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 September 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 November 3, 2020, the registrant had 147,955,531 shares of common stock outstanding.

T2 BIOSYSTEMS, INC.

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PART I.
FINANCIAL INFORMATION

Item 1. Financial Statements

T2 BIOSYSTEMS, INC.

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

	September 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 19,059	$ 11,033
Marketable securities	21,990	—
Accounts receivable	3,860	2,825
Inventories	3,569	3,599
Prepaid expenses and other current assets	2,969	1,438
Total current assets	51,447	18,895
Property and equipment, net	3,585	5,845
Operating lease right-of-use assets	1,729	3,360
Restricted cash	551	180
Marketable securities	20,186	—
Other assets	133	206
Total assets	$ 77,631	$ 28,486
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Notes payable	$ —	$ 42,902
Accounts payable	2,407	3,753
Accrued expenses and other current liabilities	7,654	11,207
Derivative liability	—	2,425
Deferred revenue	290	285
Total current liabilities	10,351	60,572
Notes payable, net of current portion	44,612	—
Operating lease liabilities, net of current portion	479	1,873
Deferred revenue, net of current portion	300	46
Derivative liability	1,235	—
Other liabilities	3,080	—
Commitments and contingencies (see Note 13)		
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued and outstanding at September 30, 2020 and December 31, 2019	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized; 147,954,385 and 50,651,535 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	147	51
Additional paid-in capital	430,529	342,121
Accumulated other comprehensive loss	(36)	—
Accumulated deficit	(413,066)	(376,177)
Total stockholders' equity (deficit)	17,574	(34,005)
Total liabilities and stockholders' equity (deficit)	$ 77,631	$ 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 September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue:				
Product revenue	$ 3,757	$ 1,177	$ 5,843	$ 3,765
Research revenue	—	56	11	269
Contribution revenue	1,488	444	4,488	1,232
Total revenue	5,245	1,677	10,342	5,266
Costs and expenses:				
Cost of product revenue	6,833	3,944	13,804	13,153
Research and development	3,965	4,098	12,883	12,047
Selling, general and administrative	5,083	5,981	16,691	19,756
Total costs and expenses	15,881	14,023	43,378	44,956
Loss from operations	(10,636)	(12,346)	(33,036)	(39,690)
Interest expense, net	(646)	(1,876)	(3,906)	(5,658)
Other income, net	27	51	53	383
Net loss	$ (11,255)	$ (14,171)	$ (36,889)	$ (44,965)
Net loss per share — basic and diluted	$ (0.08)	$ (0.31)	$ (0.33)	$ (1.01)
Weighted-average number of common shares used in computing net loss per share — basic and diluted	147,793,891	45,413,215	112,371,006	44,711,463
Other comprehensive loss:				
Net loss	$ (11,255)	$ (14,171)	$ (36,889)	$ (44,965)
Net unrealized gain (loss) on marketable securities	(36)	—	(36)	—
Comprehensive loss	$ (11,291)	$ (14,171)	$ (36,925)	$ (44,965)

See accompanying notes to condensed consolidated financial statements.

T2 BIOSYSTEMS, INC.

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

	Common Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Deficit	Income (Loss)	Equity (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)
Stock-based compensation expense	—	—	1,165	—	—	1,165
Issuance of common stock from vesting of restricted stock, exercise of stock options and employee stock purchase plan	50,438	—	53	—	—	53
Issuance of common stock from secondary offering, net	1,679,387	1	1,883	—	—	1,884
Change in fair value of warrants upon modification	—	—	117	—	—	117
Issuance of warrants	—	—	660	—	—	660
Shares issued in connection with Purchase Agreement	413,349	—	—	—	—	—
Net loss	—	—	—	(14,171)	—	(14,171)
Balance at September 30, 2019	46,678,746	$ 45	$ 336,179	$ (362,136)	$ —	$ (25,912)

	Common Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Deficit	Income (Loss)	Equity (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)
Stock-based compensation expense	—	—	855	—	—	855
Issuance of common stock from exercise of stock options	5,083	—	4	—	—	4
Issuance of common stock from secondary offering, net	19,488,023	19	32,375	—	—	32,394
Unrealized loss on marketable securities	—	—	—	—	(36)	(36)
Net loss	—	—	—	(11,255)	—	(11,255)
Balance at September 30, 2020	147,954,385	$ 147	$ 430,529	$ (413,066)	$ (36)	$ 17,574

See accompanying notes to condensed consolidated financial statements.

T2 BIOSYSTEMS, INC.

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

	Nine Months Ended September 30,	
	2020	2019
Cash flows from operating activities		
Net loss	$ (36,889)	$ (44,965)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,323	1,694
Amortization of operating lease right-of-use assets	1,149	1,065
Stock-based compensation expense	3,009	4,475
Change in fair value of derivative instrument	(1,190)	461
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	2,345	1,763
Changes in operating assets and liabilities:		
Accounts receivable	(1,035)	213
Prepaid expenses and other assets	(1,458)	(577)
Inventories	723	(1,464)
Accounts payable	(1,281)	2,683
Accrued expenses and other liabilities	(1,099)	1,250
Deferred revenue	259	(143)
Operating lease liabilities	(1,478)	(1,694)
Net cash used in operating activities	(34,465)	(35,242)
Cash flows from investing activities		
Purchases of marketable securities	(50,462)	—
Proceeds from maturities of marketable securities	8,250	—
Proceeds from sale of property and equipment	4	—
Purchases and manufacture of property and equipment	(425)	(735)
Net cash used in investing activities	(42,633)	(735)
Cash flows from financing activities		
Proceeds from issuance of shares from employee stock purchase plan and stock option exercises, net	184	383
Proceeds from issuance of common stock in public offering, net of offering costs	85,311	1,884
Principal repayments of finance leases	—	(882)
Net cash provided by financing activities	85,495	1,385
Net increase (decrease) in cash, cash equivalents and restricted cash	8,397	(34,592)
Cash, cash equivalents and restricted cash at beginning of period	11,213	50,985
Cash, cash equivalents and restricted cash at end of period	$ 19,610	$ 16,393
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 1,820	$ 3,435
Supplemental disclosures of noncash activities		
Transfer of T2 owned instruments and components to (from) inventory	$ 693	$ 31
Change in fair value of warrants issued and modified	$ —	$ 924
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	$ 61	$ 43

	September 30, 2020	December 31, 2019
Reconciliation of cash, cash equivalents and restricted cash at end of period		
Cash and cash equivalents	$ 19,059	$ 11,033
Restricted cash	551	180
Total cash, cash equivalents and restricted cash	$ 19,610	$ 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 (NTAP) for the T2Bacteria Panel for fiscal year 2020 and in September 2020, CMS extended the approval for 2021. On November 20, 2019, the Company's T2Resistance Panel was granted a CE-Mark. On June 30, 2020, the Company announced the U.S. 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). In August 2020, the FDA issued EUA for the Company's 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 September 30, 2020, the Company had cash and cash equivalents of $19.1 million, marketable securities of $42.2 million, an accumulated deficit of $413.1 million, a stockholders' equity of $17.6 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 early commercial stage 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 certain 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, although raw materials for the manufacturing of reagents is in high demand, and interruptions in supply are difficult to predict. 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 September 30, 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 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 September 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 that the Company will achieve the revenue target of $15.0 million for the twenty-four month period ended December 31, 2020, however 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 September 30, 2020, the condensed consolidated statements of operations and comprehensive loss for the three and nine months ended September 30, 2020 and 2019, the condensed consolidated statements of stockholders' equity (deficit) for the three and nine months ended September 30, 2020 and 2019, the condensed consolidated statements of cash flows for the nine months ended September 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 September 30, 2020, and the results of its operations for the three and nine months ended September 30, 2020 and 2019 and its cash flows for the nine months ended September 30, 2020 and 2019. The results for the three and nine months ended September 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 $0.6 million or 12% of total revenue and $0.6 million or 36% of total revenue for the three months ended September 30, 2020 and 2019, respectively. Total international sales were approximately $1.4 million or 13% of total revenue and $1.8 million and 34% of total revenue for the nine months ended September 30, 2020 and 2019, respectively.

For the three and nine months ended September 30, 2020, there was no international customer that represented greater than 10% of total revenue. For the three and nine months ended September 30, 2019, there were no international customers that represented greater than 10% of its total revenue.

As of September 30, 2020 and December 31, 2019, the Company had outstanding receivables of $0.5 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 and non-current assets. 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 September 30, 2020.

The following table summarizes the Company's marketable securities at September 30, 2020 (in thousands):

	September 30, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Certificates of deposit	$ 1,500	$ 1	$ —	$ 1,501
U.S. treasury securities	40,712	—	(37)	40,675
Total	$ 42,212	$ 1	$ (37)	$ 42,176

The following table summarizes the maturities of the Company's marketable securities at September 30, 2020 (in thousands):

	September 30, 2020	
	Amortized Cost	Fair Value
Due in less than 1 year	$ 21,983	$ 21,990
Due in 1-2 years	20,229	20,186
Total	$ 42,212	$ 42,176

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 September 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. Revenue from the sale of consumable diagnostic tests (under instrument purchase agreements) is recognized upon shipment. 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, September 30,		Nine Months Ended, September 30,	
	2020	2019	2020	2019
Product Revenue				
Instruments	$ 1,402	$ 543	$ 1,819	$ 1,540
Consumables	2,332	604	3,930	2,054
Instrument rentals	23	30	94	171
Total Product Revenue	3,757	1,177	5,843	3,765
Research Revenue	—	56	11	269
Contribution Revenue	1,488	444	4,488	1,232
Total Revenue	$ 5,245	$ 1,677	$ 10,342	$ 5,266

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 September 30, 2020, the aggregate amount of transaction price allocated to remaining performance obligations for contracts with an original duration greater than one year was $0.4 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 23 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 September 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 $0.6 million and $0.2 million at September 30, 2020 and December 31, 2019, respectively. Revenue recognized during the three months ended September 30, 2020 relating to contract liabilities at December 31, 2019 was immaterial. Revenue recognized during the nine months ended September 30, 2020 relating to contract liabilities at December 31, 2019 was $0.2 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 were capitalized.

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. 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 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. 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 September 30, 2020 and December 31, 2019 (in thousands):

	Balance at September 30, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Marketable securities	$ 42,176	$ 42,176	$ —	$ —
Restricted cash	551	551	—	—
	$ 42,727	$ 42,727	$ —	$ —
Liabilities:				
Derivative liability	$ 1,235	$ —	$ —	$ 1,235
	$ 1,235	$ —	$ —	$ 1,235

	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 money market accounts classified as restricted cash for $0.6 million at September 30, 2020 and certificates of deposit classified as restricted cash for $0.2 million at December 31, 2019 (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 September 30, 2020 and December 31, 2019 is $1.2 million and $2.4 million, respectively, and is classified as a non-current liability on the balance sheet at September 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 September 30, 2020 assessed the likelihood of paying contingent interest as remote within the next twelve months 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 September 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 2021	10%
4% contingent interest beginning in 2022	90%

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	(1,190)
Balance at September 30, 2020	$ 1,235

4. Restricted Cash

The Company is required to maintain security deposits for its operating lease agreements for the duration of the lease agreements and for a particular credit card program as long it is in place. At September 30, 2020, the Company had money market accounts for $0.6 million, which represented collateral as security deposits for its operating lease agreements for two facilities. 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 September 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):

	September 30, 2020	December 31, 2019
Raw materials	$ 1,717	$ 1,617
Work-in-process	1,430	1,227
Finished goods	422	755
Total inventories, net	$ 3,569	$ 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 nine months ended September 30, 2020.

Property and Equipment

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

	September 30, 2020	December 31, 2019
Office and computer equipment	$ 538	$ 538
Software	762	762
Laboratory equipment	4,953	4,747
Furniture	194	194
Manufacturing equipment	672	672
Manufacturing tooling and molds	255	255
T2-owned instruments and components	5,274	6,775
Leasehold improvements	3,655	3,497
Construction in progress	1,635	1,641
	17,938	19,081
Less accumulated depreciation and amortization	(14,353)	(13,236)
Property and equipment, net	$ 3,585	$ 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 September 30, 2020, there were no raw materials or work-in-process inventory in T2-owned instruments and components compared with $0.6 million at December 31, 2019. 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 September 30, 2020 and 2019, respectively, and $0.3 million and $0.6 million for the nine months ended September 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 September 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 $0.5 million was charged to operations for the three months ended September 30, 2020 and 2019, respectively. Depreciation and amortization expense of $1.3 million and $1.7 million was charged to operations for the nine months ended September 30, 2020 and 2019, respectively.

Accrued Expenses

Accrued expenses consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Accrued payroll and compensation	$ 2,954	$ 3,193
Accrued final fee	—	2,445
Accrued research and development expenses	474	267
Accrued professional services	569	511
Accrued interest	932	908
Operating lease liabilities	1,941	1,983
Other accrued expenses	784	1,900
Total accrued expenses and other current liabilities	$ 7,654	$ 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 September 30, 2020, the Company's Term Loan Agreement with CRG and the associated fee of $3.1 million are classified as non-current liabilities. Included within other accrued expenses in the table above, at September 30, 2020 is $0.3 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):

	September 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	(2,080)	(3,284)
Less: unamortized discount and deferred issuance costs	(1,385)	(1,891)
Total notes payable	$ 44,612	$ 42,902

The Term Loan Agreement with CRG is classified as a non-current liability at September 30, 2020 as the Company has sufficient cash, cash equivalents and marketable securities as of the date of this filing 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 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, which in turn would trigger violation of the minimum liquidity covenant included in 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 September 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' Equity (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 September 30, 2020, the Company had sold 101,606,667 shares of common stock with an aggregate gross sales amount of $95.0 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 was able to 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 was not obligated to make any sales of shares under the Sales Agreement. The Company or Canaccord were able to suspend or terminate the offering of shares upon notice to the other party, subject to certain conditions. Canaccord acted 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 had 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 had also agreed to provide Canaccord with customary indemnification for certain liabilities. Legal and accounting fees were changed to share capital upon issuance of shares under the Sales Agreement.

During the nine months ended September 30, 2020, the Company sold 96,120,167 shares under the Sales Agreement for net proceeds of $85.0 million after expenses.

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 nine months ended September 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 September 30, 2020, there were 1,724,563 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 September 30, 2020, there were 2,067,812 shares available for future grant under the Inducement Plan.

Stock Options

During the nine months ended September 30, 2020 and 2019, the Company granted stock options with an aggregate fair value of $3.2 million and $3.8 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	4,527,452	1.38		
Exercised	(15,083)	0.75		
Forfeited	(1,193,940)	3.08		
Cancelled	(493,526)	(3.56)		
Outstanding at September 30, 2020	9,178,233	$ 3.51	7.48	$ 1,551
Exercisable at September 30, 2020	4,254,113	$ 5.61	5.68	$ 324
Vested or expected to vest at September 30, 2020	8,080,663	$ 3.79	7.25	$ 1,257

There were 15,083 options exercised in the nine months ended September 30, 2020 and 938 options exercised in the nine months ended September 30, 2019. The weighted-average grant date fair values of stock options granted in the nine month periods

ended September 30, 2020 and 2019 were $0.71 per share and $1.40 per share, respectively, and were calculated using the following estimated assumptions:

	Nine Months Ended September 30,	
	2020	2019
Weighted-average risk-free interest rate	1.35%	1.98%
Expected dividend yield	—%	—%
Expected volatility	92%	78%
Expected terms	5.9 years	6.0 years

The total fair values of options that vested during the nine months ended September 30, 2020 and 2019 were $2.9 million and $2.4 million, respectively.

As of September 30, 2020, there was $4.5 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 2.6 years as of September 30, 2020.

Restricted Stock Units

During the nine months ended September 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 September 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 $1.2 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 September 30, 2020 are 318,898 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 nine months ended September 30, 2020 and $0.2 million and $1.0 million for the three and nine months ended September 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	1,323,423	0.88
Vested	(331,433)	3.45
Forfeited	(673,469)	3.47
Nonvested at September 30, 2020	1,614,029	1.92

As of September 30, 2020, there was $1.4 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 1.8 years, as of September 30, 2020.

Employee Stock Purchase Plan

The 2014 Employee Stock Purchase Plan (the "2014 ESPP") period is semi-annual and allows participants to purchase the Company's common stock at 85% of the lower of (i) the market value per share of common stock on the first day of the offering period or (ii) the market value per share of the common stock on the purchase date. Each participant can purchase up to a maximum of $25,000 per calendar year in fair market value. The first plan period began on August 7, 2014. Stock-based compensation expense from the 2014 ESPP for the three months ended September 30, 2020 and 2019 was approximately $0.1 million. Stock-based compensation expense from the 2014 ESPP for the nine months ended September 30, 2020 and 2019 was approximately $0.2 million and $0.3 million, respectively. During the nine months ended September 30, 2020 and 2019, 362,995 and 142,329 shares were purchased through the 2014 ESPP, respectively.

The 2014 ESPP, which was amended and restated effective August 6, 2020, provides for the granting of up to 4,523,944 shares of the Company's common stock to eligible employees. At September 30, 2020, there were 3,358,959 shares available under the 2014 ESPP.

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 September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Cost of product revenue	$ 33	$ 7	$ 164	$ 295
Research and development	127	283	646	975
Selling, general and administrative	675	862	2,180	3,216
Total stock-based compensation expense	$ 835	$ 1,152	$ 2,990	$ 4,486

For the three and nine months ended September 30, 2020 and 2019, stock-based compensation expenses capitalized as part of inventory or T2Dx instruments and components were immaterial.

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 Nine Months Ended September 30,	
	2020	2019
Options to purchase common shares	9,178,233	6,431,437
Restricted stock units	1,614,029	1,311,758
Warrants to purchase common stock	1,097,249	1,097,249
Total	11,889,511	8,840,444

11. Co-Development Agreements

Canon U.S. 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 nine months ended September 30, 2020 and recorded revenue of $0.1 million and $0.2 million for the three and nine months ended September 30, 2019, respectively.

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 nine months ended September 30, 2020. The Company recognized the $0.9 million that was awarded under the reimbursement option in 2019, and recorded revenue of $0.1 million and $0.9 million for the three and nine months ended September 30, 2019, respectively, under the CARB-X Agreement. The Company will not recognize any additional revenue under the CARB-X agreement.

U.S. 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 (the "U.S. Government Contract"). 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. In September 2020, BARDA exercised the first contract option valued at $10.5 million.

The Company recorded revenue of $1.5 million and $4.5 million for the three and nine months ended September 30, 2020, respectively. The contract began in September 2019 and the Company recorded revenue of $0.3 million under the U.S. Government Contract for the three and nine months ended September 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 October 2020, the Company entered into an amendment to extend the term to December 31, 2028. In accordance with the October 2020 amendment, the Company increased its security deposit to $420,438, which is classified as restricted cash at September 30, 2020.

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 October 2020, the Company entered into an amendment to extend the term to December 31, 2022.

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 was recorded as a component of both prepaid expenses and other current assets and other assets in the condensed consolidated balance sheets at December 31, 2019. In October 2020, the Company entered into an amendment to extend the term of the lease to October 31, 2025. In accordance with this amendment, the Company paid a replacement security deposit of $130,977, which is classified as restricted cash at September 30, 2020. Prepaid expenses and other current assets at September 30, 2020 includes the initial security deposit of $281,000 as it is due back from the landlord.

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 nine months ended September 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 FDA Emergency Use Authorization rules. The test is designed to detect the presence of the SARS-CoV-2 virus in a nasopharyngeal swab sample. The Company will pay a 3% royalty of its SARS-CoV-2 product to the Center of Discovery and Innovation at Hackensack Meridian *Health*. Royalties for the three and nine months ended September 30, 2020 were immaterial.

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 September 30, 2020, included within other accrued expenses is $0.3 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 raw materials and components for our products, 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 cost-cutting measures;*
- *unforeseen interruptions in our supply chain; 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, and are 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 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, CMS granted approval for a New Technology Add-on Payment (NTAP) for the T2Bacteria Panel for fiscal year 2020 and in September 2020, CMS extended the approval for 2021. In September 2019, 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. In September 2020, BARDA exercised the first contract option valued at $10.5 million. 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 September 30, 2020 was $413.1 million, we had stockholders’ equity of $17.6 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, although raw materials for the manufacturing of reagents is in high demand, and interruptions in supply are difficult to predict. 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 September 30, 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 nine months ended September 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 September 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 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. In August 2020, the FDA issued EUA for the Company's T2SARS-CoV-2 Panel.

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). Revenue from the sale of consumable diagnostic tests (under capital purchase agreements) is recognized upon shipment. 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.

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

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 may hinder our near term international 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 nine months ended September 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 nine months ended September 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 nine months ended September 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 as a percentage of revenue. 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 as a percentage of revenue in future periods. 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 September 30, 2020 and 2019

	Three Months Ended September 30,		
	2020	2019	Change
	(in thousands)		
Revenue:			
Product revenue	$ 3,757	$ 1,177	$ 2,580
Research revenue	—	56	(56)
Contribution revenue	1,488	444	1,044
Total revenue	5,245	1,677	3,568
Costs and expenses:			
Cost of product revenue	6,833	3,944	2,889
Research and development	3,965	4,098	(133)
Selling, general and administrative	5,083	5,981	(898)
Total costs and expenses	15,881	14,023	1,858
Loss from operations	(10,636)	(12,346)	1,710
Interest expense, net	(646)	(1,876)	1,230
Other income, net	27	51	(24)
Net loss	$ (11,255)	$ (14,171)	$ 2,916

Product revenue

Product revenue was $3.8 million for the three months ended September 30, 2020 compared to $1.2 million for the three months ended September 30, 2019, an increase of $2.6 million, which was driven by higher consumables sales of $1.7 million primarily from our T2SARS-CoV-2 product which we started selling in the third quarter of 2020, as well as higher sales from our T2Bacteria and T2Candida products. We also had higher T2Dx instrument sales of $0.7 million and higher other revenue of $0.2 million mostly attributable to freight.

Research revenue

We did not record any research revenue for the three months ended September 30, 2020, compared to $0.1 million for the three months ended September 30, 2019, a decrease of $0.1 million. Research revenue for the three months ended September 30, 2019 relates to our Co-Development Agreement with Canon U.S. Life Sciences, which completed in 2019.

Contribution revenue

Contribution revenue was $1.5 million for the three months ended September 30, 2020, compared to $0.4 million for the three months ended September 30, 2019, an increase of $1.1 million. Contribution revenue for the three months ended September 30, 2020 relates to our U.S. Government Contract, which began in September 2019. Contribution revenue for the three months ended September 30, 2019 relates to our cost-sharing agreement with CARB-X of $0.1 million, which completed in 2019 and our U.S. Government Contract of $0.3 million, which began in September 2019.

Cost of product revenue

Cost of product revenue was $6.8 million for the three months ended September 30, 2020, compared to $3.9 million for the three months ended September 30, 2019, an increase of $2.9 million. The increase in cost was driven by $1.7 million from higher instrument sales, $1.6 million from higher consumable sales primarily from T2SARS-CoV-2, and $0.3 million of higher shipping related expenses. These increases are partially offset by $0.6 million of increased manufacturing efficiencies and $0.1 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.

Research and development expenses

Research and development expenses were $4.0 million for the three months ended September 30, 2020, compared to $4.1 million for the three months ended September 30, 2019, a decrease of $0.1 million. The decrease was driven by $0.3 million of lower payroll related and travel expenses from a reduction in headcount and $0.3 million lower of materials cost. These decreases were partially offset by increased consulting expenses of $0.3 million primarily for our U.S. Government Contract, increased lab and facility expenses of $0.1 million primarily for our U.S. Government Contract and our T2SARS-CoV-2 Panel and increased clinical related expenses of $0.1 million for assay development.

Selling, general and administrative expenses

Selling, general and administrative expenses were $5.1 million for the three months ended September 30, 2020, compared to $6.0 million for the three months ended September 30, 2019, a decrease of $1.0 million. Travel expenses decreased by $0.3 million due to the reduction in headcount and restrictions as a result of the COVID-19 pandemic. Expenses related to systems restoration from the 2019 cyber-attack decreased by $0.3 million. Payroll related and stock compensation expenses decreased by $0.2 million primarily due to the market-based restricted stock unit and a reduction in headcount. Tradeshow and other marketing expenses decreased by $0.1 million due to the impact of the COVID-19 pandemic. Legal fees also decreased by $0.2 million due to the timing of financings and the Transition Agreement. These decreases are partially offset by an increase of $0.1 million in D&O insurance premiums.

Interest expense, net

Interest expense, net, was $0.6 million for the three months ended September 30, 2020, compared to $1.9 million for the three months ended September 30, 2019. Interest expense, net, decreased by $1.3 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 September 30, 2020 compared to $0.1 million for the three months ended September 30, 2019, a decrease of $0.1 million, primarily from decreased dividend and other investment income.

Results of Operations for the Nine Months Ended September 30, 2020 and 2019

	Nine Months Ended September 30,		
	2020	2019	Change
	(in thousands)		
Revenue:			
Product revenue	$ 5,843	$ 3,765	$ 2,078
Research revenue	11	269	(258)
Contribution revenue	4,488	1,232	3,256
Total revenue	10,342	5,266	5,076
Costs and expenses:			
Cost of product revenue	13,804	13,153	651
Research and development	12,883	12,047	836
Selling, general and administrative	16,691	19,756	(3,065)
Total costs and expenses	43,378	44,956	(1,578)
Loss from operations	(33,036)	(39,690)	6,654
Interest expense, net	(3,906)	(5,658)	1,752
Other income, net	53	383	(330)
Net loss	$ (36,889)	$ (44,965)	$ 8,076

Product revenue

Product revenue was $5.8 million for the nine months ended September 30, 2020 compared to $3.8 million for the nine months ended September 30, 2019, an increase of $2.0 million. The increase was driven by higher consumable sales of $1.8 million primarily from our T2SARS-CoV-2 product which we began selling in the third quarter of 2020, as well as higher sales of our T2Bacteria and T2Candida products. We also had higher T2Dx instrument sales of $0.2 million.

Research revenue

Research revenue was $11 thousand pertaining to an immaterial agreement for the nine months ended September 30, 2020, compared to $0.3 million for the nine months ended September 30, 2019, a decrease of $0.3 million. Research revenue for the nine months ended September 30, 2019 primarily relates to our Co-Development Agreement with Canon U.S. Life Sciences, which completed in 2019.

Contribution revenue

Contribution revenue of $4.5 million, for the nine months ended September 30, 2020, relates to our U.S. Government Contract, which began in September 2019. Contribution revenue of $1.2 million for the nine months ended September 30, 2019 relates to our cost-sharing agreement with CARB-X of $0.9 million, which completed in 2019, and our U.S. Government Contract of $0.3 million, which began in September 2019.

Cost of product revenue

Cost of product revenue was $13.8 million for the nine months ended September 30, 2020, compared to $13.2 million for the nine months ended September 30, 2019, an increase of $0.6 million. The increase in cost was driven by $1.6 million of higher consumable sales primarily of our T2SARS-CoV-2, a $0.6 million COVID-19 related impairment charge of our T2-owned instruments and components, $0.3 million of higher instrument sales, and $0.2 million of higher shipping related costs. These increases were partially offset by $1.2 million of lower service costs primarily as a result of the impact of the COVID-19 pandemic and lower repair costs, $0.6 million of increased manufacturing efficiencies and $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.

Research and development expenses

Research and development expenses were $12.9 million for the nine months ended September 30, 2020, compared to $12.0 million for the nine months ended September 30, 2019, an increase of $0.9 million. The increase was driven by a $0.9 million increase in consulting expenses primarily related to our U.S. Government Contract, an increase of $0.6 million in lab and facility expenses primarily for our U.S. Government Contract and our T2SARS-CoV-2 Panel and higher clinical related expenses of $0.1 million for assay development. These increases were partially offset by a $0.5 million decrease in payroll related and travel expenses due to a reduction in headcount and lower materials costs of $0.2 million.

Selling, general and administrative expenses

Selling, general and administrative expenses were $16.7 million for the nine months ended September 30, 2020, compared to $19.8 million for the nine months ended September 30, 2019, a decrease of $3.1 million. The decrease was driven by a decrease in payroll related expenses of $2.1 million and travel expenses of $0.6 million, all of which are attributable to a reduction in headcount and restrictions as a result of the COVID-19 pandemic. Stock compensation expense decreased by $1.0 million due to the market based restricted stock units and a reduction in headcount. Tradeshow and other marketing expenses decreased by $0.7 million, primarily due to the impact of the COVID-19 pandemic. Expenses related to systems restoration from the 2019 cyber-attack decreased by $0.5 million. 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 in early 2020, compliance with Section 404 of the Sarbanes-Oxley Act and a Board members search, an increase of $0.6 million in D&O insurance premiums, and a $0.5 million impairment charge from a vacated operating lease.

Interest expense, net

Interest expense, net, was $3.9 million for the nine months ended September 30, 2020, compared to $5.7 million for the nine months ended September 30, 2019, a decrease of $1.8 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 $0.1 million for the nine months ended September 30, 2020 and $0.4 million for the nine months ended September 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 September 30, 2020 and December 31, 2019 we had an accumulated deficit of $413.1 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, although raw materials for the manufacturing of reagents is in high demand, and interruptions in supply are difficult to predict. 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 September 30, 2020, the Company had sold 96,120,167 shares of common stock with an aggregate gross sales amount of $95.0 million.

We had 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 were 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 September 30, 2020 and December 31, 2019 we had unrestricted cash and cash equivalents of approximately $19.1 million and $11.0 million respectively. Currently, the majority of our cash and cash equivalents, along with our marketable securities of $42.2 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, although raw materials for the manufacturing of reagents is in high demand, and interruptions in supply are difficult to predict. 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 September 30, 2020, we had an accumulated deficit of $413.1 million, and a stockholders' equity of $17.6 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 September 30, 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 nine months ended September 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 September 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 achieve the revenue target of $15.0 million for the twenty-four month period ended December 31, 2020, however 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:

	Nine Months Ended September 30,	
	2020	2019
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (34,465)	$ (35,242)
Investing activities	(42,633)	(735)
Financing activities	85,495	1,385
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 8,397	$ (34,592)

Net cash used in operating activities

Net cash used in operating activities was approximately $34.5 million for the nine months ended September 30, 2020, and consisted of a net loss of $36.9 million adjusted for non-cash items including stock-based compensation expense of $3.0 million, non-cash interest expense of $2.3 million, depreciation and amortization expense of $1.3 million, a change in fair value of the derivative of $1.2 million, non-cash lease expense of $1.1 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 $5.4 million, primarily related to a decrease in accrued expenses of $1.1 million primarily from bonus and commission payments as well as payments related to the Transition Agreement with John McDonough, a decrease in accounts payable of $1.3 million due to timing of payments, a decrease in operating lease liabilities of $1.5 million, an increase in prepaid expenses and other assets of $1.5 million primarily related to order deposits with our contract manufacturer, increased software subscriptions and the security deposit receivable for one of our operating leases, and an increase in accounts receivable of $1.0 million due to higher consumable and instrument sales shipped near quarter end and, partially offset by $0.7 million of a decrease in inventory primarily due to increased sales and an increase in deferred revenue primarily due to warranty and service performance obligations of $0.3 million associated with the recent instrument sales.

Net cash used in operating activities was approximately $35.2 million for the nine months ended September 30, 2019, and consisted of a net loss of $44.9 million adjusted for non-cash items including stock-based compensation expense of $4.5 million, depreciation and amortization expense of $1.7 million, non-cash interest expense of $1.8 million, amortization of operating lease right-of-use assets of $1.1 million, a change in the fair value of the derivative instrument of $0.5 million, and a net change in operating assets and liabilities of $0.3 million, primarily related to an increase in accounts payable of $2.7 million due to timing of payments, an increase in accrued expenses of $1.3 million due to timing of interest payments, a decrease in accounts receivable of $0.2 million due to less outstanding instrument invoices and partially offset by a decrease in operating lease liabilities of $1.7 million, a decrease in deferred revenue of $0.1 million, an increase in prepaid expenses and other assets of $0.6 million primarily related to tradeshows and insurance and a $1.5 million increase in instrument inventories to meet anticipated demand.

Net cash used in investing activities

Net cash used in investing activities was approximately $42.6 million for the nine months ended September 30, 2020, and primarily consisted of purchases of marketable securities of $50.5 million and equipment purchases of $0.4 million, partially offset by proceeds from maturities of marketable securities of $8.3 million.

Net cash used in investing activities was approximately $0.7 million for the nine months ended September 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 $85.5 million for the nine months ended September 30, 2020, and consisted of primarily of proceeds from sales of our common stock under the Sales Agreement, net of issuance costs, of $85.0 million, proceeds from sales of our common stock under the Equity Distribution Agreement, net of issuance costs, of $0.3 million and proceeds from issuance of shares under our 2014 Employee Stock Purchase Plan and stock option exercises of $0.2 million.

Net cash provided by financing activities was approximately $1.4 million for the nine months ended September 30, 2019, and consisted of repayments of finance leases of $0.9 million, partially offset by proceeds from issuance of common stock of $0.4 million and $1.9 million proceeds from secondary offering.

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 September 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, 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 September 30, 2020 as we have sufficient cash, cash equivalents and marketable securities as of the date of this filing 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 September 30, 2020 and December 31, 2019 is $1.2 million and $2.4 million, respectively. We classified the derivative liability as a non-current liability on the balance sheet at September 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 September 30, 2020 assessed the likelihood of paying contingent interest as remote within the next twelve months, 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 September 30, 2020 and December 31, 2019, we had cash and cash equivalents of $19.1 million and $11.0 million, respectively. At September 30, 2020, the majority 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 September 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 September 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 September 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. We are implementing 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 by the first quarter of 2021. 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.

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 or raw materials 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.

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 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 the first quarter of 2020. 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, supply chain 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

None.

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 September 30, 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*	Sixth Amendment to Lease by and between the Company and LS King Hartwell Innovation Campus LLC, dated as of October 19, 2020
10.3*	First Amendment to Lease by and between the Company and LS King Hartwell Innovation Campus LLC, dated as of October 19, 2020
10.4*	Amendment No. 5 to Commercial Lease between Columbus Day Realty, Inc. and the Company, dated as of October 20, 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: November 5, 2020

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

Date: November 5, 2020

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

Exhibit 10.1

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES
		1 | 9

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00002	09/25/2020	OS257167	

6. ISSUED BY	CODE	ASPR-BARDA
ASPR-BARDA 200 Independence Ave., S.W. Room 640-G AUT Washington DC 20201		

7. ADMINISTERED BY *(If other than Item 6)*	CODE	ASPR-BARDA
ASPR-BARDA US DEPT OF HEALTH & HUMAN SERVICES BIOMEDICAL ADVANCED RESEACH & DEVELOPMENT 200 INDEPENDENCE AVE, S.W. Washington DC 20201		

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*			
T2 BIOSYSTEMS, INC. 1512719 Attn: STEPHEN HAGAN T2 BIOSYSTEMS, INC. 101 HARTWELL AVE LEXINGTON MA 024213125		(x)	9A. AMENDMENT OF SOLICITATION NO.
			9B. DATED *(SEE ITEM 11)*
		X	10A. MODIFICATION OF CONTRACT/ORDER NO. 75A50119C00053
			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 notextended

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)* Net Increase: $10,495,783.00

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

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 MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER *(Specify type of modification and authority)* FAR 52.217-9 Option to Extend the Term of the Contract

E. IMPORTANT: Contractor ☐is not x is required to sign this document and return 1 ☐copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Tax ID Number: 20-4827488

DUNS Number: 803126320

The purpose of this modification is to exercise and fully fund Option One (1).In addition, this modification will modify the following Articles: B.2 Base Period; B.3 Option Periods; B.4 Estimated Cost-Cost Sharing; B.6 Advance Understandings; G.3 Key Personnel; F.1 Estimated Period of Performance; and F.2 Deliverables; as well as update Section J with Attachment #1 - Statement of Work, dated September 12, 2020.

The Base period of performance end date remains as October 8, 2020 [UNCHANGED].

The Option 1 period of performance will be from [***]

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 full force and effect .

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
ALEC BARCLAY		ROSHAWN K. MAJORS	
15B. CONTRACTOR/OFFEROR /S/ ALEC BARCLAY *(Signature of person authorized to sign)*	15C. DATE SIGNED 9/25/2020	16B. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	16C. DATE SIGNED

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

NAME OF OFFEROR OR CONTRACTOR
T2 BIOSYSTEMS, INC. 1512719

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Appr. Yr.: 2020 CAN: 1992020 Object Class: 25106 Period of Performance: [***] Change Item 2 to read as follows(amount shown is the oblied amount):				
2	Option 1 Period: [***]				10,495,783.00

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

SUPPLEMENTAL AGREEMENT

****RED BOLD font denotes applicable changes**

Beginning with the effective date of this modification, the Government and the Contractor mutually agree as follows:

Under **SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS, ARTICLE B.2** is hereby modified to reflect the following:

B.2 BASE PERIOD

1. For the Government, the total estimated cost of the base period of this contract, excluding fee, is $5,978,993. For the Contractor, the total estimated cost of the base period of this contract, excluding fee, is $[***]

2. The Contractor shall maintain records of all contract costs and such records shall be subject to FAR 52.215-2 (Oct 2010), Audit and Records – Negotiation and incorporated by reference into the contract in SECTION I.

3. The amount currently obligated will cover base performance of the contract through October 8, 2020**.**

CLIN	Period of Performance	Supplies/Services	BARDA Estimated Not To Exceed	T2 Estimated Not to Exceed	Overall Total Estimated Not to Exceed
0001	Base Period 9/9/2019 through 10/8/2020	[***]	$5,978,993	$[***]	$[***]

ARTICLE B.3 OPTION PERIODS - the table included in this Article is hereby modified to reflect the following:

B.3 COST REIMBURSMENT OPTIONS

a. The contract includes optional, cost reimbursement CLINs 0002 through 0007. The Government may exercise Option Periods in accordance with FAR 52.217-9 Option to Extend the Term of the Contract **~~(March 2000)~~**, as set forth in Section I of the contract.

b. The contract includes optional services, cost reimbursement CLIN 0008. The Government may exercise Option Services in accordance with FAR 52.217-8 Option to Extend Services, as set forth in Section I of the contract.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

c. Unless the government exercises its option pursuant to the option clause contained in ARTICLE I.2, the contract consists only of the Base Work segment specified in the Statement of Work as defined in SECTONS C and F, for the price set forth in ARTICLE B.2 of the contract.

d. The Government may modify the contract unilaterally and require the contractor to provide supplies and services for Option Periods listed below, in accordance with FAR 52.217-9.

e. If the Government decides to exercise an option(s), the Government will provide the Contractor a preliminary written notice of its intent as referenced in the clause. Specific information regarding the time frame for this notice is set forth in the OPTION CLAUSE Article in SECTION G of this contract. The estimated cost of the contract will be increased as set forth below:

Option	CLIN	Period of Performance	Supplies/Services	BARDA Estimated Not to Exceed	T2 Estimated Not to Exceed	Overall Total Estimated Not to Exceed
1	0002	[***]	**Option 1 Period**: [***]	$10,495,783	$[***]	$[***]
2	0003	[***]	**Option 2 Period:** [***]	$[***]	$[***]	$[***]
3	0004	[***]	**Option 3 Period:** **[***]**	$[***]	$[***]	$[***]
4	0005	[***]	**Option 4 Period:** **[***]**	$[***]	$[***]	$[***]
5	0006	[***]	**Option 5 Period:** **[***]**	$[***]	$[***]	$[***]
6	007	[***]	**Option 6 Period:**	$[***]	$[***]	$[***]
Optional Services	0008	[***]	[***]	$[***]	$[***]	$[***]
		TOTALS	**Only option years**	$[***]	$[***]	$[***]
		TOTALS	**Base + options**	$68,952,025	$[***]	$[***]

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

ARTICLE B.4 ESTIMATED COST-COST SHARING is hereby modified as follows:

B.4 ESTIMATED COST - COST SHARING

This is a cost-sharing contract. The overall estimated total cost sharing for performance under this contract is $[***] (Base plus Options for both BARDA and T2). For further provisions regarding the specific cost-sharing arrangement, see the ADVANCE UNDERSTANDINGS, Article in SECTION B of the Contract.B.6. ADVANCE UNDERSTANDINGS, subparagraph (i), number (2) is hereby modified to reflect the following:

B.6 ADVANCE UNDERSTANDINGS

i. Cost Sharing
   2. The Government shall provide monies in an amount not to exceed the values set forth Article B.2 and B.3. The Contractor's share is estimated using the values set forth in Article B2. and B.3.

All other contract terms under Section B remains unchanged.

Under **SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT,** Statement of Work is hereby modified to reflect Attachment # 1 dated September 12, 2020 in Section J of this contract.

All other contract terms under Section C remains unchanged.

Under **SECTION SECTION F – DELIVERIES OR PERFORMANCE, ARTICLES G.3 KEY PERSONNEL** is hereby modified to reflect the following:

F.1 ESTIMATED PERIOD OF PERFORMANCE

The estimated period of performance for this contract shall be consistent with the dates set forth in the Base Period in Section B.2. If the Government exercises the Options Period(s) and/or Option Services, pursuant to the Option Clause in Section I.3 of the contract, the period of performance shall be increased as shown in the table in Section B.3.

F. 2 DELIVERABLES

Successful performance of the final contract shall be deemed to occur upon completion of performance of the work set forth in the Statement of Work dated September 12, 2020, set forth in Section J - List of Attachments of this contract and upon delivery and acceptance, as required by the Statement of Work, by the COR, of each of the deliverables described in Section C, Section F, and Section J.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

All other contract terms under Section F remains unchanged.

Under **SECTION G – CONTRACT ADMINISTRATION DATA, ARTICLE G.3 KEY PERSONNEL** is hereby modified to reflect the following:

G.3 KEY PERSONNEL

Pursuant to the Key Personnel clause incorporated in Section I of this contract, the following individuals are considered to be essential to the work being performed hereunder:

Name	Title
Alec Barclay	Principal Investigator, Chief Operations Officer
Catherine Hogan	Director, Program Management

The key personnel specified in this contract are considered to be essential to work performance. At least 30 days prior to diverting any of the specified individuals to other programs or contracts (or as soon as possible, if an individual must be replaced, for example, as a result of leaving the employ of the Contractor), the Contractor shall notify the Contracting Officer and shall submit comprehensive justification for the diversion or replacement request (including proposed substitutions for key personnel) and qualifications of the individual proposed as a substitute to permit evaluation by the Government of the impact on performance under this contract. The Contractor shall not divert or otherwise replace any key personnel without the written consent of the Contracting Officer. The Government may modify the contract to add or delete key personnel at the request of the contractor or Government. At a minimum, the key personnel should include the project manager, principal investigator, radiation biologist, quality control manager, quality assurance director, regulatory lead, and manufacturing lead.

All other contract terms under Section G remains unchanged.

Under **SECTION J LIST OF ATTACHMENTS** is hereby modified to reflect the following:

1. STATEMENT OF WORK

Statement of Work, dated September 12, 2020, 28 pages

All other contract terms under Section J remains unchanged.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

CONTRACTOR'S STATEMENT OF RELEASE

In consideration of the modification(s) agreed to herein as complete and equitable adjustments of any sort are NOT due from Contractor's revision of Section J, Attachment 1 – Statement of Work, dated September 12, 2020. The Contractor hereby releases the Government from any and all liability under the contract for further equitable adjustments attributable to such facts or circumstances as a result of this action.

All other contract terms remain unchanged.

END OF MODIFICATION P00002

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

ATTACHMENT 1
Biomedical Advanced Research and Development Authority (BARDA) Broad Agency Announcement (BAA) (Solicitation #BAA-18-100-SOL-00003)
Advanced Research and Development of Chemical, Biological, Radiological, and Nuclear Medical Countermeasures
RAPID, HIGH-THROUGHPUT, MULTIPLEXED DETECTION OF BIOTHREAT SPECIES ID AND RESISTANCE GENES USING T2MR
Topic Area of Interest No. [7.2.4 & 7.3.3] Statement of Work DATED July 22, 2019 (Diagnostics/Devices Product Development)

STATEMENT OF WORK

BIOMEDICAL ADVANCED RESEARCH AND DEVELOPMENT AUTHORITY (BARDA) BROAD AGENCY ANNOUNCEMENT (BAA) BAA-18-100-SOL-00003

ADVANCED RESEARCH AND DEVELOPMENT OF CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR MEDICAL COUNTERMEASURES

RAPID, HIGH-THROUGHPUT, MULTIPLEXED DETECTION OF BIOTHREAT SPECIES ID AND RESISTANCE GENES USING T2MR
AREA OF INTEREST NUMBERS 7.2.4 AND 7.3.3 CONTRACTUAL STATEMENT OF WORK

[***]

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) would be competitively harmful if publicly disclosed.

Exhibit 10.2

SIXTH AMENDMENT TO LEASE

This Sixth Amendment to Lease (the "**Sixth Amendment**") is made as of October 19, 2020 ("**Execution Date**"), by and between LS KING HARTWELL INNOVATION CAMPUS, LLC, a Delaware limited liability company, with an address c/o King Street Properties, 800 Boylston Street, Suite 1570, Boston, MA 02199 ("**Landlord**"), and T2 BIOSYSTEMS, INC., a Delaware corporation, with an address of 101 Hartwell Avenue, Lexington, MA 02421 ("**Tenant**").

WITNESSETH

WHEREAS, Landlord, as successor-in-interest to King 101 Hartwell LLC, and Tenant entered into that certain Lease dated August 6, 2010, as amended by a First Amendment to Lease dated as of November [blank], 2011, a Second Amendment to Lease dated as of July 11, 2014, a Commencement Letter dated July 28, 2014 (agreed and accepted by Tenant on August 12, 2014), a Letter Agreement dated March 30, 2015, a Third Amendment to Lease dated as of May 11, 2015, a Fourth Amendment to Lease dated as of March 2, 2017 (the "**Fourth Amendment**") and a Fifth Amendment to Lease dated as of November [blank], 2018 (collectively, the "**Lease**"), pursuant to which Landlord is leasing to Tenant approximately 33,635 rentable square feet (as more particularly described in the Lease, the "**Premises**") of the building located at 101 Hartwell Avenue, Lexington, MA (the "**Building**");

WHEREAS, Tenant desires to extend the Term of the Lease for an additional period; and WHEREAS, Landlord is willing to extend the Term of the lease for an additional period,

upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the covenants herein reserved and contained, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Recitals; Capitalized Terms. The foregoing recitals are hereby incorporated by reference. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them as set forth in the Lease.

2. Extension of Term. The Term of the Lease is hereby extended for an additional term commencing as of January 1, 2022, and expiring as of December 31, 2028 (the "**Third Additional Term**"). The Third Additional Term shall be on all of the terms and conditions of the Lease immediately preceding the Third Additional Term, except as expressly set forth in this Sixth Amendment. Tenant hereby accepts the Premises in their "as is", "where is" condition on the Execution Date, with all faults, and without representations or warranties from Landlord of any kind whatsoever. Except for Landlord's Sixth Amendment Contribution and, if applicable, Landlord's Mid-Term Contribution (both as hereinafter defined), Tenant acknowledges and agrees that Landlord has no obligation to perform any work or to provide any other concession with respect to the Premises in connection with the extension of the Term for the Third Additional Term. The foregoing shall not limit any obligations of Landlord existing under the Lease including, without Limitation, Article 10 thereof.

3. Third Additional Term Base Rent and Operating Costs and Taxes.

(a) Base Rent for the Third Additional Term shall be paid in equal monthly installments in accordance with the following schedule in advance and otherwise in accordance with the terms of the Lease:

Time Period	**Annual Base Rent**	**Monthly Installment**
1/1/22-12/31/22:	$1,681,750.00	$140,145.83
1/1/23-12/31/23:	$1,732,202.50	$144,350.21
1/1/24-12/31/24:	$1,784,168.58	$148,680.71
1/1/25-12/31/25:	$1,837,693.63	$153,141.14
1/1/26-12/31/26:	$1,892,824.44	$157,735.37
1/1/27-12/31/27:	$1,949,609.17	$162,467.43
1/1/28-12/31/28:	$2,008,097.45	$167,341.45

(b) Tenant shall continue to pay Tenant's Share of Operating Costs and Tenant's Share of Taxes during the Third Additional Term in accordance with Sections 5.2(f) and 5.3(c) of the Lease. Further, Tenant shall continue to pay all charges for electricity, gas, water and all other utilities and services furnished to the Premises and any equipment exclusively serving the Premises during the Third Additional Term in accordance with Sections 9.1, 9.2 and 9.3 of the Lease.

4. Landlord's Sixth Amendment Contribution and Landlord's Mid-Term Contribution.

(a) Landlord shall, subject to the provisions of this Section 4, contribute up to Five Hundred Four Thousand Five Hundred Twenty-Five and 00/100 Dollars ($504,525.00) ("**Landlord's Sixth Amendment Contribution**") towards the cost of the leasehold improvements that have been or will be installed by Tenant in the Premises ("**Tenant's Sixth Amendment Work**"). Tenant shall be entitled to apply up to Two Hundred One Thousand Eight Hundred Ten and 00/100 Dollars ($201,810.00) of Landlord's Sixth Amendment Contribution toward the Soft Costs (as hereinafter defined) incurred by Tenant in the performance of Tenant's Sixth Amendment Work. "**Soft Costs**" shall be defined as any design, space planning, interior architect and engineering consultants fees and expenses, permitting fees, cost of furniture, fixtures and equipment and telephone and data cabling costs incurred by Tenant in connection with Tenant's Sixth Amendment Work. In the event that Landlord's Sixth Amendment Contribution shall not be sufficient to complete Tenant's Sixth Amendment Work, Tenant shall pay the excess costs, prior to Landlord's disbursing Landlord's Sixth Amendment Contribution to Tenant. Tenant shall retain the general contractor, architect, engineer, and other consultants of its choice, subject to Landlord's approval in accordance with Section 11.1 of the Lease.

(b) Provided that Tenant satisfies the Contribution Conditions (as hereinafter defined), Landlord shall, subject to the provisions of this Section 4, contribute up to Five Hundred Four Thousand Five Hundred Twenty-Five and 00/100 Dollars ($504,525.00) ("**Landlord's Mid-Term Contribution**") soley towards the cost of hard construction costs

of HVAC improvements and replacements to be installed by Tenant in the Premises ("**Tenant's Additional Work**"). In the event that Landlord's Mid-Term Contribution shall not be sufficient to complete Tenant's Additional Work, Tenant shall pay the excess costs, prior to Landlord's disbursing Landlord's Mid-Term Contribution to Tenant. Tenant shall retain the general contractor, architect, engineer, and other consultants of its choice, subject to Landlord's approval in accordance with Section 11.1 of the Lease.

(c) Landlord's Mid-Term Contribution is subject to the following conditions, and, without limiting the foregoing, Landlord shall have no obligation to pay Landlord's Mid-Term Contribution, or any portion thereof, if the following conditions (the "**Contribution Conditions**") are not satisfied as of the date of any Requisition for such Mid-Term Contribution:

Tenant shall have (i) cash or cash equivalents available to fund Tenant's operations for a minimum of eighteen (18) months (based on Tenant's operating expenses during the third (3rd) Rent Year of the Additional Term), and (ii) a then-current market capitalization of at least Five Hundred Million Dollars ($500,000,000), in each case as evidenced by a written certification (in form and substance reasonably acceptable to Landlord) from Tenant's Chief Financial Officer, Treasurer or Controller to Landlord, to which certification shall be attached Tenant's audited financial statements for the previous fiscal year or unaudited financials if audited financials are not prepared in the ordinary course of Tenant's business.

(d) Provided that Tenant is not in default of its obligations beyond applicable notice and cure periods under this Lease at the time that Tenant submits any Requisition (as hereinafter defined) on account of Landlord's Sixth Amendment Contribution and/or Landlord's Mid-Term Contribution, Landlord shall pay the cost of the work shown on each Requisition submitted by Tenant to Landlord within thirty (30) days of Landlord's receipt thereof. If Landlord declines to pay any portion of Landlord's Sixth Amendment Contribution and/or Landlord's Mid-Term Contribution (if applicable) requested in any Requisition submitted by Tenant based upon Tenant's default, Tenant shall, subject to the provisions of this Section 4, have the right, so long as the Lease is in full force and effect, and Tenant is in full compliance with its obligations under the Lease, to resubmit such Requisition after Tenant cures such default. For the purposes hereof, a "**Requisition**" shall mean written documentation showing in reasonable detail the costs of the improvements then installed by Tenant in the Premises. Each Requisition shall be accompanied by evidence reasonably satisfactory to Landlord that all work covered by previous Requisitions has been fully paid by Tenant. Landlord shall have the right, upon reasonable advance notice to Tenant, to inspect Tenant's books and records relating to each Requisition in order to verify the amount thereof. Tenant shall submit Requisition(s) no more often than one (1) time per month.

(e) Notwithstanding anything to the contrary herein contained:

(i) Landlord shall have no obligation to advance funds on account of Landlord's Sixth Amendment Contribution and/or Landlord's Mid-Term Contribution (if applicable) unless and until Landlord has received the Requisition

in question, together with certifications from Tenant's architect, certifying that the work shown on the Requisition has been performed in accordance with applicable law and in accordance with Tenant's approved plans, and written lien waivers from Tenant's contractor for work performed to date.

(ii) Notwithstanding anything to the contrary herein contained, Landlord shall have no obligation to pay (i) Landlord's Sixth Amendment Contribution in respect of any Requisition submitted prior to the Execution Date or after December 31, 2022, or (ii) subject to Section 4(c) above, Landlord's Mid-Term Contribution, if applicable, in respect of any Requisition submitted prior to the Mid-Term Date (as hereinafter defined) or after the date that is one (1) year immediately following the Mid-Term Date. For the purposes hereof, "**Mid-Term Date**" shall mean the date that is the earlier to occur of: (x) the date on which Guardian Therapeutics, Inc., ("**Guardian**") vacates the space presently leased to Guardian (i.e., the space which contains 7,700 rentable square feet on the first (1st) floor of the Building) (referred to herein as the "**Guardian Premises**"), and Landlord and Tenant enter into a lease agreement for the Guardian Premises and possession of the Guardian Premises are delivered to Tenant; and (y) February 1, 2025.

(iii) Tenant shall not be entitled to any unused portion of Landlord's Sixth Amendment Contribution and/or Landlord's Mid-Term Contribution (if applicable).

(f) Except for Landlord's Sixth Amendment Contribution and Landlord's Mid-Term Contribution (if applicable), Tenant shall bear all other costs of Tenant's Sixth Amendment Work and Tenant's Additional Work. Landlord shall have no liability or responsibility for any claim, injury or damage alleged to have been caused by the particular materials, whether building standard or non-building standard, selected by Tenant in connection with Tenant's Sixth Amendment Work and/or Tenant's Additional Work.

(g) Tenant's Sixth Amendment Work and Tenant's Additional Work shall be performed in accordance with Article 11 of the Lease. Landlord shall not charge a construction management fee, coordination fee, supervisory fee and/or other similar fees in connection with Tenant's Sixth Amendment Work, Tenant's Additional Work and/or Alterations in or to the Premises made by Tenant. Further, during the Term, Landlord shall not charge Tenant or Tenant's contractors, subcontractors, architects, engineers or consultants for the use of any elevators or restrooms located in the Building, any loading facilities serving the Premises, or any parking areas serving the Building.

5. Extension Term. Tenant shall have the right to extend the Term of the Lease for one (1) additional term of five (5) years. Said extension right shall be upon all of the terms and conditions set forth in Section 1.2 of the Lease, except that:

(a) the first (1st) two (2) sentences of said Section 1.2 of the Lease, as amended by Section 5 of the Fourth Amendment, are hereby deleted and the following is substituted in their place:

"(a) Provided (i) Tenant, an Affiliated Entity (hereinafter defined) and/or a Successor (hereinafter defined) is/are then occupying at least seventy percent (70%) of the Premises; and (ii) no Event of Default nor an event which, with the passage of time and/or the giving of notice would constitute an Event of Default has occurred (1) as of the date of the Extension Notice (hereinafter defined), and (2) at the commencement of the applicable Extension Term (hereinafter defined), Tenant shall have the option to extend the Term for one (1) additional term of five (5) years (the "**Extension Term**"), commencing as of January 1, 2029, and expiring as of December 31, 2033. Tenant must exercise such option to extend by giving Landlord written notice (the "**Extension Notice**") on or before December 31, 2027, *time being of the essence*."; and

(b) the phrase "Lexington/Bedford area" appearing in Section 1.2(b) of the Lease is hereby deleted and replaced with the phrase "Lexington/Waltham submarket".

6. Right of First Offer.

The one-time right of first offer set forth in Section 8 of the Lease, as amended by Section 6 of the Fourth Amendment, shall continue to be in full force and effect in accordance with the terms and conditions set forth in said Section 8 of the Lease, as amended by said Section 6 of the Fourth Amendment; provided, however, that Section 8 of the Lease is hereby amended as follows:

(a) The following is hereby inserted at the end of said Section 8: "The right of first offer granted to Tenant shall be superior to Guardian's right to extend or renew the term of its lease of the Guardian Premises past October 31, 2025, and, provided that Tenant satisfies the conditions contained in this Section 8, Landlord shall deliver a ROFO Notice to Tenant prior to entering into any agreement to extend the term of the lease to Guardian for the Guardian Premises past October 31, 2025."

(b) Clause (ii) of Section 8.1 is hereby deleted through the words "(20,000) rentable square feet in the Building" and is replaced with the following: "Tenant is in occupancy of one hundred percent (100%) of the Premises".

7. Security Deposit. Reference is made to the fact that Landlord is currently holding a Security Deposit in the amount of One Hundred Sixty Thousand and 00/100 Dollars ($160,000.00) (the "**Existing LC Amount**") in the form of a letter of credit (the "**Existing Letter of Credit**") pursuant to the provisions of Article 7 of the Lease. Notwithstanding the foregoing, concurrently with the execution of this Sixth Amendment, Tenant shall deliver to Landlord, as additional security for Tenant's performance of all its Lease obligations, either (x) an amendment to the Existing Letter of Credit ("**LC Amendment**"), in form and substance reasonably acceptable to Landlord, increasing the amount thereof to Four Hundred Twenty Thousand Four Hundred Thirty-Seven and 50/100 Dollars ($420,437.50) (the "**Total LC Amount**") (i.e., the Existing LC Amount plus $260,437.50), or (y) a replacement Letter of Credit (the "**Replacement Letter of Credit**") in the amount of the Total LC Amount, substantially in the form attached hereto as **Exhibit A**, satisfying the requirements of this Section 7 and Article 7 of the Lease. If Tenant

delivers to Landlord a Replacement Letter of Credit satisfying the foregoing requirements, as aforesaid, then Landlord shall return the Existing Letter of Credit within ten (10) business days after Landlord receives such Replacement Letter of Credit from Tenant.

8. SNDA. Subject to the provisions of Section 22.1 of the Lease, Landlord shall use commercially reasonable efforts to cause any future Mortgagee to deliver to Tenant a Non-disturbance Agreement on the standard form used by the holder of the Mortgage in question, with such commercially reasonable modifications as may be requested by Tenant.

9. Inapplicable Lease Provisions.

Article 3 of the Lease (Condition of Premises Construction), Exhibit 3 to the Lease (Landlord's Work) and Exhibit 3(A) to the Lease (Exterior Work) shall have no applicability with respect to this Sixth Amendment.

10. Ratification. Except as amended hereby, the terms and conditions of the Lease shall remain unaffected and in full force and effect throughout the balance of the Term, as extended hereby. From and after the date hereof, all references to the "Lease" shall mean the Lease as amended hereby. Additionally, Landlord and Tenant each confirms and ratifies that, as of the date hereof and to its actual knowledge, (a) the Lease is and remains in good standing and in full force and effect, and (b) neither party has any claims, counterclaims, set-offs or defenses against the other party arising out of the Lease or the Premises or in any way relating thereto or arising out of any other transaction between Landlord and Tenant. The submission of drafts of this document for examination and negotiation does not constitute an offer, or a reservation of or option for any of the terms and conditions set forth in this Sixth Amendment, and this Sixth Amendment shall not be binding upon Landlord or Tenant unless and until Landlord shall have executed and delivered a fully executed copy of this Sixth Amendment to Tenant.

11. Miscellaneous. Tenant and Landlord each warrants and represents that it has dealt with no broker in connection with the consummation of this Sixth Amendment other than CBRE (the "**Broker**"). Tenant and Landlord each agrees to defend, indemnify and save the other harmless from and against any Claims arising in breach of its representation and warranty set forth in the immediately preceding sentence. Landlord shall be solely responsible for the payment of any brokerage commissions to Broker. This Sixth Amendment is binding upon and shall inure to the benefit of Landlord and Tenant and their respective successors and assigns. This Sixth Amendment constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions, and may not be amended, waived, discharged or terminated except by a written instrument signed by all the parties hereto. This Sixth Amendment may be executed in any number of counterparts and by each of the undersigned on separate counterparts, which counterparts taken together shall constitute one and the same instrument. This Sixth Amendment may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, in addition to electronically produced signatures, "electronic signature" shall include faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

[signatures on following page]

**[SIGNATURE PAGE TO SIXTH AMENDMENT TO LEASE
BY AND BETWEEN LS KING HARTWELL INNOVATION CAMPUS, LLC AND T2 BIOSYSTEMS, INC.]**

EXECUTED under seal as of the Execution Date first set forth above.

LANDLORD:

LS KING HARTWELL INNOVATION CAMPUS, LLC, a Delaware limited liability company

By: King Jeter LLC, a Massachusetts limited liability company, its Manager

By: King Street Properties Investments LLC,
a Massachusetts limited liability company, its Manager

By: /s/ Thomas Ragno
Name: Thomas Ragno
Title: Manager

TENANT:

T2 BIOSYSTEMS, INC.,
a Delaware corporation

By: /s/ Alec Barclay
Name: Alec Barclay
Title: Chief Operations Officer

Exhibit A

Form of Replacement Letter of Credit [See attached]

[Exhibit A - Sixth Amendment to Lease]

L/C DRAFT LANGUAGE

IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER

ISSUE DATE:

ISSUING BANK:
SILICON VALLEY BANK 3003
TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210 SANTA CLARA,
CALIFORNIA 95054

BENEFICIARY:
LS KING HARTWELL INNOVATION CAMPUS, LLC C/O KING STREET
PROPERTIES
800 BOYLSTON STREET, SUITE 1570
BOSTON, MA 02199

APPLICANT:
T2 BIOSYSTEMS, INC.

AMOUNT: USD [BLANK}

EXPIRATION DATE: , 2020 (ONE YEAR FROM
ISSUANCE) PLACE OF EXPIRATION: ISSUING BANK'S COUNTERS AT ITS ABOVE ADDRESS

DEAR SIR/MADAM:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. SVBSF
IN YOUR FAVOR AVAILABLE BY
YOUR DRAFTS DRAWN ON US AT SIGHT IN THE FORM OF EXHIBIT "A".

WE ARE INFORMED BY APPLICANT THAT THIS STANDBY LETTER OF CREDIT IS ISSUED TO SERVE AS THE SECURITY DEPOSIT FOR A CERTAIN LEASE BY AND BETWEEN LS KING HARTWELL INNOVATION CAMPUS, LLC , AS LANDLORD, AND T2 BIOSYSTEMS, INC., AS TENANT, WITH RESPECT TO CERTAIN PREMISES LOCATED AT 101 HARTWELL AVENUE, LEXINGTON, MA 0241.

PARTIAL DRAWS AND MULTIPLE PRESENTATIONS ARE ALLOWED.

THIS LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR AN ADDITIONAL PERIOD OF ONE YEAR, WITHOUT AMENDMENT, FROM THE PRESENT OR EACH FUTURE EXPIRATION DATE UNLESS AT LEAST SIX (60) DAYS PRIOR TO THE THEN CURRENT EXPIRATION DATE WE NOTIFY YOU BY HAND DELIVERY, OR OVERNIGHT COURIER, OR BY CERTIFIED MAIL,WITH A COPY TO GOULSTON & STORRS, 400 ATLANTIC AVENUE, BOSTON, MA 02110, ATTENTION: JEAN BOWE AND TO THE APPLICANT, THAT THIS LETTER OF CREDIT WILL NOT BE EXTENDED BEYOND THE CURRENT EXPIRATION DATE. IN NO EVENT SHALL THIS LETTER OF CREDIT BE AUTOMATICALLY EXTENDED BEYOND NOVEMBER 30th, 2025 WHICH SHALL BE THE FINAL EXPIRATION DATE OF THIS LETTER OF CREDIT. IN THE EVENT THAT THIS LETTER OF CREDIT IS NOT EXTENDED FOR AN ADDITIONAL PERIOD AS PROVIDED ABOVE, BENEFICIARY MAY DRAW THE THEN AMOUNT AVAILABLE HEREUNDER.

DRAFT(S) AND DOCUMENTS MUST INDICATE THE NUMBER AND DATE OF THIS LETTER OF CREDIT.

THIS LETTER OF CREDIT IS TRANSFERABLE UPON BENEFICIARY'S REQUEST, BY THE ISSUING BANK ONE OR MORE TIMES BUT IN EACH INSTANCE TO A SINGLE BENEFICIARY AND ONLY IN ITS ENTIRETY UP TO THE THEN AVAILABLE AMOUNT IN FAVOR OF ANY NOMINATED TRANSFEREE ASSUMING SUCH TRANSFER TO SUCH TRANSFEREE WOULD BE IN COMPLIANCE WITH THEN APPLICABLE LAW AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE REGULATIONS OF THE U.S. DEPARTMENT OF TREASURY AND U.S. DEPARTMENT OF COMMERCE. AT THE TIME OF TRANSFER, THE ORIGINAL LETTER OF CREDIT AND ORIGINAL AMENDMENT(S), IF ANY, MUST BE SURRENDERED TO US TOGETHER WITH OUR LETTER OF TRANSFER DOCUMENTATION (IN THE FORM OF EXHIBIT "B" ATTACHED HERETO) AND OUR TRANSFER FEE OF ¼ OF 1% OF THE TRANSFER AMOUNT (MINIMUM $250.00) IS FOR THE ACCOUNT OF APPLICANT. ANY TRANSFER OF THIS LETTER OF CREDIT MAY NOT CHANGE THE PLACE OF EXPIRATION OF THE LETTER OF CREDIT FROM OUR ABOVE-SPECIFIED OFFICE. EACH TRANSFER SHALL BE EVIDENCED BY OUR ENDORSEMENT ON THE REVERSE OF THE ORIGINAL LETTER OF CREDIT AND WE SHALL FORWARD THE ORIGINAL LETTER OF CREDIT TO THE TRANSFEREE.

IF THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT NO. SVBSF IS LOST, STOLEN OR DESTROYED, WE WILL ISSUE YOU A "CERTIFIED TRUE COPY" OF THIS STANDBY LETTER OF CREDIT NO. SVBSF UPON OUR RECEIPT OF YOUR INDEMNITY LETTER TO SILICON VALLEY BANK WHICH WILL BE SENT TO YOU UPON OUR RECEIPT OF YOUR WRITTEN REQUEST THAT THIS STANDBY LETTER OF CREDIT NO.SVBSF IS LOST, STOLEN, OR DESTROYED. IF THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT NO. SVBSF IS MUTILATED, WE WILL ISSUE YOU A REPLACEMENT STANDBY LETTER OF CREDIT WITH THE SAME NUMBER, DATE AND TERMS AS THE ORIGINAL UPON OUR RECEIPT OF THE MUTILATED STANDBY LETTER OF CREDIT.

THIS LETTER OF CREDIT MAY ALSO BE CANCELED PRIOR TO ANY PRESENT OR FUTURE EXPIRATION DATE, UPON RECEIPT BY SILICON VALLEY BANK BY OVERNIGHT COURIER OR REGISTERED MAIL (RETURN RECEIPT REQUESTED) OF THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS (IF ANY) FROM THE BENEFICIARY TOGETHER WITH A STATEMENT SIGNED BY THE BENEFICIARY STATING THAT THE LETTER OF CREDIT IS NO LONGER REQUIRED AND IS BEING RETURNED FOR CANCELLATION.

ALL DEMANDS FOR PAYMENT SHALL BE MADE BY PRESENTATION OF THE APPROPRIATE DOCUMENTS ON A BUSINESS DAY AT OUR OFFICE (THE “BANK’S OFFICE”) AT: SILICON VALLEY BANK, 3003 TASMAN DRIVE, MAIL SORT HF 210, SANTA CLARA, CA 95054, ATTENTION: GLOBAL TRADE FINANCE. AS USED IN THIS LETTER OF CREDIT, "BUSINESS DAY" SHALL MEAN ANY DAY OTHER THAN A SATURDAY, SUNDAY OR A DAY ON WHICH BANKING INSTITUTIONS IN THE STATE OF CALIFORNIA ARE AUTHORIZED OR REQUIRED BY LAW TO CLOSE.

FACSIMILE PRESENTATIONS ARE ALSO PERMITTED. EACH FACSIMILE TRANSMISSION SHALL BE MADE AT: (408) 496-2418 OR (408) 969-6510; AND UNDER CONTEMPORANEOUS TELEPHONE ADVICE TO: (408) 450-5001 OR (408) 654-7176, ATTENTION: GLOBAL TRADE FINANCE. ABSENCE OF THE AFORESAID TELEPHONE ADVICE SHALL NOT AFFECT OUR OBLIGATION TO HONOR ANY DRAW REQUEST. IN CASE DEMAND FOR PAYMENT HEREUNDER IS PRESENTED BY FACSIMILE TRANSMISSION, PRESENTATION OF THE ORIGINAL OF SUCH DEMAND FOR PAYMENT IS NOT REQUIRED.

WE HEREBY AGREE WITH THE BENEFICIARY THAT THE DRAFTS DRAWN UNDER AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT SHALL BE DULY HONORED UPON PRESENTATION TO THE DRAWEE, IF NEGOTIATED ON OR BEFORE THE EXPIRATION DATE OF THIS CREDIT.

IF ANY INSTRUCTIONS ACCOMPANYING A DRAWING UNDER THIS LETTER OF CREDIT

REQUEST THAT PAYMENT IS TO BE MADE BY TRANSFER TO YOUR ACCOUNT WITH ANOTHER BANK, WE WILL ONLY EFFECT SUCH PAYMENT BY FED WIRE TO A U.S. REGULATED BANK, AND WE AND/OR SUCH OTHER BANK MAY RELY ON AN ACCOUNT NUMBER SPECIFIED IN SUCH INSTRUCTIONS EVEN IF THE NUMBER IDENTIFIES A PERSON OR ENTITY DIFFERENT FROM THE INTENDED PAYEE.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES ISP98, INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 590 ("ISP98").

IF YOU HAVE ANY QUESTIONS REGARDING THIS TRANSACTION, PLEASE CONTACT: AT 408- , ALWAYS QUOTING OUR LETTER OF CREDIT NO.SVBSF .

SILICON VALLEY BANK

[BANK USE]

[BANK USE]

AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

.....
Authorized Signature

(BENEFICIARY'S NAME)

TO: SILICON VALLEY BANK 3003 TASMAN DRIVE SANTA CLARA, CA 95054
AT SIGHT OF THIS DRAFT

PAY TO THE ORDER OF

US$

US DOLLARS

DRAWN UNDER SILICON VALLEY BANK, SANTA CLARA, CALIFORNIA, STANDBY LETTER OF CREDIT NUMBER NO.

DATED

REF. NO.
DATE:

EXHIBIT A

GUIDELINES TO PREPARE THE DRAFT

1. DATE: ISSUANCE DATE OF DRAFT.
2. REF. NO.: BENEFICIARY'S REFERENCE NUMBER, IF ANY.
3. PAY TO THE ORDER OF: NAME OF BENEFICIARY AS INDICATED IN THE L/C.
4. US$: AMOUNT OF DRAWING IN FIGURES.
5. USDOLLARS: AMOUNT OF DRAWING IN WORDS.
6. LETTER OF CREDIT NUMBER: SILICON VALLEY BANK'S STANDBY L/C NUMBER THAT PERTAINS TO THE DRAWING.
7. DATED: ISSUANCE DATE OF THE STANDBY L/C.
8. BENEFICIARY'S NAME: NAME OF BENEFICIARY AS INDICATED IN THE L/C.
9. AUTHORIZED SIGNATURE: SIGNED BY AN AUTHORIZED SIGNER OF BENEFICIARY.

IF YOU HAVE QUESTIONS RELATED TO THIS STANDBY LETTER OF CREDIT PLEASE CONTACT US AT .

EXHIBIT B TRANSFER FORM

DATE:

TO: SILICON VALLEY BANK
3003 TASMAN DRIVE
SANTA CLARA, CA 95054

RE: IRREVOCABLE STANDBY LETTER OF CREDIT NO.
ISSUED BY ATTN:INTERNATIONAL
DIVISION.
LETTERS OF CREDIT
SILICON VALLEY BANK, SANTA CLARA STANDBY
L/C AMOUNT:

LADIES AND GENTLEMEN:

FOR VALUE RECEIVED, THE UNDERSIGNED BENEFICIARY HEREBY IRREVOCABLY TRANSFERS TO:

(NAME OF TRANSFEREE)

(ADDRESS)

ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY TO DRAW UNDER THE ABOVE LETTER OF CREDIT UP TO ITS AVAILABLE AMOUNT AS SHOWN ABOVE AS OF THE DATE OF THIS TRANSFER.

BY THIS TRANSFER, ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY IN SUCH LETTER OF CREDIT ARE TRANSFERRED TO THE TRANSFEREE. TRANSFEREE SHALL HAVE THE SOLE RIGHTS AS BENEFICIARY THEREOF, INCLUDING SOLE RIGHTS RELATING TO ANY AMENDMENTS, WHETHER INCREASES OR EXTENSIONS OR OTHER AMENDMENTS, AND WHETHER NOW EXISTING OR HEREAFTER MADE. ALL AMENDMENTS ARE TO BE ADVISED DIRECTLY TO THE TRANSFEREE WITHOUT NECESSITY OF ANY CONSENT OF OR NOTICE TO THE UNDERSIGNED BENEFICIARY.

SIGNATURE AUTHENTICATED

The name(s), title(s), and signature(s) conform to that/those on file with us for the company and the signature(s) is/are authorized to execute this instrument.

(Name of Bank) (Address of Bank) (City, State, ZIP Code)
(Authorized Name and Title)

(Authorized Signature) (Telephone number)

THE ORIGINAL OF SUCH LETTER OF CREDIT IS RETURNED HEREWITH, AND WE ASK YOU TO ENDORSE THE TRANSFER ON THE REVERSE THEREOF, AND FORWARD IT DIRECTLY TO THE TRANSFEREE WITH YOUR CUSTOMARY NOTICE OF TRANSFER.

SINCERELY,

(BENEFICIARY'S NAME)

(SIGNATURE OF BENEFICIARY)
(NAME AND TITLE)

Exhibit 10.3

FIRST AMENDMENT TO LEASE

This First Amendment to Lease (the "**First Amendment**") is made as of October 19, 2020 ("**Execution Date**"), by and between LS KING HARTWELL INNOVATION CAMPUS, LLC, a Delaware limited liability company, with an address c/o King Street Properties, 800 Boylston Street, Suite 1570, Boston, MA 02199 ("**Landlord**"), and T2 BIOSYSTEMS, INC., a Delaware corporation, with an address of 101 Hartwell Avenue, Lexington, MA 02421 ("**Tenant**").

WITNESSETH

WHEREAS, Landlord, as successor-in-interest to King 4 Hartwell Place, LP, and Tenant entered into that certain Lease dated November 12, 2014, as amended by a Commencement Letter dated April 1, 2015 (as so amended, the "**Lease**"), pursuant to which Landlord is leasing to Tenant approximately 10,692 rentable square feet (as more particularly described in the Lease, the "**Premises**") of the building located at 4 Hartwell Place, Lexington, MA (the "**Building**");

WHEREAS, Tenant desires to extend the Term of the Lease for an additional period; and WHEREAS, Landlord is willing to extend the Term of the lease for an additional period,

upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the covenants herein reserved and contained, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Recitals; Capitalized Terms. The foregoing recitals are hereby incorporated by reference. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them as set forth in the Lease.

2. Extension of Term. The Term of the Lease is hereby extended for an additional term commencing as of April 1, 2021, and expiring as of October 31, 2025 (the "**Additional Term**"). The Additional Term shall be on all of the terms and conditions of the Lease immediately preceding the Additional Term, except as expressly set forth in this First Amendment. Tenant hereby accepts the Premises in their "as is", "where is" condition on the Execution Date, with all faults, and without representations or warranties from Landlord of any kind whatsoever. Tenant acknowledges and agrees that Landlord has no obligation to perform any work or to provide any other concession with respect to the Premises in connection with the extension of the Term for the Additional Term. The foregoing shall not limit any obligations of Landlord currently existing under the Lease including, without limitation, Article 10 thereof.

3. Additional Term Base Rent and Operating Costs and Taxes.

(a) Base Rent for the Additional Term shall be paid in equal monthly installments in accordance with the following schedule in advance and otherwise in accordance with the terms of the Lease:

Time Period	**Annual Base Rent**	**Monthly Installment**
4/1/21-3/31/22:	$523,908.00	$43,659.00
4/1/22-3/31/23:	$539,625.24	$44,968.77
4/1/23-3/31/24:	$555,814.00	$46,317.83
4/1/24-3/31/25:	$572,488.42	$47,707.37
4/1/25-10/31/25:	$589,663.07*	$49,138.59

*Annualized

(b) Tenant shall continue to pay Tenant's Share of Operating Costs and Tenant's Share of Taxes during the Additional Term in accordance with Sections 5.2(f) and 5.3(c) of the Lease. Further, Tenant shall continue to pay all charges for electricity, gas, water and all other utilities and services furnished to the Premises and any equipment exclusively serving the Premises during the Additional Term in accordance with Sections 9.1, 9.2 and 9.3 of the Lease.

4. Extension Term.

(a) Provided that the following conditions are satisfied (the "**Extension Conditions**"), which Extension Conditions may be waived by Landlord in its sole discretion, (i) Tenant, an Affiliated Entity (hereinafter defined) and/or a Successor (hereinafter defined) is/are then occupying one hundred percent (100%) of the Premises; and (ii) no Event of Default nor an event which, with the passage of time and/or the giving of notice would constitute an Event of Default has occurred (1) as of the date of the Extension Notice (hereinafter defined), and (2) at the commencement of the applicable Extension Term (hereinafter defined), Tenant shall have the option (the "**Initial Extension Option**") to extend the Term for one (1) additional term of three (3) years and two (2) months (the "**First Extension Term**"), commencing as of November 1, 2025 and expiring on December 31, 2028.

(b) Provided that the Extension Conditions are satisfied or waived by Landlord in its sole discretion, and provided further that Tenant has timely and properly exercised the Initial Extension Option pursuant to Section 4(a) above, Tenant shall have the option to extend the Term for one (1) additional term of five (5) years, commencing as of the expiration of the First Extension Term (the "**Second Extension Term**"; and together with the First Extension Term, each an "**Extension Term**").

(c) Tenant must exercise each option to extend, if at all, by giving Landlord written notice (the "**Extension Notice**") (i) on or before January 31, 2025, *time being of the essence*, with respect to the Initial Extension Option and (ii) on or before December 31, 2027 with respect to the option to extend for the Second Extension Term. Upon the timely giving of such Extension Notice, the Term shall be deemed extended upon all of the terms and conditions of this Lease, except that (A) Base Rent during each Extension Term shall be calculated in accordance with this Section 4, (B) Landlord shall have no obligation to construct or renovate the Premises, and (C) Tenant shall have one (1) fewer option to extend the Term. If Tenant fails to give timely notice, as aforesaid, Tenant shall have no further right to extend the Term. Notwithstanding the fact that Tenant's proper and timely

exercise of such option to extend the Term shall be self-executing, the parties shall promptly execute a lease amendment reflecting such Extension Term after Tenant exercises such option. The execution of such lease amendment shall not be deemed to waive any of the conditions to Tenant's exercise of its rights under this Section 4.

(d) The Base Rent during each Extension Term (the "**Extension Term Base Rent**") shall be determined in accordance with the process described hereafter. Extension Term Base Rent shall be the greater of (i) Base Rent for the last Rent Year of the prior Term, or (ii) the fair market rental value of the Premises then demised to Tenant as of the commencement of the applicable Extension Term as determined in accordance with the process described below, for renewals of combination laboratory and office space in the Lexington/Waltham submarket (the "**Market Area**") of equivalent quality, amenities, improvements, size, utility and location, with the length of the Extension Term, the credit standing of Tenant and all other relevant factors to be taken into account. Within thirty (30) days after receipt of the Extension Notice, Landlord shall deliver to Tenant written notice of its determination of the Extension Term Base Rent for the applicable Extension Term. Tenant shall, within thirty (30) days after receipt of such notice, notify Landlord in writing whether Tenant accepts or rejects Landlord's determination of the Extension Term Base Rent ("**Tenant's Response Notice**"). If Tenant fails timely to deliver Tenant's Response Notice, Landlord's determination of the Extension Term Base Rent shall be binding on Tenant.

(e) If, and only if, Tenant's Response Notice is timely delivered to Landlord and indicates both that Tenant rejects Landlord's determination of the Extension Term Base Rent and desires to submit the matter to arbitration, then the Extension Term Base Rent shall be determined in accordance with the procedure set forth in this Section 4(e). In such event, within ten (10) business days after receipt by Landlord of Tenant's Response Notice indicating Tenant's desire to submit the determination of the Extension Term Base Rent to arbitration, Tenant and Landlord shall each notify the other, in writing, of their respective selections of an appraiser (respectively, "**Landlord's Appraiser**" and "**Tenant's Appraiser**"). Landlord's Appraiser and Tenant's Appraiser shall then jointly select a third appraiser (the "**Third Appraiser**") within ten (10) business days of their appointment. All of the appraisers selected shall be individuals with at least five (5) consecutive years' commercial appraisal experience in the area in which the Premises are located, shall be members of the Appraisal Institute (M.A.I.), and, in the case of the Third Appraiser, shall not have acted in any capacity for either Landlord or Tenant within five (5) years of his or her selection. The three appraisers shall determine the Extension Term Base Rent in accordance with the requirements and criteria set forth in Section 4(d) above, employing the method commonly known as Baseball Arbitration, whereby Landlord's Appraiser and Tenant's Appraiser each sets forth its determination of the Extension Term Base Rent as defined above, and the Third Appraiser must select one or the other (it being understood that the Third Appraiser shall be expressly prohibited from selecting a compromise figure). Landlord's Appraiser and Tenant's Appraiser shall deliver their determinations of the Extension Term Base Rent to the Third Appraiser within five (5) days of the appointment of the Third Appraiser and the Third Appraiser shall render his or her decision within ten (10) days after receipt of both of the other two determinations of the Extension Term Base Rent. The Third Appraiser's decision shall be binding on both

Landlord and Tenant. Each party shall bear the cost of its own appraiser and the cost of the Third Appraiser shall be paid by the party whose determination is not selected.

5. Security Deposit. Reference is made to the fact that Landlord is currently holding a Security Deposit in the amount of Two Hundred Eighty Thousand Six Hundred Sixty-Five and 00/100 Dollars ($280,665.00) (the "**Existing Security Deposit Amount**") in the form of cash (the "**Existing Security Deposit**") pursuant to the provisions of Article 7 of the Lease. Notwithstanding the foregoing, concurrently with the execution of this First Amendment, Tenant shall deliver to Landlord, as replacement security for Tenant's performance of all its Lease obligations, a Letter of Credit (the "**Replacement Security Deposit**") in the amount of One Hundred Thirty Thousand Nine Hundred Seventy-Seven and 00/100 Dollars ($130,977.00), substantially in the form attached hereto as **Exhibit A**, satisfying the requirements of this Section 5 and Article 7 of the Lease. Landlord shall return the Existing Security Deposit within five (5) business days after Landlord receives such Replacement Security Deposit from Tenant.

6. SNDA. Subject to the provisions of Section 22.1 of the Lease, Landlord shall use commercially reasonable efforts to cause any future Mortgagee to deliver to Tenant a Non-disturbance Agreement on the standard form used by the holder of the Mortgage in question, with such commercially reasonable modifications as may be requested by Tenant.

7. Ratification. Except as amended hereby, the terms and conditions of the Lease shall remain unaffected and in full force and effect throughout the balance of the Term, as extended hereby. From and after the date hereof, all references to the "Lease" shall mean the Lease as amended hereby. Additionally, Landlord and Tenant each confirms and ratifies that, as of the date hereof and to its actual knowledge, (a) the Lease is and remains in good standing and in full force and effect, and (b) neither party has any claims, counterclaims, set-offs or defenses against the other party arising out of the Lease or the Premises or in any way relating thereto or arising out of any other transaction between Landlord and Tenant. The submission of drafts of this document for examination and negotiation does not constitute an offer, or a reservation of or option for any of the terms and conditions set forth in this First Amendment, and this First Amendment shall not be binding upon Landlord or Tenant unless and until Landlord shall have executed and delivered a fully executed copy of this First Amendment to Tenant.

8. Miscellaneous. Tenant and Landlord each warrants and represents that it has dealt with no broker in connection with the consummation of this First Amendment other than CBRE (the "**Broker**"). Tenant and Landlord each agrees to defend, indemnify and save the other harmless from and against any Claims arising in breach of its representation and warranty set forth in the immediately preceding sentence. Landlord shall be solely responsible for the payment of any brokerage commissions to Broker. This First Amendment is binding upon and shall inure to the benefit of Landlord and Tenant and their respective successors and assigns. This First Amendment constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions, and may not be amended, waived, discharged or terminated except by a written instrument signed by all the parties hereto. This First Amendment may be executed in any number of counterparts and by each of the undersigned on separate counterparts, which counterparts taken together shall constitute one and the same instrument. This First Amendment may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and

effect as an original signature. Without limitation, in addition to electronically produced signatures, “electronic signature” shall include faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

[**SIGNATURE PAGE TO FIRST AMENDMENT TO LEASE
BY AND BETWEEN LS KING HARTWELL INNOVATION CAMPUS, LLC AND T2 BIOSYSTEMS, INC.**]

EXECUTED under seal as of the Execution Date first set forth above.

LANDLORD:

LS KING HARTWELL INNOVATION CAMPUS, LLC, a Delaware limited liability company

By: King Jeter LLC, a Massachusetts limited liability company, its Manager

By: King Street Properties Investments LLC,
a Massachusetts limited liability company, its Manager

By: /s/ Thomas Ragno
Name: Thomas Ragno
Title: Manager

TENANT:

T2 BIOSYSTEMS, INC.,
a Delaware corporation

By:/s/ Alec Barclay
Name: Alec Barclay
Title: Chief Operations Officer

Exhibit A

Form of Letter of Credit [see attached]

L/C DRAFT LANGUAGE

IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER

ISSUE DATE:

ISSUING BANK:
SILICON VALLEY BANK 3003
TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210 SANTA CLARA,
CALIFORNIA 95054

BENEFICIARY:
LS KING HARTWELL INNOVATION CAMPUS, LLC C/O KING STREET
PROPERTIES
800 BOYLSTON STREET, SUITE 1570
BOSTON, MA 02199

APPLICANT:
T2 BIOSYSTEMS, INC.

AMOUNT: USD 130,977.00(U.S.DOLLARS ONE HUNDRED THIRTY THOUSAND NINE HUNDRED SEVENTY SEVEN AND 00/100)

EXPIRATION DATE: , 2020 (ONE YEAR FROM
ISSUANCE) PLACE OF EXPIRATION: ISSUING BANK'S COUNTERS AT ITS ABOVE ADDRESS

DEAR SIR/MADAM:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. SVBSF
IN YOUR FAVOR AVAILABLE BY
YOUR DRAFTS DRAWN ON US AT SIGHT IN THE FORM OF EXHIBIT "A".

WE ARE INFORMED BY APPLICANT THAT THIS STANDBY LETTER OF CREDIT IS ISSUED TO SERVE AS THE SECURITY DEPOSIT FOR A CERTAIN LEASE BY AND BETWEEN LS KING HARTWELL INNOVATION CAMPUS, LLC , AS LANDLORD, AND T2 BIOSYSTEMS, INC., AS TENANT, WITH RESPECT TO CERTAIN PREMISES LOCATED AT 4 HARTWELL PLACE, LEXINGTON, MA 0241.

PARTIAL DRAWS AND MULTIPLE PRESENTATIONS ARE ALLOWED.

THIS LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR AN ADDITIONAL PERIOD OF ONE YEAR, WITHOUT AMENDMENT, FROM THE PRESENT OR EACH FUTURE EXPIRATION DATE UNLESS AT LEAST SIX (60) DAYS PRIOR TO THE THEN CURRENT EXPIRATION DATE WE NOTIFY YOU BY HAND DELIVERY, OR OVERNIGHT COURIER, OR BY CERTIFIED MAIL,WITH A COPY TO GOULSTON & STORRS, 400 ATLANTIC AVENUE, BOSTON, MA 02110, ATTENTION: JEAN BOWE AND TO THE APPLICANT, THAT THIS LETTER OF CREDIT WILL NOT BE EXTENDED BEYOND THE CURRENT EXPIRATION DATE. IN NO EVENT SHALL THIS LETTER OF CREDIT BE AUTOMATICALLY EXTENDED BEYOND NOVEMBER 30th, 2025 WHICH SHALL BE THE FINAL EXPIRATION DATE OF THIS LETTER OF CREDIT. IN THE EVENT THAT THIS LETTER OF CREDIT IS NOT EXTENDED FOR AN ADDITIONAL PERIOD AS PROVIDED ABOVE, BENEFICIARY MAY DRAW THE THEN AMOUNT AVAILABLE HEREUNDER.

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BENEFICIARY AND ONLY IN ITS ENTIRETY UP TO THE THEN AVAILABLE AMOUNT IN FAVOR OF ANY NOMINATED TRANSFEREE ASSUMING SUCH TRANSFER TO SUCH
TRANSFEREE WOULD BE IN COMPLIANCE WITH THEN APPLICABLE LAW AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE REGULATIONS OF THE U.S. DEPARTMENT OF TREASURY AND U.S. DEPARTMENT OF COMMERCE. AT THE TIME OF
TRANSFER, THE ORIGINAL LETTER OF CREDIT AND ORIGINAL AMENDMENT(S), IF ANY, MUST BE SURRENDERED TO US TOGETHER WITH OUR LETTER OF TRANSFER
DOCUMENTATION (IN THE FORM OF EXHIBIT "B" ATTACHED HERETO) AND OUR
TRANSFER FEE OF ¼ OF 1% OF THE TRANSFER AMOUNT (MINIMUM $250.00) IS FOR THE ACCOUNT OF APPLICANT. ANY TRANSFER OF THIS LETTER OF CREDIT MAY NOT CHANGE THE PLACE OF EXPIRATION OF THE LETTER OF CREDIT FROM OUR ABOVE-SPECIFIED OFFICE. EACH TRANSFER SHALL BE EVIDENCED BY OUR ENDORSEMENT ON THE REVERSE OF THE ORIGINAL LETTER OF CREDIT AND WE SHALL FORWARD THE ORIGINAL LETTER OF CREDIT TO THE TRANSFEREE.

IF THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT NO. SVBSF IS LOST, STOLEN OR DESTROYED, WE WILL ISSUE YOU A "CERTIFIED TRUE COPY" OF THIS STANDBY LETTER OF CREDIT NO. SVBSF
UPON OUR RECEIPT OF YOUR INDEMNITY LETTER TO SILICON VALLEY BANK WHICH WILL BE SENT TO YOU UPON OUR RECEIPT OF YOUR WRITTEN REQUEST THAT THIS STANDBY LETTER OF CREDIT NO.SVBSF
IS LOST, STOLEN, OR DESTROYED. IF THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT NO. SVBSF
IS MUTILATED, WE WILL ISSUE YOU A REPLACEMENT STANDBY LETTER OF CREDIT WITH THE SAME NUMBER, DATE AND TERMS AS THE ORIGINAL UPON OUR RECEIPT OF THE MUTILATED STANDBY LETTER OF CREDIT.

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ALL DEMANDS FOR PAYMENT SHALL BE MADE BY PRESENTATION OF THE APPROPRIATE DOCUMENTS ON A BUSINESS DAY AT OUR OFFICE (THE “BANK’S OFFICE”) AT: SILICON VALLEY BANK, 3003 TASMAN DRIVE, MAIL SORT HF 210, SANTA CLARA, CA 95054, ATTENTION: GLOBAL TRADE FINANCE. AS USED IN THIS LETTER OF CREDIT, "BUSINESS DAY" SHALL MEAN ANY DAY OTHER THAN A SATURDAY, SUNDAY OR A DAY ON WHICH BANKING INSTITUTIONS IN THE STATE OF CALIFORNIA ARE AUTHORIZED OR REQUIRED BY LAW TO CLOSE.

FACSIMILE PRESENTATIONS ARE ALSO PERMITTED. EACH FACSIMILE TRANSMISSION SHALL BE MADE AT: (408) 496-2418 OR (408) 969-6510; AND UNDER CONTEMPORANEOUS TELEPHONE ADVICE
TO: (408) 450-5001 OR (408) 654-7176, ATTENTION: GLOBAL TRADE FINANCE. ABSENCE OF THE AFORESAID TELEPHONE ADVICE SHALL NOT AFFECT OUR OBLIGATION TO HONOR ANY DRAW REQUEST. IN CASE DEMAND FOR PAYMENT HEREUNDER IS PRESENTED BY FACSIMILE TRANSMISSION, PRESENTATION OF THE ORIGINAL OF SUCH DEMAND FOR PAYMENT IS NOT REQUIRED.

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IF ANY INSTRUCTIONS ACCOMPANYING A DRAWING UNDER THIS LETTER OF CREDIT

REQUEST THAT PAYMENT IS TO BE MADE BY TRANSFER TO YOUR ACCOUNT WITH ANOTHER BANK, WE WILL ONLY EFFECT SUCH PAYMENT BY FED WIRE TO A U.S. REGULATED BANK, AND WE AND/OR SUCH OTHER BANK MAY RELY ON AN ACCOUNT NUMBER SPECIFIED IN SUCH INSTRUCTIONS EVEN IF THE NUMBER IDENTIFIES A PERSON OR ENTITY DIFFERENT FROM THE INTENDED PAYEE.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES ISP98, INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 590 ("ISP98").

IF YOU HAVE ANY QUESTIONS REGARDING THIS TRANSACTION, PLEASE CONTACT: AT 408- , ALWAYS QUOTING OUR LETTER OF CREDIT NO.SVBSF .

SILICON VALLEY BANK

[BANK USE] _ [BANK USE]
AUTHORIZED SIGNATURE AUTHORIZED SIGNATURE

.....
Authorized Signature

(BENEFICIARY'S NAME)

TO: SILICON VALLEY BANK 3003 TASMAN DRIVE SANTA CLARA, CA 95054
AT SIGHT OF THIS DRAFT

PAY TO THE ORDER OF

US$

US DOLLARS

DRAWN UNDER SILICON VALLEY BANK, SANTA CLARA, CALIFORNIA, STANDBY LETTER OF CREDIT NUMBER NO.

DATED

REF. NO.
DATE:

EXHIBIT A

GUIDELINES TO PREPARE THE DRAFT

1. DATE: ISSUANCE DATE OF DRAFT.
2. REF. NO.: BENEFICIARY'S REFERENCE NUMBER, IF ANY.
3. PAY TO THE ORDER OF: NAME OF BENEFICIARY AS INDICATED IN THE L/C.
4. US$: AMOUNT OF DRAWING IN FIGURES.
5. USDOLLARS: AMOUNT OF DRAWING IN WORDS.
6. LETTER OF CREDIT NUMBER: SILICON VALLEY BANK'S STANDBY L/C NUMBER THAT PERTAINS TO THE DRAWING.
7. DATED: ISSUANCE DATE OF THE STANDBY L/C.
8. BENEFICIARY'S NAME: NAME OF BENEFICIARY AS INDICATED IN THE L/C.
9. AUTHORIZED SIGNATURE: SIGNED BY AN AUTHORIZED SIGNER OF BENEFICIARY.

IF YOU HAVE QUESTIONS RELATED TO THIS STANDBY LETTER OF CREDIT PLEASE CONTACT US AT .

EXHIBIT B TRANSFER FORM

DATE:

TO: SILICON VALLEY BANK
3003 TASMAN DRIVE
SANTA CLARA, CA 95054

RE: IRREVOCABLE STANDBY LETTER OF CREDIT NO.
ISSUED BY ATTN:INTERNATIONAL
DIVISION.
LETTERS OF CREDIT
SILICON VALLEY BANK, SANTA CLARA STANDBY
L/C AMOUNT:

LADIES AND GENTLEMEN:

FOR VALUE RECEIVED, THE UNDERSIGNED BENEFICIARY HEREBY IRREVOCABLY TRANSFERS TO:

(NAME OF TRANSFEREE)

(ADDRESS)

ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY TO DRAW UNDER THE ABOVE LETTER OF CREDIT UP TO ITS AVAILABLE AMOUNT AS SHOWN ABOVE AS OF THE DATE OF THIS TRANSFER.

BY THIS TRANSFER, ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY IN SUCH LETTER OF CREDIT ARE TRANSFERRED TO THE TRANSFEREE. TRANSFEREE SHALL HAVE THE SOLE RIGHTS AS BENEFICIARY THEREOF, INCLUDING SOLE RIGHTS RELATING TO ANY AMENDMENTS, WHETHER INCREASES OR EXTENSIONS OR OTHER AMENDMENTS, AND WHETHER NOW EXISTING OR HEREAFTER MADE. ALL AMENDMENTS ARE TO BE ADVISED DIRECTLY TO THE TRANSFEREE WITHOUT NECESSITY OF ANY CONSENT OF OR NOTICE TO THE UNDERSIGNED BENEFICIARY.

SIGNATURE AUTHENTICATED

The name(s), title(s), and signature(s) conform to that/those on file with us for the company and the signature(s) is/are authorized to execute this instrument.

(Name of Bank) (Address of Bank) (City, State, ZIP Code)
(Authorized Name and Title)

(Authorized Signature) (Telephone number)

THE ORIGINAL OF SUCH LETTER OF CREDIT IS RETURNED HEREWITH, AND WE ASK YOU TO ENDORSE THE TRANSFER ON THE REVERSE THEREOF, AND FORWARD IT DIRECTLY TO THE TRANSFEREE WITH YOUR CUSTOMARY NOTICE OF TRANSFER.

SINCERELY,

(BENEFICIARY'S NAME)

(SIGNATURE OF BENEFICIARY)
(NAME AND TITLE)

AMENDMENT NO. 5 TO COMMERCIAL LEASE BETWEEN COLUMBUS DAY REALTY, INC. AND T2 BIOSYSTEMS, INC.

This Amendment No. 5 is to a Commercial Lease dated May 6, 2013, by and between Columbus Day Realty, Inc. (LESSOR), and T2 Biosystems, Inc. (LESSEE), which lease relates to the premises at 231 Andover Street, Wilmington, Massachusetts.

WHEREAS, the Commercial Lease is dated May 6, 2013;

WHEREAS, the parties signed Amendment No. 1 to the Commercial Lease on September 24, 2103;

WHEREAS, the parties signed Amendment No. 2 to the Commercial Lease on September 21, 2015;

WHEREAS, the parties signed Amendment No. 3 to the Commercial Lease on August 10, 2017;

WHEREAS, the parties signed Amendment No. 4 to the Commercial Lease on August 31, 2018;

WHEREAS, the parties are desirous of amending the Commercial Lease for the purpose of extending the term of the Lease to December 31, 2022;

NOW, THEREFORE, in accordance with the covenants, considerations and conditions contained herein, the parties agree to further amend the Commercial Lease as follows:

3. TERM

This paragraph of the Commercial Lease is hereby amended by extending the expiration date to December 31, 2022.

4. RENT

The base rent for the period of January 1, 2021 to December 31, 2021 shall be at the rate of Twelve Dollars ($12.00) per square foot. The base rent for the period of January 1, 2022 to December 31, 2022 shall be at the rate of Thirteen Dollars ($13.00) per square foot.

Except as modified by this Amendment, all other terms of the Commercial Lease and Amendments No. 1, No. 2, No. 3, and No. 4 shall remain in full force and effect for the remaining term of the Lease.

IN WITNESS WHEREOF, the LESSOR and LESSEE have set their hands and seals this 20th day of October, 2020.

COLUMBUS DAY REALTY, INC. T2 BIOSYSTEMS, INC.

By: Tony Pimentel By: Alec Barclay

Its President Its Chief Operations Officer

By: Susan Johnson

Its Treasurer

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: November 5, 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: November 5, 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 September 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: November 5, 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 September 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: November 5, 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.