances and transactions have been eliminated.

Unaudited Interim Financial Information

Certain information and footnote disclosures normally included in the Company's annual financial statements have been condensed or omitted. Accordingly, these interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

The accompanying interim condensed consolidated balance sheet as of June 30, 2020, the condensed consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2020 and 2019, the condensed consolidated statements of stockholders' deficit for the three and six months ended June 30, 2020 and 2019, the condensed consolidated statements of cash flows for the six months ended June 30, 2020 and 2019 and the related financial data and other information disclosed in these notes are unaudited. The unaudited interim financial statements have been prepared on the same basis as the audited annual financial statements, and, in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the Company's financial position as of June 30, 2020, and the results of its operations for the three and six months ended June 30, 2020 and 2019 and its cash flows for the six months ended June 30, 2020 and 2019. The results for the three and six months ended June 30, 2020 are not necessarily indicative of the results to be expected for the year ending December 31, 2020, any other interim periods, or any future year or period.

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker is the Chief Executive Officer. The Company views its operations and manages its business in one operating segment, which is the business of developing and, upon regulatory clearance, commercializing its diagnostic products aimed at lowering mortality rates, improving patient outcomes and reducing the cost of healthcare by helping medical professionals make targeted treatment decisions earlier.

Geographic Information

The Company sells its products domestically and internationally. Total international sales were approximately $0.3 million or 10% of total revenue and $0.6 million or 31% of total revenue for the three months ended June 30, 2020 and 2019, respectively. Total international sales were approximately $0.7 million or 15% of total revenue and $1.2 million and 34% of total revenue for the six months ended June 30, 2020 and 2019, respectively.

For the three months ended June 30, 2020 and 2019, there was no international customer that represented greater than 10% of total revenue. For the six months ended June 30, 2020, there was no international customer that represented greater than 10% of total revenue. For the six months ended June 30, 2019, the Company derived approximately 10% of its total revenue from one international customer.

As of June 30, 2020 and December 31, 2019, the Company had outstanding receivables of $0.3 million and $1.2 million, respectively, from customers located outside of the U.S.

Net Loss Per Share

Basic net loss per share is calculated by dividing net loss by the weighted-average number of shares of common stock outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is calculated by adjusting the weighted-average number of shares outstanding for the dilutive effect of common stock equivalents outstanding for the period, determined using the treasury-stock method. For purposes of the diluted net loss per share calculation, stock options and unvested restricted stock and restricted stock contingently issuable upon achievement of certain market conditions are considered to be

common stock equivalents, but have been excluded from the calculation of diluted net loss per share, as their effect would be anti-dilutive for all periods presented. Therefore, basic and diluted net loss per share applicable to common stockholders was the same for all periods presented.

Marketable Securities

The Company's marketable securities typically consist of certificates of deposit and U.S. treasury securities, which are classified as available-for-sale and included in current assets as they are intended to fund current operations. Available-for-sale securities are carried at fair value with unrealized gains and losses reported as a component of shareholders' deficit in accumulated other comprehensive income (loss). Realized gains and losses, if any, are included in other income in the condensed consolidated statements of operations.

Available-for-sale securities are reviewed for possible impairment at least quarterly, or more frequently if circumstances arise that may indicate impairment. When the fair value of the securities declines below the amortized cost basis, impairment is indicated and it must be determined whether it is other than temporary. Impairment is considered to be other than temporary if the Company: (i) intends to sell the security, (ii) will more likely than not be forced to sell the security before recovering its cost, or (iii) does not expect to recover the security's amortized cost basis. If the decline in fair value is considered other than temporary, the cost basis of the security is adjusted to its fair market value and the realized loss is reported in earnings. Subsequent increases or decreases in fair value are reported as a component of shareholders' deficit in accumulated other comprehensive income (loss). There were no other-than-temporary unrealized losses as of June 30, 2020.

The market value of the Company's marketable securities, for which maturities are all less than one year, are as follows (in thousands):

	June 30, 2020
Certificates of deposit	$ 2,251
U.S. treasury securities	6,996
Total	$ 9,247

The unrealized gains and losses as of June 30, 2020 were immaterial.

Guarantees

As permitted under Delaware law, the Company indemnifies its officers and directors for certain events or occurrences while each such officer or director is, or was, serving at the Company's request in such capacity. The term of the indemnification is the officer's or director's lifetime. The maximum potential amount of future payments the Company could be required to make is unlimited; however, the Company has directors' and officers' liability insurance coverage that limits its exposure and enables the Company to recover a portion of any future amounts paid.

The Company leases office, laboratory and manufacturing space under noncancelable operating leases. The Company has standard indemnification arrangements under the leases that require it to indemnify the landlords against all costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from any breach, violation or nonperformance of any covenant or condition of the Company's leases.

In the ordinary course of business, the Company enters into indemnification agreements with certain suppliers and business partners where the Company has certain indemnification obligations limited to the costs, expenses, fines, suits, claims, demands, liabilities and actions directly resulting from the Company's gross negligence or willful misconduct, and in certain instances, breaches, violations or nonperformance of covenants or conditions under the agreements.

As of June 30, 2020 and December 31, 2019, the Company had not experienced any material losses related to these indemnification obligations, and no material claims with respect thereto were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

Leases

Pursuant to Topic 842, *Leases* ("ASC 842"), at the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. Leases with a term greater than one year are recognized on the balance sheet as right-of-use assets, lease liabilities and long-term lease liabilities. The Company has elected not to recognize on the balance sheet leases with terms of one year or less. The exercise of lease renewal options is at our discretion and the

renewal to extend the lease terms are not included in the Company's right-of-use assets and lease liabilities as they are not reasonably certain of exercise. The Company will evaluate the renewal options and when they are reasonably certain of exercise, the Company will include the renewal period in its lease term. Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected remaining lease term. However, certain adjustments to the right-of-use asset may be required for items such as prepaid or accrued lease payments. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rates, which are the rates incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment.

In accordance with the guidance in ASC 842, components of a lease should be split into three categories: lease components (e.g. land, building, etc.), non-lease components (e.g. common area maintenance, consumables, etc.), and non-components (e.g. property taxes, insurance, etc.) Then the fixed and in-substance fixed contract consideration (including any related to non-components) must be allocated based on the respective relative fair values to the lease components and non-lease components.

The Company made the policy election to not separate lease and non-lease components. Each lease component and the related non-lease components are accounted for together as a single component.

Revenue Recognition

The Company generates revenue from the sale of instruments, consumable diagnostic tests, related services, reagent rental agreements and research and development agreements with third parties. Pursuant to ASC 606, *Revenue from Contracts with Customers* ("ASC 606"), revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration the Company expects to be entitled to receive in exchange for these goods and services.

Once a contract is determined to be within the scope of ASC 606 at contract inception, the Company reviews the contract to determine which performance obligations the Company must deliver and which of these performance obligations are distinct. The Company recognizes as revenues the amount of the transaction price that is allocated to the respective performance obligation when the performance obligation is satisfied or as it is satisfied. Generally, the Company's performance obligations are transferred to customers at a point in time, typically upon shipment, or over time, as services are performed.

Most of the Company's contracts with distributors in geographic regions outside the United States contain only a single performance obligation; whereas, most of the Company's contracts with direct sales customers in the United States contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. Excluded from the transaction price are sales tax and other similar taxes which are presented on a net basis.

Product revenue is generated by the sale of instruments and consumable diagnostic tests predominantly through the Company's direct sales force in the United States and distributors in geographic regions outside the United States. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers, including its distributors. Payment terms granted to distributors are the same as those granted to end-user customers and payments are not dependent upon the distributors' receipt of payment from their end-user customers. The Company either sells instruments to customers and international distributors, or retains title and places the instrument at the customer site pursuant to a reagent rental agreement. When an instrument is purchased by a customer, the Company recognizes revenue when the related performance obligation is satisfied (i.e. when the control of an instrument has passed to the customer; typically, at shipping point). When the instrument is placed under a reagent rental agreement, the Company's customers generally agree to fixed term agreements, which can be extended, and incremental charges on each consumable diagnostic test purchased. Revenue from the sale of consumable diagnostic tests (under a reagent rental agreement) is recognized upon shipment. The transaction price from consumables purchases is allocated between the lease of the instrument (under a contingent rent methodology as provided for in ASC 842, *Leases*), and the consumables when related performance obligations are satisfied, as a component of lease and product revenue, and is included as Instrument Rentals in the below table. Revenue associated with reagent rental consumables purchases is currently classified as variable consideration and constrained until a purchase order is received and related performance obligations have been satisfied. Shipping and handling costs billed to customers in connection with a product sale are recorded as a component of the transaction price and allocated to product revenue in the condensed consolidated statements of operations and comprehensive loss as they are incurred by the Company in fulfilling its performance obligations.

Direct sales of instruments include warranty, maintenance and technical support services typically for one year following the installation of the purchased instrument ("Maintenance Services"). Maintenance Services are separate performance obligations as they are service based warranties and are recognized on a straight-line basis over the service delivery period. After the completion of the initial Maintenance Services period, customers have the option to renew or extend the Maintenance Services typically for additional

one-year periods in exchange for additional consideration. The extended Maintenance Services are also service based warranties that represent separate purchasing decisions. The Company recognizes revenue allocated to the extended Maintenance Services performance obligation on a straight-line basis over the service delivery period.

Fees paid to member-owned group purchasing organizations ("GPOs") are deducted from related product revenues.

The Company warrants that consumable diagnostic tests will be free from defects, when handled according to product specifications, for the stated life of the product. To fulfill valid warranty claims, the Company provides replacement product free of charge. Accordingly, the Company accrues warranty expense associated with the estimated defect rates of the consumable diagnostic tests.

Revenue earned from activities performed pursuant to research and development agreements is reported as research revenue in the condensed consolidated statements of operations and comprehensive loss, and is recognized over time using an input method as the work is completed. The related costs are expensed as incurred as research and development expense. The timing of receipt of cash from the Company's research and development agreements generally differs from when revenue is recognized. Milestones are contingent on the occurrence of future events and are considered variable consideration being constrained until the Company believes a significant revenue reversal will not occur. Refer to Note 11 for further details regarding the Company's research and development arrangements.

Grants received, including cost reimbursement agreements, are assessed to determine if the agreement should be accounted for as an exchange transaction or a contribution. An agreement is accounted for as a contribution if the resource provider does not receive commensurate value in return for the assets transferred. Contribution revenue is recognized when all donor-imposed conditions have been met.

Our customers may cease to comply with the terms of our sales agreements and this may impact our ability to recognize revenue and hinder receivables collections. We have a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects our ability to continue our future product development may be impacted.

Disaggregation of Revenue

The Company disaggregates revenue from contracts with customers by type of products and services, as it best depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. The following table disaggregates our revenue by major source (in thousands):

	Three Months Ended, June 30,		Six Months Ended, June 30,	
	2020	2019	2020	2019
Product Revenue				
Instruments	$ 170	$ 462	$ 417	$ 997
Consumables	853	717	1,598	1,450
Instrument rentals	18	95	71	141
Total Product Revenue	1,041	1,274	2,086	2,588
Research Revenue	11	71	11	213
Contribution Revenue	1,500	459	3,000	788
Total Revenue	$ 2,552	$ 1,804	$ 5,097	$ 3,589

Remaining Performance Obligations

Remaining performance obligations represent the transaction price of firm orders for which work has not been performed or goods and services have not been delivered. As of June 30, 2020, the aggregate amount of transaction price allocated to remaining performance obligations for contracts with an original duration greater than one year was $0.1 million. We do not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed. The Company expects to recognize revenue on the remaining performance obligations over the next 18 months.

Significant Judgments

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Once we determine the performance obligations, the Company determines the transaction price,

which includes estimating the amount of variable consideration, based on the most likely amount, to be included in the transaction price, if any. We then allocate the transaction price to each performance obligation in the contract based on a relative stand-alone selling price method. The corresponding revenue is recognized as the related performance obligations are satisfied as discussed in the revenue categories above.

Judgment is required to determine the standalone selling price for each distinct performance obligation. We determine standalone selling price based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, we estimate the standalone selling price taking into account available information such as market conditions and the expected costs and margin related to the performance obligations.

Contract Assets and Liabilities

The Company did not record any contract assets at June 30, 2020 and December 31, 2019.

The Company's contract liabilities consist of upfront payments for research and development contracts and Maintenance Services on instrument sales. We classify these contract liabilities in deferred revenue as current or noncurrent based on the timing of when we expect to recognize revenue. Contract liabilities were $0.1 million and $0.2 million at June 30, 2020 and December 31, 2019, respectively. Revenue recognized during the three months ended June 30, 2020 relating to contract liabilities at December 31, 2019 was immaterial. Revenue recognized during the six months ended June 30, 2020 relating to contract liabilities at December 31, 2019 was $0.1 million and related to straight-line revenue recognition associated with maintenance agreements.

Cost to Obtain and Fulfill a Contract

The Company does not meet the recoverability criteria to capitalize costs to obtain or fulfill instrument purchases. Reagent rental agreements do not meet the recoverability criteria to capitalize costs to obtain the contracts and the costs to fulfill the contracts are under the scope of ASC 842. At the end of each reporting period, the Company assesses whether any circumstances have changed to meet the criteria for capitalization. The Company did not incur any expenses to obtain research and development agreements and costs to fulfill those contracts do not generate or enhance resources of the entity. As such, no costs to obtain or fulfill contracts have been capitalized at period end.

Cost of Product Revenue

Cost of product revenue includes the cost of materials, direct labor and manufacturing overhead costs used in the manufacture of consumable diagnostic tests sold to customers and related license and royalty fees. Cost of product revenue also includes depreciation on revenue generating T2Dx instruments that have been placed with customers under reagent rental agreements; costs of materials, direct labor and manufacturing overhead costs on the T2Dx instruments sold to customers; and other costs such as customer support costs, royalties and license fees, warranty and repair and maintenance expense on the T2Dx instruments that have been placed with customers under reagent rental agreements.

Research and Development Costs

Costs incurred in the research and development of the Company's product candidates are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities, including activities associated with performing services under research revenue arrangements and contribution agreements, costs associated with the manufacture of developed products and include salaries and benefits, stock compensation, research-related facility and overhead costs, laboratory supplies, equipment and contract services.

Recent Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Accounting Standards Adopted

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses: Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). This ASU requires measurement and recognition of expected credit losses for financial

assets. This standard will become effective for us beginning January 1, 2020. The Company adopted ASU 2016-13 on January 1, 2020. The adoption did not have a material impact on our financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* ("ASU 2018-13"), which eliminates, adds and modifies certain disclosure requirements for fair value measurements. The amendment is effective for interim and annual reporting periods beginning after December 15, 2019. The Company adopted ASU 2018-13 on January 1, 2020. The results of adoption are presented in Note 3.

In November 2018, the FASB issued ASU No. 2018-18, *Collaborative Arrangements* ("ASU 2018-18"), which clarifies the interaction between ASC 808, Collaborative Arrangements and ASC 606, Revenue from Contracts with Customers. Certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606 when the counterparty is a customer. In addition, ASU 2018-18 precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue if the counterparty is not a customer for that transaction. ASU 2018-18 should be applied retrospectively to the date of initial application of ASC 606. This guidance is effective for interim and fiscal periods beginning after December 15, 2019. We adopted ASU 2018-18 on January 1, 2020. The adoption did not have a material impact on our financial statements.

Accounting Standards Issued, Not Adopted

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes: Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2020, with early adoption permitted. Adoption of the standard requires certain changes to be made prospectively, with some changes to be made retrospectively. We do not expect the adoption of this standard to have a material impact on our financial position, results of operations or cash flows.

3. Fair Value Measurements

The Company measures the following financial assets at fair value on a recurring basis. There were no transfers between levels of the fair value hierarchy during any of the periods presented. The following tables set forth the Company's financial assets carried at fair value categorized using the lowest level of input applicable to each financial instrument as of June 30, 2020 and December 31, 2019 (in thousands):

	Balance at June 30, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	$ 3,250	$ 3,250	$ —	$ —
Marketable securities	9,247	9,247	—	—
Restricted cash	160	160	—	—
	$ 12,657	$ 12,657	$ —	$ —
Liabilities:				
Derivative liability	$ 2,391	$ —	$ —	$ 2,391
	$ 2,391	$ —	$ —	$ 2,391

	Balance at December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	$ 4,301	$ 4,301	$ —	$ —
Restricted cash	180	180	—	—
	$ 4,481	$ 4,481	$ —	$ —
Liabilities:				
Derivative liability	$ 2,425	$ —	$ —	$ 2,425
	$ 2,425	$ —	$ —	$ 2,425

The Company's cash equivalents and available-for-sale marketable securities are comprised of certificates of deposit and government securities. Securities are classified as cash equivalents when the original maturities are within 90 days of the purchase dates. The Company also maintains certificates of deposit classified as restricted cash for $0.2 million (Note 4).

The Company's Term Loan Agreement with CRG (Note 6) contains certain provisions that change the underlying cash flows of the instrument, including acceleration of the obligations under the Term Loan Agreement under an event of default. In addition, under certain circumstances, a default interest rate of an additional 4.0% per annum will apply at the election of CRG on all outstanding obligations during the occurrence and continuance of an event of default. The Company concluded that these features are not clearly and closely related to the host instrument and represent a single compound derivative that is required to be re-measured at fair value on a quarterly basis.

The fair value of the derivative at June 30, 2020 and December 31, 2019 is $2.4 million and is classified as a non-current liability on the balance sheet at June 30, 2020 and a current liability at December 31, 2019 to match the classification of the related Term Loan Agreement (Note 6). While the Company's fair value assessment as of June 30, 2020 assessed the likelihood of paying contingent interest as probable within the next twelve months, based on recent financing events subsequent to June 30, 2020 and as of the date of this filing the Company continues to assess and believes the probability is remote that the contingent interest will commence within the next twelve months which, accordingly, provided for the non-current classification of the derivative liability. Management continues to reassess at each balance sheet and filing date based on facts and circumstances and can provide no assurances regarding the probability of payment of the contingent interest in future periods.

The estimated fair value of the derivative at June 30, 2020 was determined using a probability-weighted discounted cash flow model that includes contingent interest payments under the following scenarios:

	Range
4% contingent interest beginning in 2020	90.0%
4% contingent interest beginning in 2021	10.0%

Should the Company's assessment of these probabilities change, including amendments of certain revenue targets, there could be a change to the fair value of the derivative liability.

The following table provides a roll-forward of the fair value of the derivative liability (in thousands):

Balance at December 31, 2019	$ 2,425
Change in fair value of derivative liability, recorded as interest expense	(34)
Balance at June 30, 2020	$ 2,391

4. Restricted Cash

The Company is required to maintain a security deposit for its operating lease agreement for the duration of the lease agreement and for a particular credit card program as long it is in place. At June 30, 2020, the Company had a certificate of deposit for $0.2

million, which represented collateral as a security deposit for its operating lease agreement for its facility. At December 31, 2019, the Company had certificates of deposit for $0.2 million, which represented collateral as security deposits for its operating lease agreement for its facility and for a particular credit card program which was no longer in place as of June 30, 2020.

5. Supplemental Balance Sheet Information

Inventories

Inventories are stated at the lower of cost or net realizable value on a first-in, first-out basis and are comprised of the following (in thousands):

	June 30, 2020	December 31, 2019
Raw materials	$ 1,203	$ 1,617
Work-in-process	1,368	1,227
Finished goods	1,540	755
Total inventories, net	$ 4,111	$ 3,599

The COVID-19 pandemic caused the Company to reassess its build plan and evaluate its inventories accordingly, which resulted in an additional $0.6 million charge to cost of product revenue during the six months ended June 30, 2020.

Property and Equipment

Property and equipment consist of the following (in thousands):

	June 30, 2020	December 31, 2019
Office and computer equipment	$ 538	$ 538
Software	762	762
Laboratory equipment	4,852	4,747
Furniture	194	194
Manufacturing equipment	672	672
Manufacturing tooling and molds	255	255
T2-owned instruments and components	5,527	6,775
Leasehold improvements	3,485	3,497
Construction in progress	1,643	1,641
	17,928	19,081
Less accumulated depreciation and amortization	(14,028)	(13,236)
Property and equipment, net	$ 3,900	$ 5,845

Construction in progress is primarily comprised of equipment that has not been placed in service. T2-owned instruments and components is comprised of raw materials and work-in-process inventory that are expected to be used or used to produce T2-owned instruments, based on our business model and forecast, and completed instruments that will be used for internal research and development, clinical studies or reagent rental agreements with customers. At June 30, 2020 and December 31, 2019, there were $0.1 million and $0.6 million, respectively, of raw materials and work-in-process inventory in T2-owned instruments and components. Completed T2-owned instruments are placed in service once installation procedures are completed and are depreciated over five years. Depreciation expense for T2-owned instruments placed at customer sites pursuant to reagent rental agreements is recorded as a component of cost of product revenue and totaled approximately $0.1 million and $0.2 million for the three months ended June 30, 2020 and 2019, respectively, and $0.2 million and $0.4 million for the six months ended June 30, 2020 and 2019, respectively.

At the beginning of the COVID-19 pandemic, the Company believed the pandemic would reduce product sales and impair the ability to recover the cost of the T2-owned instruments and components. The Company assessed the impact on the related cash flows of the T2-owned instruments and reduced the respective carrying values by $0.6 million as of June 30, 2020, which is recorded as cost of product revenue impairment expense.

Depreciation expense for T2-owned instruments used for internal research and development and clinical studies is recorded as a component of research and development expense. Depreciation and amortization expense of $0.4 million and $0.6 million was

charged to operations for the three months ended June 30, 2020 and 2019, respectively. Depreciation and amortization expense of $0.9 million and $1.2 million was charged to operations for the six months ended June 30, 2020 and 2019, respectively.

Accrued Expenses

Accrued expenses consist of the following (in thousands):

	June 30, 2020	December 31, 2019
Accrued payroll and compensation	$ 1,388	$ 3,193
Accrued final fee	—	2,445
Accrued research and development expenses	199	267
Accrued professional services	578	511
Accrued interest	914	908
Operating lease liabilities	2,010	1,983
Other accrued expenses	882	1,900
Total accrued expenses and other current liabilities	$ 5,971	$ 11,207

At December 31, 2019, a fee associated with the Company's Term Loan Agreement (Note 6) of $2.4 million is included as accrued final fee in the table above to match the current classification of the associated debt. At June 30, 2020, the Company's Term Loan Agreement with CRG and the associated fee of $2.8 million are classified as non-current liabilities. Included within other accrued expenses in the table above, at June 30, 2020 is $0.4 million from the Second Amendment to Employment Agreement with John McDonough (the "Transition Agreement") (Note 13). Included within other accrued expenses and accrued payroll and compensation in the table above at December 31, 2019 are $1.0 million and $0.2 million, respectively, related to the Transition Agreement.

6. Notes Payable

Future principal payments on the notes payable are as follows (in thousands):

	June 30, 2020	December 31, 2019
Term loan agreement before unamortized PIK interest, discount and issuance costs	$ 48,077	$ 48,077
Less: unamortized paid-in-kind interest	(2,488)	(3,284)
Less: unamortized discount and deferred issuance costs	(1,589)	(1,891)
Total notes payable	$ 44,000	$ 42,902

The Term Loan Agreement with CRG is classified as a current liability on the balance sheet at December 31, 2019 based on the Company's consideration of the probability of violating the 2020 revenue covenant primarily due to the COVID-19 pandemic's likely impact on our product sales, which in turn would trigger violation of the minimum liquidity covenant included in the Term Loan Agreement. The Term Loan Agreement with CRG is classified as a non-current liability at June 30, 2020 as the Company has sufficient cash, cash equivalents and marketable securities as of the date of this filing due to subsequent financing (Note 7) that the minimum liquidity covenant would not be triggered even upon default of the revenue covenant at December 31, 2020 as a result of having sufficient funds to pay the cure amount set forth under the Term Loan Agreement. The Term Loan Agreement includes a subjective acceleration clause whereby an event of default, including a material adverse change in the business, operations, or conditions (financial or otherwise), could result in the acceleration of the obligations under the Term Loan Agreement. The contractual terms of the agreement, as amended, require quarterly principal payments of $12.0 million commencing March 31, 2022 through maturity December 31, 2022. The Company has assessed the classification of the note payable as non-current based on facts and circumstances as of the date of this filing, specifically as it relates to achieving the minimum liquidity and revenue covenants. As of the date of this filing, the Company believes that should it be unable to meet such covenants as of December 31, 2020, it is probable that it would be able to pay the cure of default. Management continues to reassess at each balance sheet and filing date based on facts and circumstances and can provide no assurances regarding the probability of meeting its aforementioned covenants in future periods.

Term Loan Agreement

In December 2016, the Company entered into a Term Loan Agreement (the "Term Loan Agreement") with CRG. The Company initially borrowed $40.0 million pursuant to the Term Loan Agreement, which has a six-year term with four years of interest-only payments (through December 30, 2020), after which quarterly principal and interest payments will be due through the December 30, 2022 maturity date. Interest on the amounts borrowed under the Term Loan Agreement accrues at an annual fixed rate of 11.5%, 3.5% of which may be deferred during the interest-only period by adding such amount to the aggregate principal loan amount. In addition, if the Company achieves certain financial performance metrics, the loan will convert to interest-only until the December 30, 2022 maturity, at which time all unpaid principal and accrued unpaid interest will be due and payable. The Company is required to pay CRG a financing fee based on the loan principal amount drawn. The Company is also required to pay a final payment fee of 8.0%, subsequently amended to 10%, of the principal outstanding upon repayment. The Company is accruing the final payment fee as interest expense and it is included as a non-current liability at June 30, 2020 and a current liability at December 31, 2019 on the balance sheet to conform to the classification of the associated debt in those periods.

The Company may prepay all or a portion of the outstanding principal and accrued unpaid interest under the Term Loan Agreement at any time upon prior notice subject to a certain prepayment fee during the first five years of the term and no prepayment fee thereafter. As security for its obligations under the Term Loan Agreement the Company entered into a security agreement with CRG whereby the Company granted a lien on substantially all of its assets, including intellectual property. The Term Loan Agreement also contains customary affirmative and negative covenants for a credit facility of this size and type, including a requirement to maintain a minimum cash balance. The Term Loan Agreement also requires the Company to achieve certain revenue targets, whereby the Company is required to pay double the amount of any shortfall as an acceleration of principal payments. In March 2019, the Term Loan Agreement was amended to reduce the 2019 minimum revenue target to $9.0 million and eliminate the 2018 revenue covenant. In exchange for the amendment, the Company agreed to reset the strike price of the warrants to purchase a total of 528,958 shares of the Company's common stock, issued in connection with the Term Loan Agreement, from $8.06 per share to $4.35 per share (Note 9).

In September 2019, the Term Loan Agreement was amended to extend the interest-only payment period through December 31, 2021, to extend the initial principal repayment to March 31, 2022, and to reduce the minimum product revenue target for 2019 from $9 million to $4 million, for the twenty-four month period beginning on January 1, 2019 from $95 million to $15 million and for the twenty-four month period beginning on January 1, 2020 from $140 million to $43 million. The final payment fee was increased from 8% to 10% of the principal amount outstanding upon repayment. The Company issued to CRG warrants to purchase 568,291 shares of the Company's common stock ("New Warrants") (Note 9) at an exercise price of $1.55, with typical provisions for termination upon a change of control or a sale of all or substantially all of the assets of the Company. The Company also reduced the exercise price for the warrants previously issued to CRG to purchase an aggregate of 528,958 shares of the Company's common stock to $1.55. All of the New Warrants are exercisable any time prior to September 9, 2029, and all of the previously issued warrants are exercisable any time prior to December 30, 2026. The Company accounted for the March 2019 and September 2019 amendments as modifications to the Term Loan Agreement.

The Term Loan Agreement includes a subjective acceleration clause whereby an event of default, including a material adverse change in the business, operations, or conditions (financial or otherwise), could result in the acceleration of the obligations under the Term Loan Agreement. Under certain circumstances, a default interest rate of an additional 4.0% per annum will apply at the election of CRG on all outstanding obligations during the occurrence and continuance of an event of default.

Equipment Lease Credit Facility

In October 2015, the Company signed a $10.0 million Credit Facility (the "Credit Facility") with Essex Capital Corporation (the "Lessor") to fund capital equipment needs. As one of the conditions of the Term Loan Agreement, the Credit Facility was capped at a maximum of $5.0 million. Under the Credit Facility, Essex funded capital equipment purchases presented by the Company. The Company repaid the amounts borrowed in 36 equal monthly installments from the date of the amount funded. At the end of the 36 month lease term, the Company had the option to (a) repurchase the leased equipment at the lesser of fair market value or 10% of the original equipment value, (b) extend the applicable lease for a specified period of time, which will not be less than one year, or (c) return the leased equipment to the Lessor.

In April 2016 and June 2016, the Company completed the first two draws under the Credit Facility, of $2.1 million and $2.5 million, respectively. The Company made monthly payments of $67,000 under the first draw and $79,000 under the second draw. The borrowings under the Credit Facility were treated as finance leases and are included in property and equipment on the balance sheet. The amortization of the assets conveyed under the Credit Facility was included as a component of depreciation expense. During the year ended December 31, 2019, the Company repurchased the equipment for $0.3 million in accordance with the terms of the Credit Facility.

7. Stockholders' Deficit

Equity Distribution Agreement

On July 30, 2019, the Company entered into the Sales Agreement with Canaccord, as agent, pursuant to which the Company may offer and sell shares of common stock, for aggregate gross sale proceeds of up to $30.0 million from time to time through Canaccord. On March 9, 2020, the Company entered into an amendment to the Sales Agreement to increase the aggregate gross sales amount from $30.0 million to $65.0 million. On April 8, 2020, the Company entered into an amendment to the Sales Agreement to increase the aggregate gross sales amount from $65.0 million to $95.0 million. As of June 30, 2020, the Company had sold 82,118,644 shares of common stock with an aggregate gross sales amount of approximately $61.6 million, leaving approximately $33.4 million remaining under the Equity Distribution Agreement. In July 2020, the Company sold 19,488,023 shares of common stock for the amount remaining under the Sales Agreement, resulting in net proceeds of $32.4 million.

Upon delivery of a placement notice based on the Company's instructions and subject to the terms and conditions of the Sales Agreement, Canaccord may sell the shares by methods deemed to be an "at the market" offering, subject to shelf limitations if any, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, or by any other method permitted by law, including negotiated transactions, subject to the prior written consent of the Company. The Company is not obligated to make any sales of shares under the Sales Agreement. The Company or Canaccord may suspend or terminate the offering of shares upon notice to the other party, subject to certain conditions. Canaccord will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices and applicable state and federal law, rules and regulations and the rules of Nasdaq.

The Company has agreed to pay Canaccord for its services of acting as agent an amount equal to 3% of the gross proceeds from the sale of the shares pursuant to the Sales Agreement. The Company has also agreed to provide Canaccord with customary indemnification for certain liabilities. Legal and accounting fees are expected to be changed to share capital upon issuance of shares under the Sales Agreement.

During the six months ended June 30, 2020, the Company sold 76,632,144 shares under the Sales Agreement for net proceeds of $52.6 million after expenses. Prepaid expenses and other current assets at June 30, 2020 include $4.6 million of proceeds receivable from sales of shares sold June 30, 2020 under the Sales Agreement which were received in early July 2020.

Purchase Agreement

On July 29, 2019, the Company entered into a $30.0 million Purchase Agreement with Lincoln Park, pursuant to which the Company was able to sell and issue to Lincoln Park, and Lincoln Park was obligated to purchase, up to $30.0 million in value of its shares of common stock from time to time over a 36-month period starting from the effective date of the respective registration statement. On April 7, 2020, the Company terminated the Purchase Agreement, effective April 8, 2020.

The Company was able to direct Lincoln Park, at its sole discretion, and subject to certain conditions, to purchase up to 200,000 shares of common stock on any business day, provided that at least one business day had passed since the most recent purchase. The amount of a purchase could be increased under certain circumstances provided, however, that Lincoln Park's committed obligation under any single purchase would not exceed $2.0 million. The purchase price of shares of common stock related to the future funding was based on the then prevailing market prices of such shares at the time of sales as described in the Purchase Agreement.

In consideration for the execution and delivery of the Purchase Agreement, the Company issued 413,349 shares of common stock to Lincoln Park.

During the six months ended June 30, 2020, the Company sold 400,000 shares for proceeds of $0.3 million in connection with the Purchase Agreement.

8. Stock-Based Compensation

Stock Incentive Plans

2006 Stock Incentive Plan

The Company's 2006 Stock Option Plan ("2006 Plan") was established for granting stock incentive awards to directors, officers, employees and consultants of the Company. Upon closing of the Company's IPO in August 2014, the Company ceased granting stock incentive awards under the 2006 Plan. The 2006 Plan provided for the grant of incentive and non-qualified stock options and restricted

stock grants as determined by the Company's board of directors. Under the 2006 Plan, stock options were generally granted with exercise prices equal to or greater than the fair value of the common stock as determined by the board of directors, expired no later than 10 years from the date of grant, and vested over various periods not exceeding 4 years.

2014 Stock Incentive Plan

The Company's 2014 Incentive Award Plan ("2014 Plan", and together with the 2006 Plan, the "Stock Incentive Plans"), provides for the issuance of shares of common stock in the form of stock options, awards of restricted stock, awards of restricted stock units, performance awards, dividend equivalent awards, stock payment awards and stock appreciation rights to directors, officers, employees and consultants of the Company. Since the establishment of the 2014 Plan, the Company has primarily granted stock options and restricted stock units. Generally, stock options are granted with exercise prices equal to or greater than the fair value of the common stock on the date of grant, expire no later than 10 years from the date of grant, and vest over various periods not exceeding 4 years.

The number of shares reserved for future issuance under the 2014 Plan is the sum of (1) 823,529 shares, (2) any shares that were granted under the 2006 Plan which are forfeited, lapse unexercised or are settled in cash subsequent to the effective date of the 2014 Plan and (3) an annual increase on the first day of each calendar year beginning January 1, 2015 and ending on January 1, 2026, equal to the lesser of (A) 4% of the shares outstanding (on an as-converted basis) on the final day of the immediately preceding calendar year and (B) such smaller number of shares determined by the Company's board of directors. As of June 30, 2020, there were 1,415,151 shares available for future grant under the Stock Incentive Plans.

Inducement Award Plan

The Company's Amended and Restated Inducement Award Plan ("Inducement Plan"), which was adopted in March 2018 and most recently amended and restated in January 2020, provides for the granting of equity awards to new employees, including options, restricted stock awards, restricted stock units, performance awards, dividend equivalent awards, stock payment awards and stock appreciation rights. The aggregate number of shares of common stock which may be issued or transferred pursuant to awards under the Inducement Plan is 5,625,000 shares. Any awards that forfeit, expire, lapse, or are settled for cash without the delivery of shares to the holder are available for the grant of an award under the Inducement Plan. Any shares repurchased by or surrendered to the Company that are returned shall be available for the grant of an award under the Inducement Plan. The payment of dividend equivalents in cash in conjunction with any outstanding award shall not be counted against the shares available for issuance under the Inducement Plan. As of June 30, 2020, there were 2,064,000 shares available for future grant under the Inducement Plan.

Stock Options

During the six months ended June 30, 2020 and 2019, the Company granted stock options with an aggregate fair value of $3.0 million and $2.6 million, respectively, which are being amortized into compensation expense over the vesting period of the options as the services are being provided.

The following is a summary of option activity under the Stock Incentive Plans and Inducement Plan (in thousands, except share and per share amounts):

	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value
Outstanding at December 31, 2019	6,353,330	$ 4.95	7.29	$ 229
Granted	4,355,952	1.37		
Exercised	(10,000)	0.75		
Forfeited	(864,757)	3.61		
Cancelled	(150,165)	6.08		
Outstanding at June 30, 2020	9,684,360	$ 3.45	7.67	$ 1,323
Exercisable at June 30, 2020	4,114,005	$ 5.76	5.57	$ 168
Vested or expected to vest at June 30, 2020	8,512,277	$ 3.71	7.44	$ 1,058

There were 10,000 options exercised in the six months ended June 30, 2020 and no options exercised in the six months ended June 30, 2019. The weighted-average grant date fair values of stock options granted in the six month periods ended June 30, 2020 and 2019 were $0.69 per share and $1.93 per share, respectively, and were calculated using the following estimated assumptions:

	Six Months Ended June 30,	
	2020	2019
Weighted-average risk-free interest rate	1.40%	2.37%
Expected dividend yield	—%	—%
Expected volatility	95%	72%
Expected terms	5.7 years	6.0 years

The total fair values of options that vested during the six months ended June 30, 2020 and 2019 were $2.3 million and $1.7 million, respectively.

As of June 30, 2020, there was $6.5 million of total unrecognized compensation cost related to non-vested stock options granted under the Stock Incentive Plans and Inducement Plan. Total unrecognized compensation cost will be adjusted for future changes in the estimated forfeiture rate. The Company expects to recognize that cost over a remaining weighted-average period of 2.7 years as of June 30, 2020.

Restricted Stock Units

During the six months ended June 30, 2020, the Company awarded restricted stock units to certain employees and directors at no cost to them. The restricted stock units, excluding any restricted stock units with market conditions, vest through the passage of time, assuming continued service. Restricted stock units are not included in issued and outstanding common stock until the underlying shares are vested and released. During the year ended December 31, 2018, an additional 73,172 restricted stock units vested but were not reflected as outstanding shares at December 31, 2019 due to a deferred release date. These restricted stock units are reflected as outstanding shares at June 30, 2020. The fair value of the restricted stock units, at the time of the grant, is expensed on a straight line basis. The granted restricted stock units had an aggregate fair value of $0.5 million, which are being amortized into compensation expense over the vesting period of the restricted stock units as the services are being provided.

Included in the nonvested restricted stock units at June 30, 2020 are 399,437 restricted stock units with market conditions, which vest upon the achievement of stock price targets. The compensation cost for restricted stock units with market conditions is being recorded over the derived service period and was immaterial for the three and six months ended June 30, 2020 and $0.2 million and $0.9 million for the three and six months ended June 30, 2019, respectively.

The following is a summary of restricted stock unit activity under the 2014 Plan (in thousands, except share and per share amounts):

	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2019	1,295,508	4.19
Granted	917,064	0.54
Vested	(331,433)	3.45
Forfeited	(454,930)	3.99
Nonvested at June 30, 2020	1,426,209	2.07

As of June 30, 2020, there was $1.0 million of total unrecognized compensation cost related to nonvested restricted stock units granted under the 2014 Plan. Total unrecognized compensation cost will be adjusted for future changes in the estimated forfeiture rate. The Company expects to recognize that cost over a remaining weighted-average period of 1.94 years, as of June 30, 2020.

Stock-Based Compensation Expense

The following table summarizes the stock-based compensation expense resulting from awards granted under Stock Incentive Plans, the Inducement Plan and the 2014 Employee Stock Purchase Plan, that was recorded in the Company's results of operations for the periods presented (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cost of product revenue	$ 4	$ —	$ 80	$ 49
Research and development	237	436	550	831
Selling, general and administrative	703	848	1,505	2,353
Total stock-based compensation expense	$ 944	$ 1,284	$ 2,135	$ 3,233

For the three months ended June 30, 2020 and 2019, stock-based compensation expenses capitalized as part of inventory or T2Dx instruments and components were immaterial. For the six months ended June 30, 2020, stock-based compensation expenses capitalized as part of inventory or T2Dx instrument and components were immaterial. For the six months ended June 30, 2019, $0.1 million of stock-based compensation expenses were capitalized as part of inventory or T2 instruments and components.

9. Warrants

In connection with the Term Loan Agreement entered into in December 2016, the Company issued to CRG warrants to purchase a total of 528,958 shares of the Company's common stock. The warrants are exercisable any time prior to December 30, 2026 at a price of $4.35 per share, which was amended in March 2019 from an original price of $8.06 per share, with typical provisions for termination upon a change of control or a sale of all or substantially all of the assets of the Company. The warrants are classified within stockholders' equity, and the proceeds were allocated between the debt and warrants based on their relative fair value. The fair value of the warrants was determined by the Black-Scholes-Merton option pricing model. The fair value of the amended warrants was $0.9 million. The incremental fair value of the modified instrument of $0.1 million was recorded as debt discount and additional paid-in-capital.

In connection with the September 2019 amendment of the Term Loan Agreement, the Company issued to CRG warrants to purchase 568,291 shares of the Company's common stock at an exercise price of $1.55, with typical provisions for termination upon a change of control or a sale of all or substantially all of the assets of the Company. The Company also reduced the exercise price for the warrants previously issued to CRG to $1.55. All of the New Warrants are exercisable any time prior to September 9, 2029. The warrants are classified within shareholders' equity, and the proceeds were allocated between the debt and warrants based on their relative fair value. The fair value of the new and amended warrants was determined by the Black-Scholes-Merton option pricing model. The incremental fair value of the amended warrants of $0.1 million and the fair value of the New Warrants of $0.7 million were recorded as debt discount and additional paid-in-capital.

10. Net Loss Per Share

The following shares were excluded from the calculation of diluted net loss per share applicable to common stockholders, prior to the application of the treasury stock method, because their effect would have been anti-dilutive for the periods presented:

	Three and Six Months Ended June 30,	
	2020	2019
Options to purchase common shares	9,684,360	5,268,096
Restricted stock units	1,426,209	1,435,587
Warrants to purchase common stock	1,097,249	528,958
Total	12,207,818	7,232,641

11. Co-Development Agreements

Canon US Life Sciences

On February 3, 2015, the Company entered into a Co-Development Partnership Agreement (the "Co-Development Agreement") with Canon U.S. Life Sciences, Inc. ("Canon") to develop a diagnostic test panel to rapidly detect Lyme disease. On September 21,

2016, Canon became a related party when the Company sold the Canon shares for an aggregate cash purchase price of $39.7 million, which represented 19.9% of the outstanding shares of common stock of the Company.

The Co-Development Agreement was completed in 2019 and the Company did not record any revenue for the three and six months ended June 30, 2020 and recorded revenue of $0.1 million for the three and six months ended June 30, 2019.

CARB-X

In March 2018, the Company was awarded a grant of up to $2.0 million from CARB-X. The collaboration with CARB-X will be used to accelerate the development of new tests to identify bacterial pathogens and resistance markers directly in whole blood more rapidly than is possible using today's diagnostic tools. The new tests aim to expand the T2Dx instrument product line by detecting 20 additional bacterial species and resistance targets, with a focus on blood borne pathogens on the United States Centers for Disease Control and Prevention ("CDC") antibiotic resistance threat list.

Under this cost-sharing agreement, the Company may be reimbursed up to $1.1 million, with the possibility of up to an additional $0.9 million based on the achievement of certain project milestones. In January 2019, the Company was awarded the $0.9 million reimbursement option.

The Company did not record any revenue for the three and six months ended June 30, 2020. The Company recognized the $0.9 million that was awarded under the reimbursement option in 2019, and recorded revenue of $0.5 million and $0.8 million for the three and six months ended June 30, 2019, respectively, under the CARB-X Agreement. The Company will not recognize any additional revenue under the CARB-X agreement.

US Government Contract

In September 2019, the Biomedical Advanced Research and Development Authority ("BARDA") awarded the Company a milestone-based contract, with an initial value of $6.0 million, and a potential value of up to $69.0 million, if BARDA awards all contract options. BARDA operates within the Office of the Assistant Secretary for Preparedness and Response ("ASPR") at the U.S. Department of Health and Human Services' ("HHS"). If BARDA awards and the Company completes all options, the Company's management believes it will enable a significant expansion of the Company's current portfolio of diagnostics for sepsis-causing pathogen and anti-biotic resistance genes.

The Company recorded revenue of $1.5 million and $3.0 million for the three and six months ended June 30, 2020, respectively. The contract began in September 2019 and the Company did not record any revenue under the US Government Contract for the three and six months ended June 30, 2019.

12. Leases

Operating Leases

The Company leases certain office space, laboratory space, and equipment. At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. The Company does not recognize right-of-use assets or lease liabilities for leases determined to have a term of 12 months or less. For new and amended leases beginning in 2019 and after, the Company has elected to account for the lease and non-lease components as a combined lease component.

In August 2010, the Company entered into an operating lease for office and laboratory space at its headquarters in Lexington, Massachusetts. The lease commenced in January 2011, with the Company providing a security deposit of $400,000. In accordance with the operating lease agreement, the Company reduced its security deposit to $160,000 in January 2018, which is recorded as restricted cash in the condensed consolidated balance sheets. In March 2017, the Company entered into an amendment to extend the term to December 2021.

In May 2013, the Company entered into an operating lease for additional office, laboratory and manufacturing space in Wilmington, Massachusetts. In August 2018, the Company entered into an amendment to extend the term to December 2020.

In November 2014, the Company entered into an agreement to rent additional office space in Lexington, Massachusetts. In April 2015, the Company entered into an amendment to extend the term to December 31, 2017. In connection with this agreement, the Company paid a security deposit of $50,000, which is recorded as a component of other assets in the condensed consolidated balance

sheets. In May 2015, the Company entered into an amendment to expand existing manufacturing facilities in Lexington, Massachusetts. In September 2017, the Company entered into an amendment to extend the term to December 31, 2021. In June 2020, the Company vacated this office space and determined that subleasing it to a tenant was unlikely due to the impact of the COVID-19 pandemic on the local commercial real estate sub-lease market. As a result, the Company recorded an impairment charge of $0.5 million to selling, general and administrative.

In November 2014, the Company entered into a lease for additional laboratory space in Lexington, Massachusetts. The lease term commenced in April 2015 and extended for six years. The rent expense, inclusive of the escalating rent payments, is recognized on a straight-line basis over the lease term. As an incentive to enter into the lease, the landlord paid approximately $1.4 million of the $2.2 million space build-out costs. The unamortized balance of the lease incentive as of January 1, 2019 was reclassified as a reduction to the initial recognition of the right-of-use asset related to this lease. In connection with this lease agreement, the Company paid a security deposit of $281,000, which is recorded as a component of both prepaid expenses and other current assets and other assets in the condensed consolidated balance sheets.

Operating leases are amortized over the lease term and included in costs and expenses in the condensed consolidated statement of operations and comprehensive loss. Variable lease costs are recognized in costs and expenses in the condensed consolidated statement of operations and comprehensive loss as incurred.

13. Commitments and Contingencies

Leases

Refer to Note 12, Leases, for discussion of the commitments associated with the Company's leases.

License Agreement

In 2006, the Company entered into a license agreement with a third party, pursuant to which the third party granted the Company an exclusive, worldwide, sublicenseable license under certain patent rights to make, use, import and commercialize products and processes for diagnostic, industrial and research and development purposes. The Company agreed to pay an annual license fee ranging from $5,000 to $25,000 for the royalty-bearing license to certain patents. The Company also issued a total of 84,678 shares of common stock pursuant to the agreement in 2006 and 2007, which were recorded at fair value at the date of issuance. The Company is required to pay royalties on net sales of products and processes that are covered by patent rights licensed under the agreement at a percentage ranging between 0.5% - 3.5%, subject to reductions and offsets in certain circumstances, as well as a royalty on net sales of products that the Company sublicenses at 10% of specified gross revenue. Royalties for the three and six months ended June 30, 2020 and 2019 were immaterial.

Worldwide Licensing Agreement

In March 2020, the Company entered into a worldwide licensing agreement for a rapid COVID-19, novel coronavirus test developed by the Center of Discovery and Innovation at Hackensack Meridian *Health*. The licensed coronavirus assay has been used by healthcare professionals within the Hackensack Meridian *Health* network, under the U.S. Food and Drug Administration's ("FDA") Emergency Use Authorization guidance, to test and treat patients suspected of having coronavirus. Under the terms of the agreement, the Company will adapt the coronavirus test to run on its T2Dx Instrument. Hackensack Meridian *Health* will also adopt the T2Dx Instrument and test panels within its Center of Discovery and Innovation.

In June 2020, the Company completed the validation of its COVID-19 molecular diagnostic test, the T2SARS-CoV-2 ™ Panel and on June 30, 2020, the Company launched its COVID-19 test under government Emergency Use Authorization rules. The test is designed to detect the presence of the SARS-CoV-2 virus in a nasopharyngeal swab sample.

Transition Agreement

On July 30, 2019, the Company announced that founding CEO John McDonough was named Executive Chairman of the Board until a successor is named at which time Mr. McDonough will become non-executive Chairman of the Board. John Sperzel was named CEO in January 2020. In connection with John McDonough's transition to Non-Executive Chairman of the Board from CEO, the Company agreed to transition payments and health benefits to be paid over the 15-month period following Mr. Sperzel's start date. At December 31, 2019, included within other accrued expenses is $1.0 million related to Mr. McDonough's transition payments and

health benefits and included within accrued payroll and compensation is $0.2 million related to Mr. McDonough's bonus. At June 30, 2020, included within other accrued expenses is $0.4 million related to Mr. McDonough's transition payments and health benefits.

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

This Quarterly Report on Form 10-Q contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, and Section 21E of the Securities and Exchange Act of 1934, or the Exchange Act. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, including statements regarding our future results of operations and financial position, business strategy, prospective products and product candidates, their expected performance and impact on healthcare costs, marketing clearance from the FDA, reimbursement for our product candidates, research and development costs, timing of regulatory filings, timing and likelihood of success, plans and objectives of management for future operations, availability of funding for such operations and future results of anticipated products, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that 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 "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this Quarterly Report on Form 10-Q are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward looking statements are subject to numerous risks, including, without limitation, the following:

- *the impact of the COVID-19 pandemic on our business, results of operations and financial positions;*
- *our ability to continue as a going concern;*
- *our status as an early stage company;*
- *our expectation to incur losses in the future;*
- *the market acceptance of our T2MR technology;*
- *our ability to timely and successfully develop and commercialize our existing products and future product candidates;*
- *the length and variability of our anticipated sales and adoption cycle;*
- *our relatively limited sales history;*
- *our ability to gain the support of leading hospitals and key thought leaders and publish the results of our clinical trials in peer-reviewed journals;*
- *our ability to successfully manage our growth;*
- *our future capital needs and our need to raise additional funds;*
- *the performance of our diagnostics;*
- *our ability to compete in the highly competitive diagnostics market;*
- *our ability to obtain marketing clearance from the FDA or regulatory clearance for new product candidates in the United States or any other jurisdiction;*

- *impacts of and delays caused by future federal government shutdowns;*
- *federal, state, and foreign regulatory requirements, including diagnostic product reimbursements and FDA regulation of our product candidates;*
- *our ability to recruit, train and retain key personnel;*
- *our ability to protect and enforce our intellectual property rights, including our trade secret-protected proprietary rights in T2MR;*
- *the impact of cybersecurity risks, including ransomware, phishing, and data breaches on our information technology systems;*
- *the impact of short sellers on our share price;*
- *our dependence on third parties;*
- *manufacturing and other product risks;*
- *the impact of the adoption of new accounting standards;*
- *the Tax Cuts and Jobs Act of 2017 (Tax Reform);*
- *the impact of recent cost-cutting measures; and*
- *our ability to maintain compliance with Nasdaq listing requirements.*

These forward-looking statements represent our estimates and assumptions only as of the date of this Quarterly Report on Form 10-Q. Unless required by U.S. federal securities laws, we do not intend to update any of these forward-looking statements to reflect circumstances or events that occur after the statement is made or to conform these statements to actual results. The following discussion should be read in conjunction with the financial statements and notes thereto appearing elsewhere in this Quarterly Report on Form 10-Q. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Quarterly Report on Form 10-Q, and Part I, Item 1A and Part II, Item 7A, "Risk Factors" and "Quantitative and Qualitative Disclosures about Market Risks", respectively, in our Annual Report on Form 10-K for the year ended December 31, 2019, as updated by Part I, Item 3, "Quantitative and Qualitative Disclosures about Market Risks" and Part II, Item 1A—"Risk Factors" in this Quarterly Report on Form 10-Q,.

You should read the following discussion and analysis of our financial condition and results of operations together with our condensed consolidated financial statements and related notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the audited financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2019.

Business Overview

We are an in vitro diagnostics company and leader in the rapid detection of sepsis-causing pathogens, is dedicated to improving patient care and reducing the cost of care by helping clinicians effectively treat patients faster than ever before. We have developed an innovative and proprietary technology platform that offers a rapid, sensitive and simple alternative to existing diagnostic methodologies. We are using our T2MR technology to develop a broad set of applications aimed at lowering mortality rates, improving patient outcomes and reducing the cost of healthcare by helping medical professionals make targeted treatment decisions earlier. T2MR enables rapid detection of pathogens, biomarkers and other abnormalities in a variety of unpurified patient sample types, including whole blood, plasma, serum, saliva, sputum and urine, and can detect cellular targets at limits of detection as low as one colony forming unit per milliliter, or CFU/mL. Our products include the T2Dx Instrument, T2Candida Panel, the T2Bacteria Panel, the T2Resistance Panel, and the T2SARS-CoV-2 Panel that are all powered by our proprietary T2MR technology. Our development efforts target sepsis, COVID-19, and Lyme disease, which are areas of significant unmet medical need in which existing therapies could be more effective with improved diagnostics.

On September 22, 2014, we received market clearance from the FDA for our first two products, the T2Dx® Instrument, or the T2Dx and the T2Candida® Panel, or T2Candida, which have the ability to rapidly identify the five clinically relevant species of *Candida*, a fungal pathogen known to cause sepsis, directly from whole blood. On May 24, 2018, we received market clearance from the FDA for the T2Bacteria® Panel, or T2Bacteria, which runs on the T2Dx Instrument and has the ability to rapidly identify five of the most common and deadly sepsis-causing bacteria (members of the ESKAPE pathogens, as defined below in *Our T2Bacteria Panel*) directly from whole blood. We have also developed and sell a research use only *Candida auris* assay, the T2Cauris™ Panel, for the rapid identification of *Candida auris*, a species of *Candida* that is highly drug resistant. We have developed a T2Resistance™

Panel for the early and sensitive detection of carbapenemase-resistance markers, which can assist clinicians in selecting effective antibiotics. The T2Resistance Panel received FDA Breakthrough Device designation in February 2019 and was granted a CE Mark in November 2019. An additional diagnostic application in development is the T2Lyme™ Panel, or T2Lyme, which is focused on the detection of the bacteria that cause Lyme disease. Diagnostic applications for additional bacteria species and resistance markers were developed as part of a collaboration with CARB-X, a public-private partnership with the U.S. Department of Health and Human Services, or HHS, and the Wellcome Trust of London, focused on combatting antibiotic resistant bacteria. On August 2, 2019, the Company's T2Bacteria Panel received a New Technology Add-on Payment (NTAP) from CMS, including a unique and stand-alone ICD-10-PCS Code. In September 2019, the Biomedical Advanced Research and Development Authority ("BARDA") awarded the Company a milestone-based contract, with an initial value of $6 million, and a potential value of up to $69 million, for the development of new direct-from-blood diagnostic panels that will run on the T2Dx. The existing reimbursement codes support our sepsis products and anticipate the same for our Lyme disease product candidates. The economic savings associated with our sepsis products are realized directly by hospitals. In the United States, we have a commercial team that is primarily targeting hospitals with the highest concentration of patients at risk for sepsis-related infections. Internationally, we have primarily partnered with distributors that target large hospitals in their respective international markets.

We believe our sepsis products, which include T2Candida, T2Bacteria, T2Resistance, and T2Cauris, will redefine the standard of care in sepsis management while lowering healthcare costs by improving both the precision and the speed to detection of sepsis-causing pathogens. According to a study published in the Journal of Clinical Microbiology in 2010, targeted therapy for patients with bloodstream infections can be delayed up to 72 hours due to the wait time for blood culture results. In another study published in Clinical Infectious Diseases in 2012, the delayed administration of appropriate antifungal therapy was associated with higher mortality among patients with septic shock attributed to *Candida* infection and, on that basis, the study concluded that more rapid and accurate diagnostic techniques are needed. Due to the high mortality rate associated with *Candida* infections, physicians often will place patients on antifungal drugs while they await blood culture diagnostic results which generally take at least five days to generate a negative test result. Antifungal drugs are toxic and may result in side effects and can cost over $50 per day. The speed to result of T2Candida and T2Bacteria coupled with their higher sensitivity as compared to blood culture may help reduce the overuse of ineffective, or even unnecessary, antimicrobial therapy which may reduce side effects for patients, lower hospital costs and potentially counteract the growing resistance to antimicrobial therapy. The administration of inappropriate therapy is a driving force behind the spread of antimicrobial-resistant pathogens, which the United States Centers for Disease Control and Prevention, or the CDC, recently called "one of our most serious health threats." The addition of the use of our products, T2Bacteria, T2Candida, and T2Resistance, which all run on the T2Dx Instrument, with the standard of care for the management of patients suspected of sepsis, enables clinicians to potentially treat 90% of patients with sepsis pathogen infections with the right targeted therapy within the first twelve hours of development of the symptoms of disease. Currently, high risk patients are typically initially treated with broad spectrum antibiotic drugs that typically cover approximately 60% of patients with infections. Of the remaining 40% of patients, approximately 30% of the patients typically have a bacterial infection and 10% typically have *Candida* infections. T2Candida and T2Bacteria are designed to identify pathogens commonly not covered by broad spectrum antibiotic drugs.

We have never been profitable and have incurred net losses in each year since inception. Our accumulated deficit at June 30, 2020 was $401.8 million, we had a stockholders' deficit of $4.4 million and we have experienced cash outflows from operating activities over the past years. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from selling, general and administrative costs associated with our operations. We have incurred significant commercialization expenses related to product sales, marketing, manufacturing and distribution of our FDA-cleared products, T2Dx, T2Candida and T2Bacteria. In addition, we will continue to incur significant costs and expenses as we continue to develop other product candidates, improve existing products and maintain, expand and protect our intellectual property portfolio. We may seek to fund our operations through public equity or private equity or debt financings, as well as other sources. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements if and when needed would have a negative impact on our business, results of operations and financial condition and our ability to develop, commercialize and drive adoption of the T2Dx Instrument, T2Candida, T2Bacteria, T2Resistance, and future T2MR-based diagnostics.

We are subject to a number of risks similar to other newly commercial life science companies, including, but not limited to commercially launching our products, development and market acceptance of our product candidates, development by our competitors of new technological innovations, protection of proprietary technology, and raising additional capital.

The COVID-19 pandemic has impacted and may continue to impact our operations. We have established protocols for continued manufacturing, distribution and servicing of our products with safe social distancing and personal protective equipment measures and for remote work for employees not essential to on-site operations. To date these measures have been successful but may not continue to function should the pandemic continue to escalate and further impact our personnel. Our hospital customers have restricted our sales team's access to their facilities and as a result, we significantly reduced our sales and general and administrative staffing levels to reduce expenses. Our customers may reduce their purchases of our products. Our customer's may cease to comply with the terms of our sales agreements and this may impact our ability to recognize revenue and hinder receivables collections. We have a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects our ability to continue our future product development may be impacted. Our shipping carrier's ability to deliver our products to customers may be disrupted. We have reviewed our suppliers and quantities of key materials and believe we have sufficient stocks and alternate sources of critical materials should our supply chains become disrupted. We believe the pandemic's impact on our sales has impacted the recoverability of the value of our T2-owned instruments and components. The COVID-19 pandemic also caused us to reassess our build plan and evaluate our inventories accordingly, which resulted in an additional charge to cost of product revenue.

Pursuant to the requirements of Accounting Standards Codification (ASC) 205-40, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, management must evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. This evaluation initially does not take into consideration the potential mitigating effect of management's plans that have not been fully implemented as of the date the financial statements are issued. When substantial doubt exists under this methodology, management evaluates whether the mitigating effect of its plans sufficiently alleviates substantial doubt about our ability to continue as a going concern. The mitigating effect of management's plans, however, is only considered if both (1) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (2) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued.

We believe that our existing cash and cash equivalents and marketable securities at June 30, 2020, along with $33.4 million of additional funding available through the Company's Equity Distribution Agreement (the "Sales Agreement") with Canaccord Genuity LLC, as agent ("Canaccord") (Note 7) which was raised in July 2020, will be sufficient to allow us to fund our current operating plan, at least a year from issuance of these financial statements. Certain elements of our operating plan are outside of our control, those elements cannot be considered probable; under ASC 205-40, the future receipt of potential funding from our Co-Development partners and other resources cannot be considered probable at this time because none of the plans are entirely within our control. During the six months ended June 30, 2020, we implemented a cost improvement strategy which is focused on reducing operating expenses and improving our cost of goods sold. We reduced our total employee headcount by 22% as compared to headcount at December 31, 2019, resulting in severance of $0.4 million, all of which was paid by June 30, 2020. The Term Loan Agreement with CRG Servicing LLC ("CRG") (Note 6) has certain covenants which require that we achieve certain annual revenue targets, whereby we are required to pay double the amount of any shortfall as an acceleration of principal payments, and maintain a minimum cash balance of $5.0 million. As of the date of these financial statements, it is probable that we will not achieve the revenue target of $15.0 million for the twenty-four month period ended December 31, 2020, and there are no assurances that we will achieve the revenue target of $43.0 million for the twenty-four month period ended December 31, 2021. Should we fail to meet the revenue target, we would seek a waiver of this provision. There can be no assurances that we would be successful in obtaining a waiver. If we are unsuccessful in obtaining a waiver, we would pay the cure amount set forth under the Term Loan Agreement. While we believe we can continue as a going concern for at least a year from issuance of these financial statements, there can be no assurances that we will continue to be in compliance with the cash covenant in future periods without additional funding.

On April 7, 2020, we received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that, for the last thirty consecutive business days, the bid price for our common stock had closed below the minimum $1.00 per share requirement for continued listing on the Nasdaq Global Market under Nasdaq Listing Rule 5450(a)(1). On June 16, 2020, we received a letter from the Nasdaq stating that we had regained compliance.

COVID-19

On March 24, 2020, the Company announced that it had licensed certain technology for the development of a rapid test for COVID-19 from the Center for Discovery and Innovation (CDI) at Hackensack Meridian Health. Under this license agreement, T2 Biosystems is authorized to use the CDI technology and adapt the CDI-developed COVID-19 test to the T2 Biosystems platform, and market and distribute the test in places of need amid the expanding pandemic. On June 30, 2020, the Company announced the US launch of its COVID-19 molecular diagnostic test, the T2SARS-CoV-2 Panel, after validation of the test meeting the FDA's requirements for an Emergency Use Authorization (EUA). On July 1, 2020, the Company submitted an EUA request to the FDA for the T2SARS-CoV-2 Panel. The T2SARS-CoV-2 Panel is designed to detect SARS-CoV-2, the virus that is responsible for COVID-

19 infections. The T2SARS-CoV-2 Panel provides sample-to-answer results in less than two hours, utilizing a nasopharyngeal swab sample. Clinical testing on known positive and negative patient samples showed a sensitivity of 95% and specificity of 100%. The T2SARS-CoV-2 Panel runs on the Company's FDA-cleared T2Dx Instrument, and is capable of performing seven tests simultaneously.

Clinical data from Wuhan, China showed that for COVID-19 patients, bacterial and fungal co-infections are a significant burden with 71% of patients treated for potential bacterial infections and 15% treated for potential fungal infections. Given the high incidence of bacterial and fungal co-infections, we believe the T2 Biosystems technology has the potential to address the diagnostic needs of COVID-19 patients by helping identify these secondary infections associated with coronavirus and detecting the virus directly. Taken together, these capabilities have the potential to enable clinicians to diagnose and target therapy for patients with secondary bacterial or fungal infections associated with primary COVID-19 infections.

Financial Overview

Revenue

We generate revenue from the sale of our products, related services, reagent rental agreements and from activities performed pursuant to research and development agreements and government contributions.

Revenue earned from activities performed pursuant to research and development agreements is reported as research revenue and is recognized over time, using an input method as the work is completed, limited to payments earned. Costs incurred to deliver the services are recorded as research and development expense in the condensed consolidated financial statements. The timing of receipt of cash from the Company's research and development agreements generally differs from when revenue is recognized. Milestones are contingent on the occurrence of future events and are considered variable consideration being constrained until the Company believes a significant revenue reversal will not occur.

Grants received, including cost reimbursement agreements, are assessed to determine if the agreement should be accounted for as an exchange transaction or a contribution. An agreement is accounted for as a contribution if the resource provider does not receive commensurate value in return for the assets transferred. Contribution revenue is recognized when all donor-imposed conditions have been met.

Product revenue is derived from the sale of our instruments and related consumable diagnostic tests, predominantly through our direct sales force in the United States, and distributors in geographic regions outside the United States. We do not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to our customers, including our distributors. Payment terms granted to distributors are the same as those granted to end-user customers and payments are not dependent upon the distributors' receipt of payment from their end-user customers. We either sell instruments to customers and international distributors or retain title and place the instrument at the customer site pursuant to a reagent rental agreement. When the instrument is directly purchased by a customer, we recognize revenue when the related performance obligation is satisfied (i.e. when the control of an instrument has passed to the customer; typically, at shipping point). When the instrument is placed under a reagent rental agreement, our customers generally agree to fixed term agreements, which can be extended, certain of which may include minimum purchase commitments and/or incremental charges on each consumable diagnostic test purchased, which varies based on the volume of test cartridges purchased. Revenue from the sale of consumable diagnostic tests (under a reagent rental agreement), which includes the incremental charge, is recognized upon shipment. Revenue associated with reagent rental consumable purchases is currently classified as variable consideration and constrained until a purchase order is received and related performance obligations have been satisfied (or partially satisfied). The transaction price from consumables purchases is allocated between the lease of the instrument (under a contingent rent methodology as provided for in ASC 842, Leases ("ASC 842")), and the consumables when related performance obligations are satisfied as a component of lease and product revenue.

Direct sales of instruments include warranty, maintenance and technical support services typically for one year following the installation of the purchased instrument ("Maintenance Services"). Maintenance Services are separate performance obligations as they are service based warranties and are recognized straight-line over the service delivery period. After the completion of the initial Maintenance Services period, customers have the option to renew or extend the Maintenance Services typically for additional one-year periods in exchange for additional consideration. The extended Maintenance Services are also service based warranties and classified as separate performance obligations. We will recognize the revenue allocated to the extended Maintenance Services performance obligation straight-line over the service delivery period. We warrant that consumable diagnostic tests will be free from defects, when handled according to product specifications, for the stated life of the product. To fulfill valid warranty claims, we provide replacement product free of charge. Accordingly, we accrue warranty expense associated with the estimated defect rates of the consumable diagnostic tests.

Our current sales strategy is focused on driving adoption of our technology within the hospital market, increasing test utilization amongst our existing installed based on T2Dx Instruments, and opportunistically increasing the installed based. Accordingly, we expect the following to occur:

- recurring revenue from our consumable diagnostic tests will increase and become subject to lower period-to-period fluctuation;
- consumable revenue will become an increasingly predictable and important contributor to our total revenue; and
- we will gain economies of scale through the growth in our sales, resulting in improving gross margins and operating margins.

However, we believe the COVID-19 pandemic will hinder our near term sales growth. Our customers may cease to comply with the terms of our sales agreements and this may impact our ability to recognize revenue and hinder receivables collections.

Cost of Product Revenue

Cost of product revenue includes the cost of materials, direct labor and manufacturing overhead costs used in the manufacture of our consumable diagnostic tests sold to customers and related license and royalty fees. Cost of product revenue also includes depreciation on the revenue-generating T2Dx instruments that have been placed with our customers under reagent rental agreements; costs of materials, direct labor and manufacturing overhead costs on the T2Dx instruments sold to customers; and other costs such as customer support costs, warranty and repair and maintenance expense on the T2Dx instruments that have been placed with our customers under reagent rental agreements. We manufacture the T2Dx instruments and part of our consumable diagnostic tests in our facilities. We outsource the manufacturing of components of our consumable diagnostic tests to contract manufacturers.

We expect cost of product revenue to decrease as a result of a cost of product revenue improvement plan that we initiated during the six months ended June 30, 2020.

At the beginning of the COVID-19 pandemic, we believed that the pandemic would reduce product sales and impair our ability to recover the cost of our T2-owned instruments and components. We assessed the impact on the related cash flows of the instruments and reduced their carrying values by $0.6 million during the six months ended June 30, 2020, which was recorded as cost of product revenue impairment expense. The COVID-19 pandemic also caused us to reassess our build plan and evaluate our inventories accordingly, which resulted in an additional $0.6 million charge to cost of product revenue in the six months ended June 30, 2020.

Research and development expenses

Our research and development expenses consist primarily of costs, incurred for the development of our technology and product candidates, technology improvements and enhancements, clinical trials to evaluate the clinical utility of our product candidates, and laboratory development and expansion, and include salaries and benefits, including stock-based compensation, research-related facility and overhead costs, laboratory supplies, equipment and contract services. Research and development expenses also include costs of delivering products or services associated with research and contribution revenue. We expense all research and development costs as incurred.

We anticipate our overall research and development expenses to decrease due to our cost improvement strategy which is focused on reducing operating expenses. We expect to continue developing additional product candidates, improving existing products, and conducting ongoing and new clinical trials. We have a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects our ability to continue our future product development may be impacted.

Selling, general and administrative expenses

Selling, general and administrative expenses consist primarily of costs for our sales and marketing, finance, legal, human resources, business development and general management functions, as well as professional services, such as legal, consulting and accounting services. We expect selling, general and administrative expenses to decrease in future periods as we have decided to focus our resources on growing adoption at existing customers and to significantly reduce the overall size of our U.S. sales and sales management teams. Other selling, general and administrative expenses include facility-related costs, fees and expenses associated with obtaining and maintaining patents, clinical and economic studies and publications, marketing expenses, and travel expenses. We expense all selling, general and administrative expenses as incurred.

Interest expense, net

Interest expense, net, consists primarily of interest expense on our notes payable, changes in fair value of our derivative liability, the amortization of deferred financing costs and debt discount, and interest earned on our cash and cash equivalents.

Other income, net

Other income, net, consists of dividend and other investment income.

Critical Accounting Policies and Use of Estimates

We have prepared our condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States. Our preparation of these condensed consolidated financial statements requires us to make estimates, assumptions, and judgments that affect the reported amounts of assets, liabilities, expenses, and related disclosures at the date of the condensed consolidated financial statements, as well as revenue and expenses recorded during those periods. We evaluated our estimates and judgments on an ongoing basis. We based our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could therefore differ materially from these estimates under different assumptions or conditions.

The items that we disclosed as our critical accounting policies and estimates in Management’s Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the year ended December 31, 2019 remained materially consistent. For a description of those critical accounting policies, please refer to our Annual Report on Form 10-K filing for the year ended December 31, 2019.

Results of Operations for the Three Months Ended June 30, 2020 and 2019

	Three Months Ended June 30,		
	2020	2019	Change
	(in thousands)		
Revenue:			
Product revenue	$ 1,041	$ 1,274	$ (233)
Research revenue	11	71	(60)
Contribution revenue	1,500	459	1,041
Total revenue	2,552	1,804	748
Costs and expenses:			
Cost of product revenue	2,300	4,820	(2,520)
Research and development	3,980	4,048	(68)
Selling, general and administrative	5,111	6,722	(1,611)
Total costs and expenses	11,391	15,590	(4,199)
Loss from operations	(8,839)	(13,786)	4,947
Interest expense, net	(1,843)	(2,000)	157
Other income, net	(3)	139	(142)
Net loss	$ (10,685)	$ (15,647)	$ 4,962

Product revenue

Product revenue was $1.1 million for the three months ended June 30, 2020 compared to $1.3 million for the three months ended June 30, 2019, a decrease of $0.2 million, which was primarily driven by lower T2Dx instrument sales as a result of the COVID-19 pandemic.

Research revenue

Research revenue was $11 thousand pertaining to an immaterial agreement for the three months ended June 30, 2020, compared to $0.1 million for the three months ended June 30, 2019, a decrease of $0.1 million. Research revenue for the three months ended June 30, 2019 relates to our Co-Development Agreement with Canon US Life Sciences, which completed in 2019.

Contribution revenue

Contribution revenue was $1.5 million for the three months ended June 30, 2020, compared to $0.5 million for the three months ended June 30, 2019, an increase of $1.0 million. Contribution revenue for the three months ended June 30, 2020 relates to our U.S. Government Contract, which began in September 2019. Contribution revenue for the three months ended June 30, 2019 relates to our cost-sharing agreement with CARB-X, which completed in 2019.

Cost of product revenue

Cost of product revenue was $2.3 million for the three months ended June 30, 2020, compared to $4.8 million for the three months ended June 30, 2019, a decrease of $2.5 million. The decrease in cost was driven by $0.9 million of lower service costs primarily due to the impact of the COVID-19 pandemic and lower repair costs and $0.6 million from lower instrument sales primarily due to the impact of the COVID-19 pandemic, $0.6 million of increased manufacturing efficiencies, $0.2 million of lower T2-owned instrument depreciation as a result of a lower carrying value of T2-owned instruments subsequent to the impairment charge in the first quarter of 2020, $0.1 million of reduced Bacteria costs from lower sales and $0.1 million of lower freight costs.

Research and development expenses

Research and development expenses were $4.0 million for the three months ended June 30, 2020, compared to $4.1 million for the three months ended June 30, 2019, a decrease of $0.1 million. The decrease was driven by $0.4 million of lower payroll related and travel expenses from a reduction in headcount, $0.2 million lower of materials cost and $0.1 million of lower clinical related expenses. These decreases were partially offset by increased lab and facility expenses of $0.6 million primarily for our US Government Contract and our T2SARS-CoV-2 Panel.

Selling, general and administrative expenses

Selling, general and administrative expenses were $5.1 million for the three months ended June 30, 2020, compared to $6.7 million for the three months ended June 30, 2019, a decrease of $1.6 million. The decrease was driven by a decrease in payroll related expenses of $1.6 million and travel expenses of $0.3 million, all of which are attributable to a reduction in headcount. Tradeshow and other marketing expenses decreased by $0.6 million, primarily due to the impact of the COVID-19 pandemic. Stock compensation expenses decreased by $0.1 million, primarily due to the market-based restricted stock units. These decreases are partially offset by a $0.5 million impairment charge from a vacated operating lease, an increase of $0.3 million in D&O insurance premiums and an increase of $0.2 million in fees for a Board members search.

Interest expense, net

Interest expense, net, was $1.8 million for the three months ended June 30, 2020, compared to $2.0 million for the three months ended June 30, 2019. Interest expense, net, decreased by $0.2 million primarily due to the change in fair value of the derivative associated with the CRG Term Loan Agreement.

Other income, net

Other income, net, was immaterial for the three months ended June 30, 2020 compared to $0.1 million for the three months ended June 30, 2019, a decrease of $0.1 million, primarily from decreased dividend and other investment income.

Results of Operations for the Six Months Ended June 30, 2020 and 2019

	Six Months Ended June 30,		
	2020	2019	Change
	(in thousands)		
Revenue:			
Product revenue	$ 2,086	$ 2,588	$ (502)
Research revenue	11	213	(202)
Contribution revenue	3,000	788	2,212
Total revenue	5,097	3,589	1,508
Costs and expenses:			
Cost of product revenue	6,971	9,208	(2,237)
Research and development	8,918	7,949	969
Selling, general and administrative	11,608	13,776	(2,168)
Total costs and expenses	27,497	30,933	(3,436)
Loss from operations	(22,400)	(27,344)	4,944
Interest expense, net	(3,260)	(3,782)	522
Other income, net	26	332	(306)
Net loss	$ (25,634)	$ (30,794)	$ 5,160

Product revenue

Product revenue was $2.1 million for the six months ended June 30, 2020 compared to $2.6 million for the six months ended June 30, 2019, a decrease of $0.5 million. The decrease was driven primarily by lower T2Dx instrument sales of $0.6 million primarily as a result of the impact of the COVID-19 pandemic, partially offset by higher consumables and other revenue of $0.1 million.

Research revenue

Research revenue was $11 thousand pertaining to an immaterial agreement for the six months ended June 30, 2020, compared to $0.2 million for the six months ended June 30, 2019, a decrease of $0.2 million. Research revenue for the six months ended June 30, 2019 primarily relates to our Co-Development Agreement with Canon US Life Sciences, which completed in 2019.

Contribution revenue

Contribution revenue of $3.0 million, for the six months ended June 30, 2020, relates to our U.S. Government Contract, which began in September 2019. Contribution revenue of $0.8 million for the six months ended June 30, 2019 relates to our cost-sharing agreement with CARB-X, which completed in 2019.

Cost of product revenue

Cost of product revenue was $7.0 million for the six months ended June 30, 2020, compared to $9.2 million for the six months ended June 30, 2019, a decrease of $2.2 million. The decrease in cost was driven by $1.4 million of lower instrument sales, $1.1 million of lower service costs primarily as a result of the impact of the COVID-19 pandemic and lower repair costs, $0.3 million of lower depreciation of our T2-owned instruments and components as a result of lower carrying value subsequent to the impairment charge in the first quarter of 2020, and $0.1 million of lower freight costs. These decreases were partially offset by a $0.6 million COVID-19 related impairment charge of our T2-owned instruments and components, and a $0.1 million increase in Bacteria costs from increased sales.

Research and development expenses

Research and development expenses were $8.9 million for the six months ended June 30, 2020, compared to $7.9 million for the six months ended June 30, 2019, an increase of $1.0 million. The increase was driven by a $0.6 million increase in consulting expenses primarily related to our US Government Contract, an increase of $0.5 million in lab and facility expenses primarily for our US Government Contract and our T2SARS-CoV-2 Panel and higher materials costs of $0.2 million. These increases were partially offset by a $0.3 million decrease in payroll related and travel expenses due to a reduction in headcount.

Selling, general and administrative expenses

Selling, general and administrative expenses were $11.6 million for the six months ended June 30, 2020, compared to $13.8 million for the six months ended June 30, 2019, a decrease of $2.2 million. The decrease was driven by a decrease in payroll related expenses of $2.1 million and travel expenses of $0.4 million, all of which are attributable to a reduction in headcount. Stock compensation expense decreased by $0.9 million due to the market based restricted stock units and a reduction in headcount. Tradeshow and other marketing expenses decreased by $0.8 million, primarily due to the impact of the COVID-19 pandemic. These decreases are partially offset by an increase of $0.7 million in consulting fees primarily related to temporary help related to final cyber-recovery efforts, compliance with Section 404 of the Sarbanes-Oxley Act and a Board members search, an increase of $0.5 million in D&O insurance premiums, a $0.5 million impairment charge from a vacated operating lease, and an increase of $0.3 million in legal expenses related to financings and the CEO transition.

Interest expense, net

Interest expense, net, was $3.3 million for the six months ended June 30, 2020, compared to $3.8 million for the six months ended June 30, 2019, a decrease of $0.5 million, primarily due to the change in fair value of the derivative associated with the CRG Term Loan Agreement.

Other income, net

Other income, net, was $26 thousand for the six months ended June 30, 2020 and $0.3 million for the six months ended June 30, 2019, a decrease of $0.3 million, primarily from decreased dividend and other investment income.

Liquidity and Capital Resources

We have incurred losses and cumulative negative cash flows from operations since our inception, and as of June 30, 2020 and December 31, 2019 we had an accumulated deficit of $401.8 million and $376.2 million respectively. Having obtained clearance from the FDA and a CE mark in Europe to market the T2Dx, T2Candida, and T2Bacteria, we have incurred significant commercialization expenses related to product sales, marketing, manufacturing and distribution. We may seek to continue to fund our operations through public equity or private equity or debt financings, as well as other sources. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements if and when needed would have a negative impact on our business, results of operations and financial condition and our ability to develop and commercialize T2Dx, T2Candida, T2Bacteria, and other product candidates.

The COVID-19 pandemic has impacted and may continue to impact our operations. We have established protocols for continued manufacturing, distribution and servicing of our products with safe social distancing and personal protective equipment measures and for remote work for employees not essential to on-site operations. To date these measures have been successful but may not continue to function should the pandemic escalate and impact our personnel. Our hospital customers have restricted our sales team's access to their facilities and as a result, we significantly reduced our sales and general and administrative staffing levels to reduce expenses. Our customers may reduce their purchases of our products. Our customers may cease to comply with the terms of our sales agreements and this may impact our ability to recognize revenue and hinder receivables collections. We have a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects our ability to continue our future product development may be impacted. Our shipping carriers' ability to deliver our products to customers may be disrupted. We have reviewed our suppliers and quantities of key materials and believe we have sufficient stocks and alternate sources of critical materials including personal protective equipment should our supply chains become disrupted. As further described in Note 5, we believe the pandemic's impact on our sales has impacted the recoverability of the value of our T2-owned instruments and components. The COVID-19 pandemic also caused us to reassess our build plan and evaluate our inventories accordingly, which resulted in an additional charge to cost of product revenue.

Historically, we have funded our operations primarily through our August 2014 initial public offering, our December 2015 public offering, our September 2016 private investment in public equity ("PIPE") financing, our September 2017 public offering, our June 2018 public offering, our July 2019 establishment of an Equity Distribution Agreement and Equity Purchase Agreement, private placements of redeemable convertible preferred stock and debt financing arrangements.

Equity Distribution Agreement

On July 30, 2019, we entered into an Equity Distribution Agreement (the "Sales Agreement") with Canaccord Genuity LLC, as agent ("Canaccord"), pursuant to which we may offer and sell shares of common stock in an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act, for aggregate gross sale proceeds of up to $30.0 million from time to time through Canaccord. On March 9, 2020, we entered into an amendment to the Sales Agreement to increase the aggregate gross sales amount from $30.0 million to $65.0 million. On April 8, 2020, we entered into an amendment to the Sales Agreement to increase the aggregate gross sales amount from $65.0 million to $95.0 million. As of June 30, 2020, the Company had sold 82,118,644 shares of common stock with an aggregate gross sales amount of approximately $61.6 million, leaving approximately $33.4 million remaining under the Equity Distribution Agreement. In July 2020, the Company sold 19,488,023 shares of common stock for the amount remaining under the Sales Agreement, resulting in net proceeds of $32.4 million.

We have agreed to pay Canaccord for its services of acting as agent 3% of the gross proceeds from the sale of the Shares pursuant to the Sales Agreement. Legal and accounting fees are reclassified to share capital upon issuance of shares under the Sales Agreement.

Purchase Agreement

On July 29, 2019, we entered into a $30.0 million purchase agreement (the "Purchase Agreement") with Lincoln Park Capital Fund, LLC ("Lincoln Park"), pursuant to which we were able to sell and issue to Lincoln Park, and Lincoln Park was obligated to purchase, up to $30.0 million in value of its shares of common stock from time to time over a 36-month period starting from the effective date of the respective registration statement. On April 7, 2020, the Company terminated the Purchase Agreement, effective April 8, 2020.

In consideration for the execution and delivery of the Purchase Agreement, we issued 413,349 shares of common stock to Lincoln Park.

Plan of operations and future funding requirements

As of June 30, 2020 and December 31, 2019 we had unrestricted cash and cash equivalents of approximately $26.5 million and $11.0 million respectively. Currently, a portion of our cash and cash equivalents, along with our marketable securities of $9.2 million, are held in certificates of deposit and U.S. treasury securities. Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, costs related to our products, clinical trials, laboratory and related supplies, supplies and materials used in manufacturing, legal and other regulatory expenses and general overhead costs.

Until such time as we can generate substantial product revenue, we expect to finance our cash needs, beyond what is currently available or on hand, through a combination of equity offerings, debt financings and revenue from existing and potential research and

development and other collaboration agreements. If we raise additional funds in the future, we may need to relinquish valuable rights to our technologies, future revenue streams or grant licenses on terms that may not be favorable to us.

The COVID-19 pandemic has impacted and may continue to impact our operations. We have established protocols for continued manufacturing, distribution and servicing of our products with safe social distancing and personal protective equipment measures and for remote work for employees not essential to on-site operations. To date these measures have been successful but may not continue to function should the pandemic escalate and impact our personnel. Our hospital customers have restricted our sales team's access to their facilities and as a result, we significantly reduced our sales and general and administrative staffing levels to reduce expenses. Our customers may reduce their purchases of our products. Our customers may cease to comply with the terms of our sales agreements and this may impact our ability to recognize revenue and hinder receivables collections. We have a significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects our ability to continue our future product development may be impacted. Our shipping carriers' ability to deliver our products to customers may be disrupted. We have reviewed our suppliers and quantities of key materials and believe we have sufficient stocks and alternate sources of critical materials including personal protective equipment should our supply chains become disrupted. As further described in Note 5, we believe the pandemic's impact on our sales has impacted the recoverability of the value of our T2-owned instruments and components. The COVID-19 pandemic also caused us to reassess our build plan and evaluate our inventories accordingly, which resulted in an additional charge to cost of product revenue.

Going Concern

At June 30, 2020, we had an accumulated deficit of $401.8 million, and a stockholders' deficit of $4.4 million. We have experienced cash outflows from operating activities over the past years and are required to maintain a minimum cash balance under our Term Loan Agreement with CRG Servicing LLC ("CRG") (Note 6). There can be no assurance that any financing by us can be realized, or if realized, what the terms of any such financing may be, or that any amount that we are able to raise will be adequate.

Management believes that the existing cash and cash equivalents and marketable securities at June 30, 2020, along with the $33.4 million of additional funding available through our Equity Distribution Agreement (the "Sales Agreement") with Canaccord Genuity LLC, as agent ("Canaccord") (Note 7) which was raised in July 2020, will be sufficient to allow us to fund our current operating plan, at least a year from issuance of these financial statements. Certain elements of our operating plan are outside of our control, those elements cannot be considered probable; under ASC 205-40, the future receipt of potential funding from our Co-Development partners and other resources cannot be considered probable at this time because none of the plans are entirely within our control. During the six months ended June 30, 2020, management implemented a cost improvement strategy which is focused on reducing operating expenses and improving our cost of goods sold. We reduced our total employee headcount by 22% as compared to headcount at December 31, 2019, resulting in severance of $0.4 million, all of which was paid by June 30 2020. The Term Loan Agreement with CRG has certain covenants which require us to achieve certain annual revenue targets, whereby we are required to pay double the amount of any shortfall as an acceleration of principal payments, and maintain a minimum liquidity amount of $5.0 million (Note 6). As of the date of these financial statements, it is probable that we will not achieve the revenue target of $15.0 million for the twenty-four month period ended December 31, 2020, and there are no assurances that we will achieve the revenue target of $43.0 million for the twenty-four month period ended December 31, 2021. Should we fail to meet the revenue target, we would seek a waiver of this provision. There can be no assurances that we would be successful in obtaining a waiver. If we are unsuccessful in obtaining a waiver, we would pay the cure amount set forth under the Term Loan Agreement. While we believe that we can continue as a going concern for at least a year from issuance of these financial statements, there can be no assurances that we will continue to be in compliance with the cash covenant in future periods without additional funding.

On April 7, 2020, we received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that, for the last thirty consecutive business days, the bid price for our common stock had closed below the minimum $1.00 per share requirement for continued listing on the Nasdaq Global Market under Nasdaq Listing Rule 5450(a)(1). On June 16, 2020, we received a letter from the Nasdaq stating that we had regained compliance.

Cash flows

The following is a summary of cash flows for each of the periods set forth below:

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (28,231)	$ (21,707)
Investing activities	(9,370)	(444)
Financing activities	53,097	(232)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 15,496	$ (22,383)

Net cash used in operating activities

Net cash used in operating activities was approximately $28.2 million for the six months ended June 30, 2020, and consisted of a net loss of $25.6 million adjusted for non-cash items including stock-based compensation expense of $2.2 million, non-cash interest expense of $1.5 million, depreciation and amortization expense of $0.9 million, non-cash lease expense of $0.8 million, COVID-19 related impairment charge of $0.6 million of our T2-owned instruments and components, an impairment of one of our operating lease assets of $0.5 million, and a net change in operating assets and liabilities of $9.1 million, primarily related to a decrease in accounts payable of $2.0 million due to timing of payments, a decrease in accrued expenses of $2.8 million primarily from bonus and commission payments as well as payments related to the Second Amendment to the Employment Agreement with John McDonough, a decrease in operating lease liabilities of $1.0 million, an increase in prepaid expenses and other assets of $4.7 million primarily related to a receivable from the Sales Agreement and order deposits with our contract manufacturer, and a decrease in deferred revenue of $0.1 million, partially offset by a decrease in accounts receivable of $1.5 million from timing of collections from our U.S. Government Contract and lower instrument sales.

Net cash used in operating activities was approximately $21.7 million for the six months ended June 30, 2019, and consisted of a net loss of $30.8 million adjusted for non-cash items including stock-based compensation expense of $3.3 million, depreciation and amortization expense of $1.2 million, non-cash interest expense of $1.1 million, amortization of operating lease right-of-use assets of $0.7 million, a change in the fair value of the derivative instrument of $0.4 million, and a net change in operating assets and liabilities of $2.4 million, primarily related to an increase in accounts payable of $2.0 million due to timing of payments, an increase in accrued expenses of $1.2 million due to timing of interest payments, a decrease in accounts receivable of $0.6 million due to lower instrument sales and a decrease in prepaid expenses and other assets of $0.6 million primarily related to tradeshows and insurance, partially offset by a decrease in operating lease liabilities of $1.1 million, and a $0.9 million increase in instrument inventories to meet anticipated demand.

Net cash used in investing activities

Net cash used in investing activities was approximately $9.4 million for the six months ended June 30, 2020, and primarily consisted of purchases of marketable securities of $9.3 million and equipment purchases of $0.1 million.

Net cash used in investing activities was approximately $0.4 million for the six months ended June 30, 2019, and consisted of costs to acquire property and equipment.

Net cash used in / provided by financing activities

Net cash provided by financing activities was approximately $53.1 million for the six months ended June 30, 2020, and consisted of primarily of proceeds from sales of our common stock under the Sales Agreement, net of issuance costs, of $52.9 million and proceeds from issuance of shares under our 2014 Employee Stock Purchase Plan and stock option exercises of $0.2 million.

Net cash used in financing activities was approximately $0.2 million for the six months ended June 30, 2019, and consisted of repayments of finance leases of $0.5 million, partially offset by proceeds from issuance of common stock of $0.3 million.

Borrowing Arrangements

Term Loan Agreement

In December 2016, we entered into a Term Loan Agreement (the "Term Loan Agreement") with CRG. We borrowed $40.0 million pursuant to the Term Loan Agreement, which has a six-year term with three years (through December 30, 2019) of interest-only payments, which period was extended to four years (through December 30, 2020) upon achieving the Approval Milestone, after which quarterly principal and interest payments would be due through the December 30, 2022 maturity date. Interest on the amounts borrowed under the Term Loan Agreement accrues at an annual fixed rate of (a) prior to the Approval Milestone, 12.50%, 4.0% of which may be deferred during the interest-only period by adding such amount to the aggregate principal loan amount and (b) following the Approval Milestone, 11.50%, 3.5% of which may be deferred during the interest-only period by adding such amount to the aggregate principal loan amount. In addition, if we achieve certain financial performance metrics, the loan will convert to interest-only until the December 30, 2022 maturity, at which time all unpaid principal and accrued unpaid interest will be due and payable. We are required to pay CRG a financing fee based on the loan principal amount drawn. We are also required to pay a final payment fee of 8%, subsequently amended to 10%, of the principal outstanding upon repayment. We are accruing the final payment fee as interest expense and it is included as a non-current liability at June 30, 2020 and a current liability at December 31, 2019 on the balance sheet.

The Term Loan Agreement with CRG is classified as a current liability on the balance sheet at December 31, 2019 based on our consideration of the probability of violating the 2020 revenue covenant primarily due to the COVID-19 pandemic's likely impact on our product sales, which in turn would trigger violation of the minimum liquidity covenant included in the Term Loan Agreement. The Term Loan Agreement with CRG is classified as a non-current liability at June 30, 2020 as we have sufficient cash, cash equivalents and marketable securities as of the date of this filing due to subsequent financing (Note 7) that the minimum liquidity covenant would not be triggered even upon default of the revenue covenant at December 31, 2020 as a result of having sufficient funds to pay the cure. We have assessed the classification of the note payable as non-current based on facts and circumstances as of the date of this filing, specifically as it relates to achieving the minimum liquidity and revenue covenants. As of the date of this filing, we believe that should we be unable to meet such covenants as of December 31, 2020, it is probable that we would be able to pay the cure of default. Management continues to reassess at each balance sheet and filing date based on facts and circumstances and can provide no assurances regarding the probability of meeting its aforementioned covenants in future periods.

We may prepay all or a portion of the outstanding principal and accrued unpaid interest under the Term Loan Agreement at any time upon prior notice subject to a certain prepayment fee during the first five years of the term and no prepayment fee thereafter. As security for our obligations under the Term Loan Agreement, we entered into a security agreement with CRG whereby we granted a lien on substantially all of its assets, including intellectual property. The Term Loan Agreement also contains customary affirmative and negative covenants for a credit facility of this size and type, including a requirement to maintain a minimum cash balance of $5.0 million. The Term Loan Agreement also requires us to achieve certain revenue targets, whereby we are required to pay double the amount of any shortfall as an acceleration of principal payments. In March 2019, the Term Loan Agreement was amended to reduce the 2019 minimum revenue target to $9.0 million and eliminate the 2018 revenue covenant. In exchange for the amendment, we agreed to reset the strike price of the warrants to purchase 528,958 shares of our common stock, issued in connection with the Term Loan Agreement, from $8.06 per share to $4.35 per share.

In September 2019, the Term Loan Agreement was amended to extend the interest-only payment period through December 31, 2021, to extend the initial principal repayment to March 31, 2022, and to reduce the minimum product revenue target for 2019 from $9 million to $4 million, for the twenty-four month period beginning on January 1, 2019 from $95 million to $15 million and for the twenty-four month period beginning on January 1, 2020 from $140 million to $43 million. The final payment fee was increased from 8% to 10% of the principal amount outstanding upon repayment. We issued to CRG warrants to purchase 568,291 shares of our common stock ("New Warrants") (Note 9) at an exercise price of $1.55, with typical provisions for termination upon a change of control or a sale of all or substantially all of our assets. We also reduced the exercise price for the warrants previously issued to CRG to purchase an aggregate of 528,958 shares of our common stock to $1.55. All of the New Warrants are exercisable any time prior to September 9, 2029, and all of the previously issued warrants are exercisable any time prior to December 30, 2026. We accounted for the March 2019 and September 2019 amendments as modifications to the Term Loan Agreement.

The Term Loan Agreement includes a subjective acceleration clause whereby an event of default, including a material adverse change in the business, operations, or conditions (financial or otherwise), could result in the acceleration of the obligations under the Term Loan Agreement. Under certain circumstances, a default interest rate of an additional 4.0% per annum will apply at the election of CRG on all outstanding obligations during the occurrence and continuance of an event of default. CRG has not exercised its right under this clause.

We assessed the terms and features of the Term Loan Agreement, including the interest-only period dependent on the achievement of the Approval Milestone and the acceleration of the obligations under the Term Loan Agreement under an event of default, of the Term Loan Agreement in order to identify any potential embedded features that would require bifurcation. In addition, under certain circumstances, a default interest rate of an additional 4.0% per annum will apply at the election of CRG on all outstanding obligations during the occurrence and continuance of an event of default, we concluded that the features of the Term Loan Agreement are not clearly and closely related to the host instrument, and represent a single compound derivative that is required to be re-measured at fair value on a quarterly basis.

The fair value of the derivative at June 30, 2020 and December 31, 2019 is $2.4 million. We classified the derivative liability as a non-current liability on the balance sheet at June 30, 2020 and a current liability at December 31, 2019 to match the classification of the related Term Loan Agreement. While our fair value assessment as of June 30, 2020 assessed the likelihood of paying contingent interest as probable within the next twelve months, based on recent financing events subsequent to June 30, 2020 and as of the date of this filing, we continue to assess and believe the probability is remote that the contingent interest will commence within the next twelve months which, accordingly, provided for the non-current classification of the derivative liability. Management continues to reassess at each balance sheet and filing date based on facts and circumstances and can provide no assurances regarding the probability of payment of the contingent interest in future periods.

Equipment Lease Credit Facility

In October 2015, we signed the $10.0 million Credit Facility (the “Credit Facility”) with Essex Capital Corporation (“Essex”) to fund capital equipment needs. As one of the conditions of the Term Loan Agreement, the Credit Facility was capped at a maximum of $5.0 million. Under the Credit Facility, Essex funded capital equipment purchases presented by us. We repaid the amounts borrowed in 36 equal monthly installments from the date of the amount funded. At the end of the 36 month lease term, we had the option to (a) repurchase the leased equipment at the lesser of fair market value or 10% of the original equipment value, (b) extend the applicable lease for a specified period of time, which will not be less than one year, or (c) return the leased equipment to the Lessor.

In April 2016 and June 2016, we completed the first two draws under the Credit Facility of $2.1 million and $2.5 million, respectively. We made monthly payments of $67,000 under the first draw and $79,000 under the second draw. The borrowings under the Credit Facility were treated as capital leases and were included in property and equipment on the balance sheet. The amortization of the assets conveyed under the Credit Facility was included as a component of depreciation expense. During the year ended December 31, 2019, we repurchased the equipment for $0.3 million in accordance with the terms of the Credit Facility.

Contractual Obligations and Commitments

There were no other material changes to our contractual obligations and commitments from those described under Management’s Discussion and Analysis of Financial Condition and Results of Operations in the Annual Report on Form 10-K for the year ended December 31, 2019.

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 under SEC rules.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk related to changes in interest rates. As of June 30, 2020 and December 31, 2019, we had cash and cash equivalents of $26.5 million and $11.0 million, respectively. At June 30, 2020, a portion of our cash and cash equivalents, along with our marketable securities, is held in certificates of deposit and U.S. treasury securities. At December 31, 2019, a portion of our funds was held in money market funds consisting of U.S. government agency securities. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in short-term securities. Due to the short-term duration of our investment portfolio and the low risk profile of our investments, an immediate one percent change in interest rates would not have a material effect on the fair market value of our portfolio. As of June 30, 2020 and December 31, 2019, we had no outstanding debt exposed to variable market interest rates. Our ability to invest our cash and cash equivalents may be impacted by market fluctuations caused by the COVID-19 pandemic.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Management of the Company, with the participation of the Chief Executive Officer and the Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) as of June 30, 2020. The Company's disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported on a timely basis and that such information is accumulated and communicated to management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate, to allow timely decisions regarding disclosure.

Based on the evaluation of our disclosure controls and procedures as of June 30, 2020, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, the Company's disclosure controls and procedures were not effective due to the material weakness in our internal control over the quality, frequency and periodic testing of the backup of the Company's IT data that was included in Form 10-Q for the quarterly period ended September 30, 2019 and continued to exist at December 31, 2019.

As described in Form 10-Q for the quarterly period ended September 30, 2019, the Company historically backed up IT data monthly to a tape system and stored the tapes offsite in a secure location for use in data recovery. However, management determined that the frequency of the backup, monthly, presented a potential loss of data that takes an inordinate amount of time to recover. This prevented the Company from timely filing its report on Form 10-Q for the quarterly period ended September 30, 2019 without filing an extension. Furthermore, management determined that semi-annual data recovery testing to a secure environment to ensure the integrity and recoverability of the data was not performed. Because these tests were not performed, the Company did not detect flaws in the backup data timely and this flawed data required a lengthy data recovery process which delayed the Company's ability to prepare timely and accurate financial statements.

The Company took actions to remediate the deficiencies in its internal controls over financial reporting and implemented additional processes and controls designed to address the underlying causes associated with the above-mentioned material weakness. We upgraded our tape backup system during the third quarter of 2019 and backups to tapes now occur monthly. We implemented redundant cloud-based backup processes during April 2020. Beginning in the second quarter of 2020, cloud-based backups are performed daily to minimize data loss. In the second quarter, we implemented a semi-annual data recovery process to a secure environment to ensure data integrity. Management will monitor the progress of the remediation plan and report regularly to the audit committee on the progress and results of the remediation plan, including the identification, status and resolution of internal control deficiencies. The Company believes these actions will be effective in remediating the material weakness described above. As the Company continues to evaluate and work to improve its internal control over financial reporting, management may determine to take additional measures to address the material weakness or determine to modify the remediation plan described above. Until the remediation steps set forth above are fully implemented and operating for a sufficient period of time, the material weakness described above will continue to exist.

Management has taken steps to ensure the continued effectiveness of the Company's controls and procedures during the COVID-19 pandemic including procedures for ensuring effective controls for securely accessing the Company's systems and for financial record keeping by personnel working remotely via secure virtual private network ("VPN") connection. We do not believe the pandemic has negatively impacted our ability to produce accurate and timely financial reports or SEC filings.

(b) Changes in Internal Control over Financial Reporting

Except as noted above, there have been no changes to the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II.
OTHER INFORMATION

Item 1. Legal Proceedings

We may be from time to time subject to various claims and legal actions during the ordinary course of our business. There are currently no claims or legal actions, individually or in the aggregate, that would have a material adverse effect on our results of operations or financial condition.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the factors discussed in "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019, and the following risk, which could materially affect our business, financial condition or future results. There have been no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2019 other than as set forth below.

The COVID-19 pandemic has had, and may continue to have, an adverse impact on our business, including our marketing and research activities, and results of operations.

In December 2019, a novel strain of coronavirus, COVID-19, was reported to have surfaced in Wuhan, China and on March 11, 2020 was declared by the World Health Organization as a global pandemic. The global outbreak of COVID-19 continues to rapidly evolve and has had adverse effects on general commercial activity and the global economy, including research, manufacturing and distributions. The COVID-19 pandemic could lead to a long-term, global economic downturn and, at this point in time, there is significant uncertainty relating to its effect on our business, operating and research activities, including but not limited to:

- delays, difficulties or postponement in expanding the range of hospitals utilizing our T2Dx Instrument, T2Candida, T2Bacteria and T2SARS-CoV-2 Panels;
- diversion of healthcare resources away from our T2SARS-CoV-2 Panel and our other products for COVID-19 testing;
- interruption of marketing and research activities due to limitations on travel and stay-at-home orders related to COVID-19;
- limitations in employee resources that would otherwise be focused on the conduct of our research activities, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- interruption or delays in the operations of the FDA, which my impact approval timelines;
- impacts from prolonged remote work arrangements, such as increased cybersecurity risks and strains on our business continuity plans;
- inability to obtain additional financing or access the financial markets; and
- manufacturing challenges, such as scarcity of the components required to produce our products or contamination of our manufacturing facility, could harm our ability to manufacture and assemble our current and proposed products in sufficient quantities and on a timely basis so as to meet consumer demand.

As a result of COVID-19, we have experienced and may continue to experience a reduction in product sales and an impaired ability to recover the cost of instruments and components. We have significant development contract with a United States Government agency and should the agency reduce, cancel or not grant additional milestone projects, our ability to continue its future product development may be impacted. The COVID-19 pandemic also causes us to reassess our build plan and evaluate inventories accordingly, which resulted in an additional charge to cost of product revenue. In June 2020, the Company vacated its office space and determined that subleasing it to a tenant was unlikely due to the impact of the COVID-19 pandemic on the local commercial real estate sub-lease market. As a result, the Company recorded an impairment charge.

In addition, the trading prices for our and other biotechnology companies' stock have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock and any such sales may be on unfavorable terms. The extent to which COVID-19 may continue to impact our business, research and development programs and operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and manage the disease. In addition, if we or any of the third parties with whom we engage were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted, which could have a material adverse effect on our business and our financial results.

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

None.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

On August 10, 2020, Thomas J. Lowery, Ph.D, our Chief Scientific Officer resigned effective August 21, 2020.

Item 6. Exhibits, Financial Statement Schedules

Exhibit Number	Exhibit Description
3.1	Restated Certificate of Incorporation of the Company, as amended (incorporated by reference to Exhibit 3.1 of the Company's Form 8-K (File No. 001-36571) filed on August 12, 2014)
3.2	Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 of the Company's Form 8-K (File No. 001-36571) filed on August 12, 2014)
10.1	Amendment of Solicitation/Modification of Contract, dated as of July 6, 2020 by and between the Company and Biomedical Advanced Research and Development Authority of the U.S. Department of Health and Human Services
10.2	Non-Employee Director Compensation Program, effective as of June 14, 2020
10.3	Amendment No. 2 to the Equity Distribution Agreement dated as of April 8, 2020 by and between T2 Biosystems, Inc. and Canaccord Genuity LLC (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (001-36571) filed on April 8, 2020
10.4	2014 Employee Stock Purchase Plan, as amended and restated effective August 6, 2020
31.1*	Certification of principal executive officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of principal financial officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2**	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith
** Furnished herewith

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.

T2 BIOSYSTEMS, INC.

Date: August 12, 2020

By: /s/ JOHN SPERZEL
John Sperzel
President, Chief Executive Officer and Director
(principal executive officer)

Date: August 12, 2020

By: /s/ JOHN M. SPRAGUE
John M. Sprague
Chief Financial Officer
(principal financial and accounting officer)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO	5. PROJECT NO. *(If applicable)*
P00001	07/09/2020		

6. ISSUED BY	CODE	ASPR-BARDA	7. ADMINISTERED BY (If other than item 6)	CODE	ASPR—BARDA

ASPR-BARDA
200 Independence Ave., S.W.
Room 640-G
Washington DC 20201

ASPR-BARDA
US DEPT OF HEALTH & HUMAN SERVICES BIOMEDICAL ADVANCED RESEACH & DEVELOPMENT AUT
200 INDEPENDENCE AVE, S.W.
Washington DC 20201

8. NAME AND ADDRESS OF CONTRACTOR *(No street country, State and ZIP Code)*

T2 BIOSYSTEMS, INC. 1512719
Attn: STEPHEN HAGAN
T2 BIOSYSTEMS, INC. 101 HARTWE
101 HARTWELL AVE
LEXINGTON MA 024213125

(X) 9A. AMENDMENT OF SOLICITATION NO

9B. DATED *(SEE ITEM 11)*

x 10A. MODIFICATION OF CONTRACT/ORDER NO. 75A501l9C00053

10B. DATED *(SEE ITEM 13)* 09/30/2019

CODE 1512719 **FACILITY CODE**

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended , by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted , or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted , such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment and is received prior to the opening hour and date specified

12 ACCOUNTING AND APPROPRIATION DATA *(If required)*
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO' *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIE D TO REFLECT THE ADMINISTRATIVE CHANGES /such *as changes in paying* o/fice, *appropriation data,* etc.) SET FORTH IN ITEM 14, PURSUANT TO THE A\JTHORITY OF FAR 43.103(b).
x	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 52.243-2 Changes - Cost Reimbursement, AltV (Apr 1984)
	D OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return _____ copies to the Issuing office .

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including* solicita//on/con/rac/ *subject matter where feasible.]*

Tax ID Number: 20-4827488
DUNS Number: 803126320

The purpose of this modification is to extend the Base Period of performance end date from July 8, 2020 to October 8, 2020.

The contract overall estimated value, current value(s) and obligated amount shall remain the same – UNCHANGED.
Period of Performance: 09/09/2019 to 10/08/2020
Contractor's Statement of Release

In consideration of the modification(s) agreed to herein as complete and no equitable Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in ful| force and effect

15A. NAME AND TITLE OF SIGNER *(Type or print)*	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
Alec J. Barclay, Chief Operations Officer	ROSHAWN K . MAYORS
15B. CONTRACTOR/OFFER R	15C. DATE SIGNED
Alec J. Barclay (Signature of person authorized to sign)	07/06/2020
16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
Roshawn K. Simpson *(Signature of Contracting officer)*	July 6, 2020

Previous edition unusable

STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

NAME OF OFFEROR OR CONTRACTOR
T2 BIOSYSTEMS, INT. 1512719

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY UNITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	adjustments are due from Contractor's request for an extension of the period of performance through October B, 2020. the Contractor herby releases the Government from any and all liability under the contract for further equitable adjustments attributable to such facts or circumstances giving rise to the request for extension. All other contract terms remain unchanged.				

T2 BIOSYSTEMS, INC.

NON-EMPLOYEE DIRECTOR COMPENSATION PROGRAM
(effective as of June 14, 2020)

Non-employee members of the board of directors (the "***Board***") of T2 Biosystems, Inc. (the "***Company***") shall be eligible to receive cash and equity compensation as set forth in this Non-Employee Director Compensation Program (this "***Program***"). The cash and equity compensation described in this Program shall be paid or be made, as applicable, automatically and without further action of the Board, to each member of the Board who is not an employee of the Company or any parent or subsidiary of the Company (each, a "***Non-Employee Director***") who may be eligible to receive such cash or equity compensation, unless such Non-Employee Director declines the receipt of such cash or equity compensation by written notice to the Company. This Program shall remain in effect until it is revised or rescinded by further action of the Board. This Program may be amended, modified or terminated by the Board at any time in its sole discretion. The terms and conditions of this Program shall, as of its effective date set forth above (the "***Effective Date***"), supersede any prior cash and/or equity compensation arrangements for service as a member of the Board between the Company and any of its Non-Employee Directors. No Non-Employee Director shall have any rights hereunder, except with respect to stock options and restricted stock units granted pursuant to the Program.

1. Annual Compensation.

(a) Annual Retainers. Each Non-Employee Director shall be eligible to receive an annual retainer of $40,000 for service on the Board (the "Annual Retainer").

(b) Additional Annual Retainers. In addition, each Non-Employee Director shall be eligible to receive the following annual retainers (each, a "Committee Member Retainer"):

(i) Chairman of the Board or Lead Independent Director. A Non-Employee Director serving as Chairman of the Board or Lead Independent Director shall receive an additional annual retainer of $30,000 for such service.

(ii) Audit Committee. A Non-Employee Director serving as Chairperson of the Audit Committee shall receive an additional annual retainer of $18,000 for such service. A Non-Employee Director serving as a member of the Audit Committee shall receive an additional annual retainer of $7,500.

(iii) Compensation Committee. A Non-Employee Director serving as Chairperson of the Compensation Committee shall receive an additional annual retainer of $14,000 for such service. A Non-Employee Director serving as a member of the Compensation Committee shall receive an additional annual retainer of $5,000.

(vi) Nominating and Corporate Governance Committee. A Non-Employee Director serving as Chairperson of the Nominating and Corporate Governance Committee shall receive an additional annual retainer of $10,000 for such service. A Non-

Employee Director serving as a member of the Nominating and Corporate Governance Committee shall receive an additional annual retainer of $3,500.

(vii) Technology Committee. A Non-Employee Director serving on the Technology Committee shall receive an additional annual retainer of $15,000 for such service.

(c)Payment of Retainers. The Annual Retainer and Committee Member Retainer shall be earned on a quarterly basis based on a calendar quarter and shall be paid by the Company in cash in arrears not later than the fifteenth day following the end of each calendar quarter. In the event a Non-Employee Director does not serve as a Non-Employee Director, or in the applicable positions described in Section 1(b), for an entire calendar quarter, the retainer paid to such Non-Employee Director shall be prorated for the portion of such calendar quarter actually served as a Non-Employee Director, or in such position, as applicable. Any changes to the retainers set forth above shall be pro-rated based on the effective date of such change.

(d) Annual Retainer Election. For each calendar year of the Non-Employee Director's service, the Non-Employee Director will have the opportunity to elect in writing in a form provided by the Company and delivered to the Company, prior to January 1 of the applicable year, payment of the Annual Retainer in cash or an equivalent number of Restricted Stock Units (as defined in the Company's 2014 Incentive Award Plan or any other applicable Company equity incentive plan then-maintained by the Company (the "***Equity Plan***")), determined by dividing (1) the Annual Retainer by (2) the Fair Market Value (as defined in the Plan) of one share of the Company's common stock on the last trading day prior to January 1 of the year to which the Annual Retainer relates. Restricted Stock Units will be issued under, and subject to the terms of, the Equity Plan and a separate restricted stock unit agreement and will vest, subject to the Non-Employee Director's continued service, in one single installment on January 1 of the year following the year to which the Annual Retainer relates. Unless otherwise determined by the Board, unvested Restricted Stock Units will be forfeited upon the Non-Employee Director's termination of service.

2. Equity Compensation. Non-Employee Directors shall be granted the equity awards described below. The awards described below shall be granted under and shall be subject to the terms and provisions of the Equity Plan and shall be granted subject to award agreements, including attached exhibits, in substantially the forms previously approved by the Board. All applicable terms of the Equity Plan apply to this Program as if fully set forth herein, and all grants of stock options hereby are subject in all respects to the terms of the Equity Plan. For the avoidance of doubt, the share numbers in Sections 2(a) and 2(b) shall be subject to adjustment as provided in the Equity Plan.

(a)Initial Awards. Each Non-Employee Director who is initially elected or appointed to the Board after the Effective Date shall be eligible to receive such number of Restricted Stock Units equal to 1.5 times the number of Restricted Stock Units subject to the Subsequent Award (as defined below) most recently granted pursuant to Section 2(b) below, including any Subsequent Award made on the date of election or appointment of the Non-Employee Director receiving the award. The awards described in this Section 2(a) shall be referred to as "***Initial Awards***." No Non-Employee Director shall be granted more than one Initial Award. In the event that a Non-Employee Director is initially elected or appointed to the Board after the Effective Date but prior to the annual meeting of the Company's stockholders (each, an "***Annual***

Meeting") in 2020, such Non-Employee Director will automatically be granted the Initial Award on the date of the Annual Meeting in 2020, subject to the Non-Employee Director's continued engagement as a Non-Employee Director through such date, and such Initial Award shall cover 1.5 times the number of Restricted Stock Units subject to each Subsequent Award granted on the date of the Annual Meeting in 2020.

(b)Subsequent Awards. A Non-Employee Director who (i) has been serving as a Non-Employee Director on the Board for at least six months as of the date of any Annual Meeting and (ii) will continue to serve as a Non-Employee Director immediately following such meeting, shall be automatically granted on the date of the Annual Meeting a number of Restricted Stock Units equal to (A) $75,000 divided by (B) the Fair Market Value of one share of the Company's common stock on the date of grant, rounded down to the nearest whole share; provided, however, that the total number of shares subject to any such Subsequent Award shall not exceed 100,000 (which number shall be subject to adjustment in accordance with the Equity Plan in the event of any stock splits, dividends, recapitalizations and the like effected after the Effective Date) The awards described in this Section 2(b) shall be referred to as "***Subsequent Awards***." For the avoidance of doubt, a Non-Employee Director elected for the first time to the Board at an Annual Meeting shall only receive an Initial Award in connection with such election, and shall not receive any Subsequent Award on the date of such meeting as well.

(c) Termination of Service of Employee Directors. Members of the Board who are employees of the Company or any parent or subsidiary of the Company who subsequently terminate their service with the Company and any parent or subsidiary of the Company and remain on the Board will not receive an Initial Award pursuant to Section 2(a) above, but to the extent that they are otherwise eligible, will be eligible to receive, after termination from service with the Company and any parent or subsidiary of the Company, Subsequent Awards as described in Section 2(b) above.

(d) Vesting of Awards Granted to Non-Employee Directors. Each Initial Award shall vest in substantially equal installments on each of the first three anniversaries of the date of grant, subject to the Non-Employee Director continuing in service on the Board through each such vesting date. Each Subsequent Award shall vest in one installment on the earlier of (i) the first anniversary of the grant date and (ii) the date of the next annual meeting of stockholders, subject to the Non-Employee Director continuing in service on the Board through such vesting date. Unless the Board otherwise determines, any portion of an Initial Award or Subsequent Award which is unvested at the time of a Non-Employee Director's termination of service on the Board shall be immediately forfeited upon such termination of service and shall not thereafter become vested. All of a Non-Employee Director's Restricted Stock Units granted in respect of the Annual Retainer, Initial Awards and Subsequent Awards shall vest in full immediately prior to the occurrence of a Change in Control (as defined in the Equity Plan), to the extent outstanding at such time.

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T2 BIOSYSTEMS, INC.
2014 EMPLOYEE STOCK PURCHASE PLAN

(as amended and restated effective August 6, 2020)

ARTICLE 1.

PURPOSE

The purposes of this T2 Biosystems, Inc. 2014 Employee Stock Purchase Plan (as it may be amended or restated from time to time, the "***Plan***") are to assist Eligible Employees of T2 Biosystems, Inc., a Delaware corporation (the "***Company***"), and its Designated Subsidiaries in acquiring a stock ownership interest in the Company pursuant to a plan which is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423(b) of the Code, and to help Eligible Employees provide for their future security and to encourage them to remain in the employment of the Company and its Designated Subsidiaries.

ARTICLE 2.

DEFINITIONS AND CONSTRUCTION

Wherever the following terms are used in the Plan they shall have the meanings specified below, unless the context clearly indicates otherwise. The singular pronoun shall include the plural where the context so indicates. Masculine, feminine and neuter pronouns are used interchangeably and each comprehends the others.

2.1 "*Administrator*" shall mean the entity that conducts the general administration of the Plan as provided in Article 11. The term "Administrator" shall refer to the Committee unless the Board has assumed the authority for administration of the Plan as provided in Article 11.

2.2 "*Applicable Law*" shall mean any applicable law, including without limitation; (i) provisions of the Code, the Securities Act, the Exchange Act and any rules or regulations thereunder; (ii) corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether federal, state, local or foreign; and (iii) rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

2.3 "*Board*" shall mean the Board of Directors of the Company.

2.4 "*Change in Control*" shall mean and include each of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission or a transaction or series of transactions that meets the requirements of clause (i) and (ii) of paragraph (c) below) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its Subsidiaries, an employee benefit plan maintained by the Company or any of its Subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new director(s) (other than a director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in Section 2.4(a) or 2.4(c)) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the two-year period

or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the "Successor Entity")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this Section 2.4(c)(ii)as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction.

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control of the Company has occurred pursuant to the above definition, and the date of the occurrence of such Change in Control and any incidental matters relating thereto.

2.5 "*Code*" shall mean the Internal Revenue Code of 1986, as amended from time to time, together with the regulations and official guidance promulgated thereunder.

2.6 "*Common Stock*" shall mean the common stock of the Company and such other securities of the Company that may be substituted therefor pursuant to Article 8.

2.7 "*Company*" shall mean T2 Biosystems, Inc., a Delaware corporation.

2.8 "*Compensation*" of an Eligible Employee shall mean the gross base compensation received by such Eligible Employee as compensation for services to the Company or any Designated Subsidiary, excluding overtime payments, sales commissions, incentive compensation, bonuses, expense reimbursements, fringe benefits and other special payments.

2.9 "*Designated Subsidiary*" shall mean any Subsidiary designated by the Administrator in accordance with Section 11.3(b).

2.10 "*Effective Date*" shall mean August 6, 2020.

2.11 "*Eligible Employee*" shall mean an Employee who does not, immediately after any rights under this Plan are granted, own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of Common Stock and other stock of the Company, a Parent or a Subsidiary (as determined under Section 423(b)(3) of the Code). For purposes of the foregoing, the rules of Section 424(d) of the Code with regard to the attribution of stock ownership shall apply in determining the stock ownership of an individual, and stock that an Employee may purchase under outstanding options shall be treated as stock owned by the Employee; provided, however, that the Administrator may provide in an Offering Document that an Employee of the Company or any Designated Subsidiary shall not be eligible to participate in an Offering Period if: (i) such Employee is a highly compensated employee within the meaning of Section 423(b)(4)(D) of the Code; (ii) such Employee has not met a service requirement designated by the Administrator pursuant to Section 423(b)(4)(A) of

the Code (which service requirement may not exceed two years); (iii) such Employee's customary employment is for twenty hours per week or less; (iv) such Employee's customary employment is for less than five months in any calendar year; and/or (v) such Employee is a citizen or resident of a foreign jurisdiction and the grant of a right to purchase Common Stock under the Plan to such Employee would be prohibited under the laws of such foreign jurisdiction or the grant of a right to purchase Common Stock under the Plan to such Employee in compliance with the laws of such foreign jurisdiction would cause the Plan to violate the requirements of Section 423 of the Code, as determined by the Administrator in its sole discretion; provided, further, that any exclusion in clauses (i), (ii), (iii), (iv) or (v) shall be applied in an identical manner under each Offering Period to all Employees, in accordance with Treasury Regulation Section 1.423-2(e).

2.12 "*Employee*" shall mean any officer or other employee (as defined in accordance with Section 3401(c) of the Code) of the Company or any Designated Subsidiary. "Employee" shall not include any director of the Company or a Designated Subsidiary who does not render services to the Company or a Designated Subsidiary as an employee within the meaning of Section 3401(c) of the Code. For purposes of the Plan, the employment relationship shall be treated as continuing intact while the individual is on sick leave or other leave of absence approved by the Company or Designated Subsidiary and meeting the requirements of Treasury Regulation Section 1.421-1(h)(2). Where the period of leave exceeds three (3) months and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship shall be deemed to have terminated on the first day immediately following such three (3)-month period.

2.13 "*Enrollment Date*" shall mean the first Trading Day of each Offering Period.

2.14 "*Exchange Act*" shall mean the Securities Exchange Act of 1934, as amended from time to time.

2.15 "*Fair Market Value*" means, as of any given date, the fair market value of a Share on the date determined as follows:

(a) If the Common Stock is listed on any (i) established securities exchange (such as the New York Stock Exchange, the NASDAQ Capital Market, the NASDAQ Global Market or the NASDAQ Global Select Market), (ii) national market system or (iii) automated quotation system, its Fair Market Value shall be the closing sales price for a Share as quoted on such exchange or system for such date or, if there is no closing sales price for a Share on the date in question, the closing sales price for a Share on the last preceding date for which such quotation exists, as reported in The Wall Street Journal or such other source as the Administrator deems reliable;

(b) If the Common Stock is not listed on an established securities exchange, national market system or automated quotation system, but the Common Stock is regularly quoted by a recognized securities dealer, its Fair Market Value shall be the mean of the high bid and low asked prices for such date or, if there are no high bid and low asked prices for a Share on such date, the high bid and low asked prices for a Share on the last preceding date for which such information exists, as reported in The Wall Street Journal or such other source as the Administrator deems reliable; or

(c) If the Common Stock is neither listed on an established securities exchange, national market system or automated quotation system nor regularly quoted by a recognized securities dealer, its Fair Market Value shall be established by the Administrator in good faith.

2.16 "*Offering Document*" shall have the meaning given to such term in Section 4.1.

2.17 "*Offering Period*" shall have the meaning given to such term in Section 4.1.

2.18 "*Parent*" shall mean any corporation, other than the Company, in an unbroken chain of corporations ending with the Company if, at the time of the determination, each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

2.19 "*Participant*" shall mean any Eligible Employee who has executed a subscription agreement and been granted rights to purchase Common Stock pursuant to the Plan.

2.20 "*Plan*" shall mean this T2 Biosystems, Inc. 2014 Employee Stock Purchase Plan, as it may be amended or restated from time to time.

2.21 "*Purchase Date*" shall mean the last Trading Day of each Offering Period.

2.22 "*Purchase Price*" shall mean the purchase price designated by the Administrator in the applicable Offering Document (which purchase price shall not be less than 85% of the Fair Market Value of a Share on the Enrollment Date or on the Purchase Date, whichever is lower); provided, however, that, in the event no purchase price is designated by the Administrator in the applicable Offering Document, the purchase price for the Offering Periods covered by such Offering Document shall be 85% of the Fair Market Value of a Share on the Enrollment Date or on the Purchase Date, whichever is lower; provided, further, that the Purchase Price may be adjusted by the Administrator pursuant to Article 8 and shall not be less than the par value of a Share.

2.23 "*Securities Act*" shall mean the Securities Act of 1933, as amended from time to time.

2.24 "*Share*" shall mean a share of Common Stock.

2.25 "*Subsidiary*" shall mean any corporation, other than the Company, in an unbroken chain of corporations beginning with the Company if, at the time of the determination, each of the corporations other than the last corporation in an unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain; provided, however, that a limited liability company or partnership may be treated as a Subsidiary to the extent either (a) such entity is treated as a disregarded entity under Treasury Regulation Section 301.7701-3(a) by reason of the Company or any other Subsidiary that is a corporation being the sole owner of such entity, or (b) such entity elects to be classified as a corporation under Treasury Regulation Section 301.7701-3(a) and such entity would otherwise qualify as a Subsidiary.

2.26 "*Trading Day*" shall mean a day on which national stock exchanges in the United States are open for trading.

ARTICLE 3.

SHARES SUBJECT TO THE PLAN

3.1 Number of Shares. Subject to Article 8, the aggregate number of Shares that may be issued pursuant to rights granted under the Plan shall be 4,523,944 Shares. If any right granted under the Plan shall for any reason terminate without having been exercised, the Common Stock not purchased under such right shall again become available for issuance under the Plan.

3.2. Stock Distributed. Any Common Stock distributed pursuant to the Plan may consist, in whole or in part, of authorized and unissued Common Stock, treasury stock or Common Stock purchased on the open market.

ARTICLE 4.

OFFERING PERIODS; OFFERING DOCUMENTS; PURCHASE DATES

4.1 Offering Periods. The Administrator may from time to time grant or provide for the grant of rights to purchase Common Stock of the Company under the Plan to Eligible Employees during one or more periods (each, an "***Offering Period***") selected by the Administrator. The terms and conditions applicable to each Offering Period shall be set forth in an "***Offering Document***" adopted by the Administrator, which Offering Document shall be in such form and shall contain such terms and conditions as the Administrator shall deem appropriate and shall be

incorporated by reference into and made part of the Plan and shall be attached hereto as part of the Plan. The provisions of separate Offering Periods under the Plan need not be identical.

4.2 Offering Documents. Each Offering Document with respect to an Offering Period shall specify (through incorporation of the provisions of this Plan by reference or otherwise):

(a) the length of the Offering Period, which period shall not exceed twenty-seven months;

(b) the maximum number of shares that may be purchased by any Eligible Employee during such Offering Period, which, in the absence of a contrary designation by the Administrator, shall be 20,000 shares;

(c) such other provisions as the Administrator determines are appropriate, subject to the Plan.

ARTICLE 5.

ELIGIBILITY AND PARTICIPATION

5.1 Eligibility. Any Eligible Employee who shall be employed by the Company or a Designated Subsidiary on a given Enrollment Date for an Offering Period shall be eligible to participate in the Plan during such Offering Period, subject to the requirements of this Article 5 and the limitations imposed by Section 423(b) of the Code and the Treasury Regulations thereunder.

5.2 Enrollment in Plan.

(a) Except as otherwise set forth in an Offering Document or determined by the Administrator, an Eligible Employee may become a Participant in the Plan for an Offering Period by delivering a subscription agreement to the Company by such time prior to the Enrollment Date for such Offering Period (or such other date specified in the Offering Document) designated by the Administrator and in such form as the Administrator provides.

(b) Each subscription agreement shall designate a whole percentage of such Eligible Employee's Compensation to be withheld by the Company or the Designated Subsidiary employing such Eligible Employee on each payday during the Offering Period as payroll deductions under the Plan. An Eligible Employee may designate any whole percentage of Compensation that is not less than 1% and not more than the maximum percentage specified by the Administrator in the applicable Offering Document (which percentage shall be 20% in the absence of any such designation) as payroll deductions. The payroll deductions made for each Participant shall be credited to an account for such Participant under the Plan and shall be deposited with the general funds of the Company.

(c) A Participant may increase or decrease the percentage of Compensation designated in his or her subscription agreement, subject to the limits of this Section 5.2, or may suspend his or her payroll deductions, at any timeduring an Offering Period; provided, however, that the Administrator may limit the number of changes a Participant may make to his or her payroll deduction elections during each Offering Period in the applicable Offering Document (and in the absence of any specific designation by the Administrator, a Participant shall be allowed one change to his or her payroll deduction elections during each Offering Period). Any such change or suspension of payroll deductions shall be effective with the first full payroll period following five business days after the Company's receipt of the new subscription agreement (or such shorter or longer period as may be specified by the Administrator in the applicable Offering Document). In the event a Participant suspends his or her payroll deductions, such Participant's cumulative payroll deductions prior to the suspension shall remain in his or her account and shall be applied to the purchase of Shares on the next occurring Purchase Date and shall not be paid to such Participant unless he or she withdraws from participation in the Plan pursuant to Article 7.

(d) Except as otherwise set forth in an Offering Document or determined by the Administrator, a Participant may participate in the Plan only by means of payroll deduction and may not make contributions by lump sum payment for any Offering Period.

5.3 Payroll Deductions. Except as otherwise provided in the applicable Offering Document, payroll deductions for a Participant shall commence on the first payroll following the Enrollment Date and shall end on the last payroll in the Offering Period to which the Participant's authorization is applicable, unless sooner terminated by the Participant as provided in Article 7.

5.4 Effect of Enrollment. A Participant's completion of a subscription agreement will enroll such Participant in the Plan for each subsequent Offering Period on the terms contained therein until the Participant either submits a new subscription agreement, withdraws from participation under the Plan as provided in Article 7 or otherwise becomes ineligible to participate in the Plan.

5.5 Limitation on Purchase of Common Stock. An Eligible Employee may be granted rights under the Plan only if such rights, together with any other rights granted to such Eligible Employee under "employee stock purchase plans" of the Company, any Parent or any Subsidiary, as specified by Section 423(b)(8) of the Code, do not permit such employee's rights to purchase stock of the Company or any Parent or Subsidiary to accrue at a rate that exceeds $25,000 of the fair market value of such stock (determined as of the first day of the Offering Period during which such rights are granted) for each calendar year in which such rights are outstanding at any time. This limitation shall be applied in accordance with Section 423(b)(8) of the Code.

5.6 Decrease or Suspension of Payroll Deductions. Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 5.5 or the other limitations set forth in this Plan, a Participant's payroll deductions may be suspended by the Administrator at any time during an Offering Period. The balance of the amount credited to the account of each Participant that has not been applied to the purchase of Shares by reason of Section 423(b)(8) of the Code, Section 5.5 or the other limitations set forth in this Plan shall be paid to such Participant in one lump sum in cash as soon as reasonably practicable after the Purchase Date.

5.7 Foreign Employees. In order to facilitate participation in the Plan, the Administrator may provide for such special terms applicable to Participants who are citizens or residents of a foreign jurisdiction, or who are employed by a Designated Subsidiary outside of the United States, as the Administrator may consider necessary or appropriate to accommodate differences in local law, tax policy or custom. Such special terms may not be more favorable than the terms of rights granted under the Plan to Eligible Employees who are residents of the United States. Moreover, the Administrator may approve such supplements to, or amendments, restatements or alternative versions of, this Plan as it may consider necessary or appropriate for such purposes without thereby affecting the terms of this Plan as in effect for any other purpose. No such special terms, supplements, amendments or restatements shall include any provisions that are inconsistent with the terms of this Plan as then in effect unless this Plan could have been amended to eliminate such inconsistency without further approval by the stockholders of the Company.

5.8 Leave of Absence. During leaves of absence approved by the Company meeting the requirements of Treasury Regulation Section 1.421-1(h)(2) under the Code, a Participant may continue participation in the Plan by making cash payments to the Company on his or her normal payday equal to his or her authorized payroll deduction.

ARTICLE 6.

GRANT AND EXERCISE OF RIGHTS

6.1 Grant of Rights. On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period shall be granted a right to purchase the maximum number of Shares specified under Section 4.2, subject to the limits in Section 5.5, and shall have the right to buy, on each Purchase Date during such Offering Period (at the applicable Purchase Price), such number of whole shares of the Company's Common Stock as is determined by dividing (a) such Participant's payroll deductions accumulated prior to such Purchase Date and retained in the Participant's account as of the Purchase Date, by (b) the applicable Purchase Price (rounded down to the nearest Share). The right shall expire on the last day of the Offering Period.

6.2 Exercise of Rights. On each Purchase Date, each Participant's accumulated payroll deductions and any other additional payments specifically provided for in the applicable Offering Document will be applied to the purchase of whole Shares of the Company, up to the maximum number of shares permitted pursuant to the terms of

the Plan and the applicable Offering Document, at the Purchase Price. No fractional shares shall be issued upon the exercise of rights granted under the Plan, unless the Offering Document specifically provides otherwise. Any cash in lieu of fractional Shares remaining after the purchase of whole Shares upon exercise of a purchase right will be credited to a Participant's account and carried forward and applied toward the purchase of whole Shares for the next following Offering Period. Shares issued pursuant to the Plan may be evidenced in such manner as the Administrator may determine and may be issued in certificated form or issued pursuant to book-entry procedures.

6.3 Pro Rata Allocation of Shares. If the Administrator determines that, on a given Purchase Date, the number of Shares with respect to which rights are to be exercised may exceed (a) the number of Shares that were available for issuance under the Plan on the Enrollment Date of the applicable Offering Period, or (b) the number of Shares available for issuance under the Plan on such Purchase Date, the Administrator may in its sole discretion provide that the Company shall make a pro rata allocation of the Shares available for purchase on such Enrollment Date or Purchase Date, as applicable, in as uniform a manner as shall be practicable and as it shall determine in its sole discretion to be equitable among all Participants for whom rights to purchase Common Stock are to be exercised pursuant to this Article 6 on such Purchase Date, and shall either (i) continue all Offering Periods then in effect, or (ii) terminate any or all Offering Periods then in effect pursuant to Article 9. The Company may make pro rata allocation of the Shares available on the Enrollment Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Enrollment Date. The balance of the amount credited to the account of each Participant that has not been applied to the purchase of Shares shall be paid to such Participant in one lump sum in cash as soon as reasonably practicable after the Purchase Date.

6.4 Withholding. At the time a Participant's rights under the Plan are exercised, in whole or in part, or at the time some or all of the Common Stock issued under the Plan is disposed of, the Participant must make adequate provision for the Company's federal, state, or other tax withholding obligations, if any, that arise upon the exercise of the right or the disposition of the Common Stock. At any time, the Company may, but shall not be obligated to, withhold from the Participant's compensation the amount necessary for the Company to meet applicable withholding obligations, including any withholding required to make available to the Company any tax deductions or benefits attributable to sale or early disposition of Common Stock by the Participant.

6.5 Conditions to Issuance of Common Stock. The Company shall not be required to issue or deliver any certificate or certificates for, or make any book entries evidencing, Shares purchased upon the exercise of rights under the Plan prior to fulfillment of all of the following conditions:

(a) The admission of such shares to listing on all stock exchanges, if any, on which the Common Stock is then listed; and

(b) The completion of any registration or other qualification of such shares under any state or federal law or under the rulings or regulations of the Securities and Exchange Commission or any other governmental regulatory body, that the Administrator shall, in its absolute discretion, deem necessary or advisable; and

(c) The obtaining of any approval or other clearance from any state or federal governmental agency that the Administrator shall, in its absolute discretion, determine to be necessary or advisable; and

(d) The payment to the Company of all amounts that it is required to withhold under federal, state or local law upon exercise of the rights, if any; and

(e) The lapse of such reasonable period of time following the exercise of the rights as the Administrator may from time to time establish for reasons of administrative convenience.

ARTICLE 7.

WITHDRAWAL; TERMINATION OF EMPLOYMENT OR ELIGIBILITY

7.1 Withdrawal. A Participant may withdraw all but not less than all of the payroll deductions credited to his or her account and not yet used to exercise his or her rights under the Plan at any time by giving written notice to the Company in a form acceptable to the Administrator no later than one week prior to the end of the Offering Period. All of the Participant's payroll deductions credited to his or her account during an Offering Period shall be paid to such Participant as soon as reasonably practicable after receipt of notice of withdrawal and such Participant's rights for the Offering Period shall be automatically terminated, and no further payroll deductions for the purchase of shares shall be made for such Offering Period. If a Participant withdraws from an Offering Period, payroll deductions shall not resume at the beginning of the next Offering Period unless the Participant delivers to the Company a new subscription agreement.

7.2 Future Participation. A Participant's withdrawal from an Offering Period shall not have any effect upon his or her eligibility to participate in any similar plan that may hereafter be adopted by the Company or a Designated Subsidiary or in subsequent Offering Periods that commence after the termination of the Offering Period from which the Participant withdraws.

7.3 Cessation of Eligibility. Upon a Participant's ceasing to be an Eligible Employee for any reason, he or she shall be deemed to have elected to withdraw from the Plan pursuant to this Article 7 and the payroll deductions credited to such Participant's account during the Offering Period shall be paid to such Participant or, in the case of his or her death, to the person or persons entitled thereto under Section 12.4, as soon as reasonably practicable, and such Participant's rights for the Offering Period shall be automatically terminated.

ARTICLE 8.

ADJUSTMENTS UPON CHANGES IN STOCK

8.1 Changes in Capitalization. Subject to Section 8.3, in the event that the Administrator determines that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), Change in Control, reorganization, merger, amalgamation, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the
Company, or sale or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, as determined by the Administrator, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any outstanding purchase rights under the Plan, the Administrator shall make equitable adjustments, if any, to reflect such change with respect to (a) the aggregate number and type of Shares (or other securities or property) that may be issued under the Plan (including, but not limited to, adjustments of the limitations in Section 3.1 and the limitations established in each Offering Document pursuant to Section 4.2 on the maximum number of Shares that may be purchased); (b) the class(es) and number of shares and price per Share subject to outstanding rights; and (c) the Purchase Price with respect to any outstanding rights.

8.2 Other Adjustments. Subject to Section 8.3, in the event of any transaction or event described in Section 8.1 or any unusual or nonrecurring transactions or events affecting the Company, any affiliate of the Company, or the financial statements of the Company or any affiliate (including without limitation any Change in Control), or of changes in Applicable Law or accounting principles, the Administrator, in its discretion, and on such terms and conditions as it deems appropriate, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to prevent the dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to any right under the Plan, to facilitate such transactions or events or to give effect to such changes in laws, regulations or principles:

(a) To provide for either (i) termination of any outstanding right in exchange for an amount of cash, if any, equal to the amount that would have been obtained upon the exercise of such right had such right been currently exercisable or (ii) the replacement of such outstanding right with other rights or property selected by the Administrator in its sole discretion;

(b) To provide that the outstanding rights under the Plan shall be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar rights covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices; and

(c) To make adjustments in the number and type of Shares (or other securities or property) subject to outstanding rights under the Plan and/or in the terms and conditions of outstanding rights and rights that may be granted in the future;

(d) To provide that Participants' accumulated payroll deductions may be used to purchase Common Stock prior to the next occurring Purchase Date on such date as the Administrator determines in its sole discretion and the Participants' rights under the ongoing Offering Period(s) shall be terminated; and

(e) To provide that all outstanding rights shall terminate without being exercised.

8.3 No Adjustment Under Certain Circumstances. No adjustment or action described in this Article 8 or in any other provision of the Plan shall be authorized to the extent that such adjustment or action would cause the Plan to fail to satisfy the requirements of Section 423 of the Code.

8.4 No Other Rights. Except as expressly provided in the Plan, no Participant shall have any rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend, any increase or decrease in the number of shares of stock of any class or any dissolution, liquidation, merger, or consolidation of the Company or any other corporation. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number of Shares subject to an Award or the grant or exercise price of any Award.

ARTICLE 9.

AMENDMENT, MODIFICATION AND TERMINATION

9.1 Amendment, Modification and Termination. The Administrator may amend, suspend or terminate the Plan at any time and from time to time; provided, however, that approval of the Company's stockholders shall be required to amend the Plan to: (a) increase the aggregate number, or change the type, of shares that may be sold pursuant to rights under the Plan under Section 3.1 (other than an adjustment as provided by Article 8); (b) change the corporations or classes of corporations whose employees may be granted rights under the Plan; or (c) change the Plan in any manner that would cause the Plan to no longer be an "employee stock purchase plan" within the meaning of Section 423(b) of the Code.

9.2 Certain Changes to Plan. Without stockholder consent and without regard to whether any Participant rights may be considered to have been adversely affected, to the extent permitted by Section 423 of the Code, the administrator shall be entitled to change the Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with amounts withheld from the Participant's Compensation, and establish such other limitations or procedures as the Administrator determines in its sole discretion to be advisable that are consistent with the Plan.

9.3 Actions In the Event of Unfavorable Financial Accounting Consequences. In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify or amend the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(a) altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price;

(b) shortening any Offering Period so that the Offering Period ends on a new Purchase Date, including an Offering Period underway at the time of the Administrator action; and

(c) allocating Shares.

Such modifications or amendments shall not require stockholder approval or the consent of any Participant.

9.4 Payments Upon Termination of Plan. Upon termination of the Plan, the balance in each Participant's Plan account shall be refunded as soon as practicable after such termination, without any interest thereon.

ARTICLE 10.

TERM OF PLAN

The Plan shall be effective on the Effective Date. The effectiveness of the Plan shall be subject to approval of the Plan by the stockholders of the Company within twelve months following the date the Plan is first approved by the Board. No right may be granted under the Plan prior to such stockholder approval. No rights may be granted under the Plan during any period of suspension of the Plan or after termination of the Plan.

ARTICLE 11.

ADMINISTRATION

11.1 Administrator. Unless otherwise determined by the Board, the Administrator of the Plan shall be the Compensation Committee of the Board (or another committee or a subcommittee of the Board to which the Board delegates administration of the Plan) (such committee, the "***Committee***"). The Board may at any time vest in the Board any authority or duties for administration of the Plan.

11.2 Action by the Administrator. Unless otherwise established by the Board or in any charter of the Administrator, a majority of the Administrator shall constitute a quorum. The acts of a majority of the members present at any meeting at which a quorum is present and, subject to Applicable Law and the Bylaws of the Company, acts approved in writing by a majority of the Administrator in lieu of a meeting, shall be deemed the acts of the Administrator. Each member of the Administrator is entitled to, in good faith, rely or act upon any report or other information furnished to that member by any officer or other employee of the Company or any Designated Subsidiary, the Company's independent certified public accountants, or any executive compensation consultant or other professional retained by the Company to assist in the administration of the Plan.

11.3 Authority of Administrator. The Administrator shall have the power, subject to, and within the limitations of, the express provisions of the Plan:

(a) To determine when and how rights to purchase Common Stock shall be granted and the provisions of each offering of such rights (which need not be identical).

(b) To designate from time to time which Subsidiaries of the Company shall be Designated Subsidiaries, which designation may be made without the approval of the stockholders of the Company.

(c) To construe and interpret the Plan and rights granted under it, and to establish, amend and revoke rules and regulations for its administration. The Administrator, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective.

(d) To amend the Plan as provided in Article 9.

(e) Generally, to exercise such powers and to perform such acts as the Administrator deems necessary or expedient to promote the best interests of the Company and its Subsidiaries and to carry out the intent that the Plan be treated as an "employee stock purchase plan" within the meaning of Section 423 of the Code.

11.4 Decisions Binding. The Administrator's interpretation of the Plan, any rights granted pursuant to the Plan, any subscription agreement and all decisions and determinations by the Administrator with respect to the Plan are final, binding, and conclusive on all parties.

ARTICLE 12.

MISCELLANEOUS

12.1 Restriction upon Assignment. A right granted under the Plan shall not be transferable other than by will or the applicable laws of descent and distribution, and is exercisable during the Participant's lifetime only by the Participant. Except as provided in Section 12.4 hereof, a right under the Plan may not be exercised to any extent except by the Participant. The Company shall not recognize and shall be under no duty to recognize any assignment or alienation of the Participant's interest in the Plan, the Participant's rights under the Plan or any rights thereunder.

12.2 Rights as a Stockholder. With respect to Shares subject to a right granted under the Plan, a Participant shall not be deemed to be a stockholder of the Company, and the Participant shall not have any of the rights or privileges of a stockholder, until such shares have been issued to the Participant or his or her nominee following exercise of the Participant's rights under the Plan. No adjustments shall be made for dividends (ordinary or extraordinary, whether in cash securities, or other property) or distribution or other rights for which the record date occurs prior to the date of such issuance, except as otherwise expressly provided herein or as determined by the Administrator.

12.3 Interest. No interest shall accrue on the payroll deductions or contributions of a Participant under the Plan.

12.4 Designation of Beneficiary.

(a) A Participant may, in the manner determined by the Administrator, file a written designation of a beneficiary who is to receive any shares and cash, if any, from the Participant's account under the Plan in the event of such Participant's death subsequent to a Purchase Date on which the Participant's rights are exercised but prior to delivery to such Participant of such shares and cash. In addition, a Participant may file a written designation of a beneficiary who is to receive any cash from the Participant's account under the Plan in the event of such Participant's death prior to exercise of the Participant's rights under the Plan. If the Participant is married and resides in a community property state, a designation of a person other than the Participant's spouse as his or her beneficiary shall not be effective without the prior written consent of the Participant's spouse.

(b) Such designation of beneficiary may be changed by the Participant at any time by written notice to the Company. In the event of the death of a Participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, the Company shall deliver such shares and/or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to anyone or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

12.5 Notices. All notices or other communications by a Participant to the Company under or in connection with the Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

12.6 Equal Rights and Privileges. Subject to Section 5.7, all Eligible Employees of the Company or any Designated Subsidiary will have equal rights and privileges under this Plan so that this Plan qualifies as an "employee stock purchase plan" within the meaning of Section 423 of the Code. Subject to Section 5.7, any provision of this Plan that is inconsistent with Section 423 of the Code will, without further act or amendment by the Company, the Board or the Administrator, be reformed to comply with the equal rights and privileges requirement of Section 423 of the Code.

12.7 Use of Funds. All payroll deductions received or held by the Company under the Plan may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

12.8 Reports. Statements of account shall be given to participating Employees at least annually, which statements shall set forth the amounts of payroll deductions, the Purchase Price, the number of shares purchased and the remaining cash balance, if any.

12.9 No Employment Rights. Nothing in the Plan shall be construed to give any person (including any Eligible Employee or Participant) the right to remain in the employ of the Company or any Parent or Subsidiary or to affect the right of the Company or any Parent or Subsidiary to terminate the employment of any person (including any Eligible Employee or Participant) at any time, with or without cause.

12.10 Notice of Disposition of Shares. Each Participant shall give prompt notice to the Company of any disposition or other transfer of any shares of stock purchased upon exercise of a right under the Plan if such disposition or transfer is made: (a) within two years from the Enrollment Date of the Offering Period in which the shares were purchased or (b) within one year after the Purchase Date on which such shares were purchased. Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

12.11 Governing Law. The Plan and any agreements hereunder shall be administered, interpreted and enforced under the internal laws of the State of Delaware without regard to conflicts of laws thereof or of any other jurisdiction.

12.12 Electronic Forms. To the extent permitted by applicable state law and in the discretion of the Administrator, an Eligible Employee may submit any form or notice as set forth herein by means of an electronic form approved by the Administrator. Before the commencement of an Offering Period, the Administrator shall prescribe the time limits within which any such electronic form shall be submitted to the Administrator with respect to such Offering Period in order to be a valid election.

* * * * *

Exhibit 31.1

CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Sperzel, certify that:

1. I have reviewed this quarterly report on Form 10-Q of T2 Biosystems, 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/ John Sperzel
John Sperzel
President, Chief Executive Officer and Director
(principal executive officer)

Date: August 12, 2020

Exhibit 31.2

CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John M. Sprague, certify that:

1. I have reviewed this quarterly report on Form 10-Q of T2 Biosystems, 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/ John M. Sprague
John M. Sprague
Chief Financial Officer
(principal accounting and financial officer)

Date: August 12, 2020

Exhibit 32.1

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of T2 Biosystems, Inc. (the "Company") on Form 10-Q for the period ending June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John Sperzel, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

/s/ John Sperzel
John Sperzel
President and Chief Executive Officer
(principal executive officer)

Date: August 12, 2020

This certification accompanies each Report pursuant to §906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Company for purposes of §18 of the Securities Exchange Act of 1934, as amended.

A signed original of this written statement required by §906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of T2 Biosystems, Inc. (the "Company") on Form 10-Q for the period ending June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John M. Sprague, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

/s/ John M. Sprague
John M. Sprague
Chief Financial Officer
(principal accounting officer and financial officer)

Date: August 12, 2020

This certification accompanies each Report pursuant to §906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Company for purposes of §18 of the Securities Exchange Act of 1934, as amended.

A signed original of this written statement required by §906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.