

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2022

or

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

For the transition period from to
Commission file number: 001-36536

CAREDX, INC.

(Exact name of registrant as specified in its charter)

Delaware
**(State or other jurisdiction of
incorporation or organization)**

94-3316839
**(I.R.S. Employer
Identification Number)**

8000 Marina Boulevard
Brisbane, California 94005
(Address of principal executive offices and zip code)

(415) 287-2300
(Registrant’s telephone number, including area code)

1 Tower Place
South San Francisco, CA 94080
(Former name, former address and former fiscal year, if changed since last report)

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value \$0.001 per share	CDNA	The Nasdaq Stock Market LLC

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, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

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

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

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

Indicate the number of shares outstanding of each of the issuer’s classes of common stock, as of the latest practicable date.

There were 53,458,126 shares of the registrant’s Common Stock issued and outstanding as of August 2, 2022.

CareDx, Inc.
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PART I. FINANCIAL INFORMATION
ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

CareDx, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands, except share data)

	June 30, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 166,832	\$ 348,485
Marketable securities	139,388	—
Accounts receivable	70,142	59,761
Inventory	18,861	17,186
Prepaid and other current assets	8,657	7,928
Total current assets	403,880	433,360
Property and equipment, net	32,904	22,044
Operating leases right-of-use assets	15,841	17,993
Intangible assets, net	46,318	50,195
Goodwill	37,084	36,983
Restricted cash	204	211
Other assets	5,057	5,835
Total assets	<u>\$ 541,288</u>	<u>\$ 566,621</u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 16,892	\$ 13,337
Accrued compensation	14,631	26,042
Accrued and other liabilities	46,933	37,922
Total current liabilities	78,456	77,301
Deferred tax liability	25	415
Common stock warrant liability	64	139
Deferred payments for intangible assets	2,877	5,041
Operating lease liability, less current portion	16,065	17,394
Other liabilities	252	455
Total liabilities	97,739	100,745
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock: \$0.001 par value; 10,000,000 shares authorized at June 30, 2022 and December 31, 2021; no shares issued and outstanding at June 30, 2022 and December 31, 2021	—	—
Common stock: \$0.001 par value; 100,000,000 shares authorized at June 30, 2022 and December 31, 2021; 53,323,712 shares and 52,923,360 shares issued and outstanding at June 30, 2022 and December 31, 2021, respectively	52	52
Additional paid-in capital	875,213	853,683
Accumulated other comprehensive loss	(7,182)	(4,670)
Accumulated deficit	(424,534)	(383,189)
Total stockholders' equity	443,549	465,876
Total liabilities and stockholders' equity	<u>\$ 541,288</u>	<u>\$ 566,621</u>

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

CareDx, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)
(In thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Revenue:				
Testing services revenue	\$ 67,135	\$ 64,890	\$ 133,579	\$ 124,171
Product revenue	6,714	6,861	13,502	12,639
Patient and digital solutions revenue	6,785	2,437	12,969	4,778
Total revenue	80,634	74,188	160,050	141,588
Operating expenses:				
Cost of testing services	18,230	17,235	35,858	33,718
Cost of product	3,887	5,205	8,286	8,852
Cost of patient and digital solutions	5,422	1,533	10,277	2,982
Research and development	22,632	19,036	44,512	35,040
Sales and marketing	26,950	19,599	50,098	35,051
General and administrative	25,232	16,322	51,791	31,545
Total operating expenses	102,353	78,930	200,822	147,188
Loss from operations	(21,719)	(4,742)	(40,772)	(5,600)
Other (expense) income:				
Interest income, net	478	1	667	127
Change in estimated fair value of common stock warrant liability	48	(65)	75	(38)
Other (expense) income, net	(553)	2,779	(1,376)	2,534
Total other (expense) income	(27)	2,715	(634)	2,623
Loss before income taxes	(21,746)	(2,027)	(41,406)	(2,977)
Income tax benefit	49	100	61	363
Net loss	\$ (21,697)	\$ (1,927)	\$ (41,345)	\$ (2,614)
Net loss per share (Note 3):				
Basic	\$ (0.41)	\$ (0.04)	\$ (0.78)	\$ (0.05)
Diluted	\$ (0.41)	\$ (0.04)	\$ (0.78)	\$ (0.05)
Weighted-average shares used to compute net loss per share:				
Basic	53,249,545	52,224,300	53,133,149	51,705,587
Diluted	53,249,545	52,224,300	53,133,149	51,705,587

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

CareDx, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(Unaudited)
(In thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net loss	\$ (21,697)	\$ (1,927)	\$ (41,345)	\$ (2,614)
Other comprehensive loss:				
Foreign currency translation adjustments, net of tax	(2,092)	443	(2,512)	(1,060)
Net comprehensive loss	<u>\$ (23,789)</u>	<u>\$ (1,484)</u>	<u>\$ (43,857)</u>	<u>\$ (3,674)</u>

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

CareDx, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share data)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	52,923,360	\$ 52	\$ 853,683	\$ (4,670)	\$ (383,189)	\$ 465,876
Issuance of common stock under employee stock purchase plan	25,852	—	999	—	—	999
RSU settlements, net of shares withheld	64,819	—	(1,482)	—	—	(1,482)
Issuance of common stock for services	1,249	—	58	—	—	58
Issuance of common stock for cash upon exercise of stock options	69,993	—	1,598	—	—	1,598
Employee stock-based compensation expense	—	—	10,563	—	—	10,563
Foreign currency translation adjustment	—	—	—	(420)	—	(420)
Net loss	—	—	—	—	(19,648)	(19,648)
Balance at March 31, 2022	53,085,273	52	865,419	(5,090)	(402,837)	457,544
RSU settlements, net of shares withheld	216,950	—	(3,211)	—	—	(3,211)
Issuance of common stock for services	2,156	—	79	—	—	79
Issuance of common stock for cash upon exercise of stock options	19,333	—	413	—	—	413
Employee stock-based compensation expense	—	—	12,513	—	—	12,513
Foreign currency translation adjustment	—	—	—	(2,092)	—	(2,092)
Net loss	—	—	—	—	(21,697)	(21,697)
Balance at June 30, 2022	53,323,712	\$ 52	\$ 875,213	\$ (7,182)	\$ (424,534)	\$ 443,549

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

CareDx, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share data)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2020	49,441,166	\$ 49	\$ 632,253	\$ (2,096)	\$ (352,527)	\$ 277,679
Issuance of common shares through public equity offering, net of commissions and offering costs of \$12,495	2,211,538	2	188,753	—	—	188,755
Issuance of common stock under employee stock purchase plan	24,052	—	838	—	—	838
RSU settlements, net of shares withheld	121,447	—	(2,313)	—	—	(2,313)
Issuance of common stock for services	1,339	—	96	—	—	96
Issuance of common stock for cash upon exercise of stock options	139,579	—	2,193	—	—	2,193
Employee stock-based compensation expense	—	—	6,488	—	—	6,488
Foreign currency translation adjustment	—	—	—	(1,503)	—	(1,503)
Net loss	—	—	—	—	(687)	(687)
Balance at March 31, 2021	51,939,121	51	828,308	(3,599)	(353,214)	471,546
RSU settlements, net of shares withheld	160,286	—	(6,638)	—	—	(6,638)
Issuance of common stock for services	23,163	—	59	—	—	59
Issuance of common stock for cash upon exercise of stock options	427,059	—	6,833	—	—	6,833
Issuance of common stock upon cash exercise of warrants	3,132	—	205	—	—	205
Employee stock-based compensation expense	—	—	9,322	—	—	9,322
Foreign currency translation adjustment	—	—	—	443	—	443
Net loss	—	—	—	—	(1,927)	(1,927)
Balance at June 30, 2021	52,552,761	\$ 51	\$ 838,089	\$ (3,156)	\$ (355,141)	\$ 479,843

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

CareDx, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Six Months Ended June 30,	
	2022	2021
Operating activities:		
Net loss	\$ (41,345)	\$ (2,614)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	23,227	15,945
Revaluation of common stock warrant liability to estimated fair value	(75)	38
Depreciation and amortization	5,363	4,102
Amortization of right-of-use assets	1,822	1,366
Unrealized loss (gain) on long-term marketable equity securities	486	(3,090)
Revaluation of contingent consideration to estimated fair value	564	(191)
Amortization of premium on short-term marketable securities, net	540	637
Changes in operating assets and liabilities:		
Accounts receivable	(10,562)	(13,419)
Inventory	(2,506)	(5,331)
Prepaid and other assets	(514)	(4,203)
Operating leases liabilities, net	(1,962)	(951)
Accounts payable	4,486	1,559
Accrued compensation	(12,290)	(1,395)
Accrued and other liabilities	7,579	4,646
Refund liability - CMS advance payment	—	(20,496)
Change in deferred taxes	(158)	(445)
Net cash used in operating activities	(25,345)	(23,842)
Investing activities:		
Acquisition of business, net of cash acquired	(102)	(3,500)
Acquisition of intangible assets	(2,100)	(6,700)
Purchases of short-term marketable securities	(182,913)	(5,500)
Maturities of short-term marketable securities	42,984	55,080
Additions of capital expenditures, net	(13,111)	(4,088)
Net cash (used in) provided by investing activities	(155,242)	35,292
Financing activities:		
Proceeds from issuance of common shares in public equity offering, net of issuance costs paid	—	188,755
Proceeds from issuance of common stock under employee stock purchase plan	999	838
Taxes paid related to net share settlement of restricted stock units	(3,892)	(8,951)
Proceeds from exercise of warrants	—	4
Proceeds from exercise of stock options	2,011	9,026
Principal payments on finance lease obligations	—	(63)
Payment of contingent consideration	(250)	—
Net cash (used in) provided by financing activities	(1,132)	189,609
Effect of exchange rate changes on cash, cash equivalents and restricted cash	59	(105)
Net (decrease) increase in cash, cash equivalents and restricted cash	(181,660)	200,954
Cash, cash equivalents, and restricted cash at beginning of period	348,696	134,939
Cash, cash equivalents, and restricted cash at end of period	\$ 167,036	\$ 335,893

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

CareDx, Inc.

Notes to Unaudited Condensed Consolidated Financial Statements

1. ORGANIZATION AND DESCRIPTION OF BUSINESS

CareDx, Inc. (“CareDx” or the “Company”), together with its subsidiaries, is a leading precision medicine company focused on the discovery, development and commercialization of clinically differentiated, high-value diagnostic solutions for transplant patients and caregivers. The Company’s headquarters are in Brisbane, California. The primary operations are in Brisbane, California; Omaha, Nebraska; Fremantle, Australia; and Stockholm, Sweden.

The Company’s commercially available testing services consist of AlloSure® Kidney, a donor-derived cell-free DNA (“dd-cfDNA”) solution for kidney transplant patients, AlloMap® Heart, a gene expression solution for heart transplant patients, AlloSure® Heart, a dd-cfDNA solution for heart transplant patients, and AlloSure® Lung, a dd-cfDNA solution for lung transplant patients. The Company has initiated several clinical studies to generate data on its existing and planned future testing services. In April 2020, the Company announced its first biopharma research partnership for AlloCell, a surveillance solution that monitors the level of engraftment and persistence of allogeneic cells for patients who have received cell therapy transplants. The Company also offers high-quality products that increase the chance of successful transplants by facilitating a better match between a donor and a recipient of stem cells and organs. In 2019, the Company began providing digital solutions to transplant centers following the acquisitions of Ottr Complete Transplant Management (“Ottr”) and XynManagement, Inc. (“XynManagement”), as well as the acquisitions of TransChart LLC (“TransChart”), MedActionPlan.com, LLC (“MedActionPlan”) and The Transplant Pharmacy, LLC (“TTP”) in 2021.

Testing Services

AlloSure Kidney has been a covered service for Medicare beneficiaries since October 2017. The Medicare reimbursement rate for AlloSure Kidney is currently \$2,841. AlloSure Kidney has received positive coverage decisions from several commercial payers, and is reimbursed by other private payers on a case-by-case basis.

AlloMap Heart has been a covered service for Medicare beneficiaries since January 2006. The Medicare reimbursement rate for AlloMap Heart is currently \$3,240. AlloMap Heart has also received positive coverage decisions for reimbursement from many of the largest U.S. private payers.

In October 2020, AlloSure Heart received a final Palmetto MolDx Medicare coverage decision for AlloSure Heart. In November 2020, Noridian Healthcare Solutions, the Company’s Medicare Administrative Contractor, issued a parallel coverage policy granting coverage when used in conjunction with AlloMap Heart, which became effective in December 2020. The Medicare reimbursement rate for AlloSure Heart is currently \$2,753.

In May 2021, the Company purchased a minority investment of common stock in the biotechnology company Miromatrix Medical, Inc. (“Miromatrix”), for \$5.0 million, and the investment is marked to market. Miromatrix works to eliminate the need for an organ transplant waiting list through the development of implantable engineered biological organs.

Clinical Studies

In January 2018, the Company initiated the Kidney Allograft Outcomes AlloSure Kidney Registry study (“K-OAR”), to develop additional data on the clinical utility of AlloSure Kidney for surveillance of kidney transplant recipients. K-OAR is a multicenter, non-blinded, prospective observational cohort study which has enrolled more than 1,700 renal transplant patients who will receive AlloSure Kidney long-term surveillance.

In September 2018, the Company initiated the Surveillance HeartCare™ Outcomes Registry (“SHORE”). SHORE is a prospective, multi-center, observational registry of patients receiving HeartCare for surveillance. HeartCare combines the gene expression profiling technology of AlloMap Heart with the dd-cfDNA analysis of AlloSure® Heart in one surveillance solution.

In February 2019, AlloSure® Lung became available for lung transplant patients through a compassionate use program while the test is undergoing further studies. In June 2020, the Company submitted an AlloSure Lung application to the Palmetto MolDx Technical Assessment program seeking coverage and reimbursement for Medicare beneficiaries.

In September 2019, the Company announced the commencement of the Outcomes of KidneyCare on Renal Allografts (“OKRA”) study, which is an extension of K-OAR. OKRA is a prospective, multi-center, observational, registry of patients receiving KidneyCare for surveillance. KidneyCare combines the dd-cfDNA analysis of AlloSure Kidney with the gene expression profiling technology of AlloMap Kidney and the predictive artificial intelligence technology of iBox for a multimodality surveillance solution. The Company has not yet made any applications to private payers for reimbursement coverage of AlloMap Kidney or KidneyCare.

Products

The Company's suite of AlloSeq products are commercial next generation sequencing ("NGS")-based kitted solutions. These products include: AlloSeq™ Tx, a high-resolution Human Leukocyte Antigen ("HLA") typing solution, AlloSeq™ cfDNA, a surveillance solution designed to measure dd-cfDNA in blood to detect active rejection in transplant recipients, and AlloSeq™ HCT, a solution for chimerism testing for stem cell transplant recipients.

The Company's other HLA typing products include: TruSight HLA, a NGS-based high resolution typing solution; Olerup SSP®, based on the sequence specific primer ("SSP") technology; and QTYPE®, which uses real-time polymerase chain reaction ("PCR") methodology, to perform HLA typing.

In March 2021, the Company acquired certain assets of BFS Molecular S.R.L. ("BFS Molecular"), a software company focused on NGS-based patient testing solutions. BFS Molecular brings extensive software and algorithm development capabilities for NGS transplant surveillance products.

Patient and Digital Solutions

Following the acquisitions of both Ottr and XynManagement, the Company is a leading provider of transplant patient management software ("Ottr software"), as well as of transplant quality tracking and waitlist management solutions. Ottr software provides comprehensive solutions for transplant patient management and enables integration with electronic medical record ("EMR") systems providing patient surveillance management tools and outcomes data to transplant centers. XynManagement provides two unique solutions, XynQAPI software ("XynQAPI") and XynCare. XynQAPI simplifies transplant quality tracking and Scientific Registry of Transplant Recipients ("SRTR") reporting. XynCare includes a team of transplant assistants who maintain regular contact with patients on the waitlist to help prepare for their transplant and maintain eligibility.

In September 2020, the Company launched AlloCare, a mobile app that provides a patient-centric resource for transplant recipients to manage medication adherence, coordinate with Patient Care Managers for AlloSure scheduling and measure health metrics.

In January 2021, the Company acquired TransChart. TransChart provides EMR software to hospitals throughout the U.S. to care for patients who have or may need an organ transplant. As part of the Company's acquisition of TransChart in January 2021, the Company acquired TxAccess, a cloud-based service that allows nephrologists and dialysis centers to electronically submit referrals to transplant programs, closely follow and assist patients through the transplant waitlist process, and ultimately, through transplantation.

In June 2021, the Company acquired the Transplant Hero patient application. The application helps patients manage their medications through alarms and interactive logging of medication events.

In June 2021, the Company entered into a strategic agreement, which was amended in April 2022, with OrganX to develop clinical decision support tools across the transplant patient journey. Together, the Company and OrganX will develop advanced analytics that integrate AlloSure, the first transplant specific dd-cfDNA assay, with large transplant databases to provide clinical data solutions. This partnership delivers the next level of innovation beyond multi-modality by incorporating a variety of clinical inputs to create a universal composite scoring system. The Company has agreed to potential future milestone payments.

In November 2021, the Company acquired MedActionPlan, a New Jersey-based provider of medication safety, medication adherence and patient education. MedActionPlan is a leader in patient medication management for transplant patients and beyond.

In December 2021, the Company acquired TTP, a transplant focused pharmacy located in Mississippi. TTP provides individualized transplant pharmacy services for patients at multiple transplant centers located throughout the U.S.

COVID-19 Pandemic

The full impact of the continued COVID-19 pandemic, including the impact associated with preventative and precautionary measures that the Company, other businesses and governments have taken and may take, continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the Company, but the pandemic may materially affect the Company's financial condition, liquidity and future results of operations.

In the final weeks of March and during April 2020, with hospitals increasingly caring for COVID-19 patients, hospital administrators chose to limit or even defer, non-emergency procedures. Immunosuppressed transplant patients either self-prescribed or were asked to avoid transplant centers and caregiver visits to reduce the risk of contracting COVID-19. As a result, with transplant surveillance visits down, the Company experienced a slowdown in testing services volumes in the final weeks of March and during April 2020. As a response to the COVID-19 pandemic, and to enable immune-compromised transplant patients to continue to have their blood drawn, in late March 2020, the Company launched RemoTraC, a remote

home-based blood draw solution using mobile phlebotomy for AlloSure and AlloMap surveillance tests, as well as for other standard monitoring tests.

There continues to be uncertainty around the COVID-19 pandemic as the Omicron variant, including its sub-variants, has caused an increase in COVID-19 cases globally, impacted the availability of medical personnel in transplant centers and the volume of transplant procedures. A sustained reduction in transplant volume can negatively impact the testing volumes, as the Company saw in the early part of the first quarter of 2022.

The Company's product business experienced a reduction in forecasted sales volume throughout the second and third quarters of 2020, as it was unable to undertake onsite discussions and demonstrations of its recently launched NGS products, including AlloSeq Tx 17, which was awarded CE mark authorization in May 2020. The Company's product business regained normalized sales volumes during the fourth quarter of 2020.

The Company is maintaining its testing, manufacturing, and distribution facilities while implementing specific protocols to reduce contact among employees. In areas where COVID-19 impacts healthcare operations, the Company's field-based sales and clinical support teams are supporting providers through virtual platforms. Although the executive orders that placed certain restrictions on operations in San Mateo County and the State of California, where the Company's laboratory and headquarters are located, were lifted effective June 15, 2021, new orders or restrictions could be adopted in the future depending upon the COVID-19 transmission rates in the Company's county and state, as well as other factors.

In addition, the Company created, and continues to have, a COVID-19 task force that is responsible for crisis decision making, employee communications, and enforcing all safety, monitoring and testing protocols in line with local regulations.

Liquidity and Capital Resources

The Company has incurred significant losses and negative cash flows from operations since its inception and had an accumulated deficit of \$424.5 million at June 30, 2022. As of June 30, 2022, the Company had cash, cash equivalents and marketable securities of \$306.2 million and no debt outstanding.

CMS Accelerated and Advance Payment Program for Medicare Providers

On March 27, 2020, the U.S. government enacted the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). Pursuant to the CARES Act, the Centers for Medicare & Medicaid Services ("CMS") expanded its Accelerated and Advance Payment Program in order to increase cash flow to providers of services and suppliers impacted by the COVID-19 pandemic. CMS is authorized to provide accelerated or advance payments during the period of the public health emergency to any Medicare provider who submitted a request to the appropriate Medicare Administrative Contractor and met the required qualifications. During April 2020, the Company received an advance payment from CMS of approximately \$20.5 million, and recorded the payment as Deferred revenue - CMS advance payment on the Company's condensed consolidated balance sheet. During December 2020, the Company reassessed the Deferred revenue - CMS advance payment and repaid the entire amount in January 2021.

January 2021 Underwritten Public Offering of Common Stock

On January 25, 2021, the Company sold 1,923,077 shares of its common stock through an underwritten public offering at a public offering price of \$91.00 per share. The net proceeds to the Company from the offering were approximately \$164.0 million, after deducting underwriting discounts and commissions and offering expenses.

On February 11, 2021, the Company sold 288,461 shares of its common stock pursuant to the full exercise of the overallotment option granted to the underwriters in connection with the offering. The net proceeds to the Company from the full exercise of the underwriters' overallotment option were approximately \$24.7 million.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies and estimates used in preparation of the unaudited condensed consolidated financial statements are described in the Company's audited consolidated financial statements as of and for the year ended December 31, 2021, and the notes thereto, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission (the "SEC") on February 24, 2022. Material changes to the significant accounting policies previously disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2021 are reflected below.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"), and follow the requirements of the SEC for

interim reporting. As permitted under those rules, certain notes and other financial information that are normally required by U.S. GAAP can be condensed or omitted. These unaudited condensed consolidated financial statements have been prepared on the same basis as the Company's annual consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments that are necessary for a fair statement of the Company's financial information. The condensed consolidated balance sheet as of December 31, 2021 has been derived from audited consolidated financial statements as of that date but does not include all of the financial information required by U.S. GAAP for complete financial statements. Operating results for the three and six months ended June 30, 2022 are not necessarily indicative of the results that may be expected for the year ending December 31, 2022.

Use of Estimates

The preparation of unaudited condensed consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses in the unaudited condensed consolidated financial statements and accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to transaction price estimates used for testing services revenue; standalone fair value of patient and digital solutions revenue performance obligations; accrued expenses for clinical studies; inventory valuation; the fair value of assets and liabilities acquired in a business combination or an assets acquisition (including identifiable intangible assets acquired); the fair value of contingent consideration recorded in connection with a business combination or an asset acquisition; the grant date fair value assumptions used to estimate stock-based compensation expense; income taxes; impairment of long-lived assets and indefinite-lived assets (including goodwill); and legal contingencies. Actual results could differ from those estimates.

Concentrations of Credit Risk and Other Risks and Uncertainties

For the three months ended June 30, 2022 and 2021, approximately 54% and 61%, respectively, of total revenue was derived from Medicare. For the six months ended June 30, 2022 and 2021, approximately 54% and 61%, respectively, of total revenue was derived from Medicare.

As of June 30, 2022 and December 31, 2021, approximately 28% and 27%, respectively, of accounts receivable was due from Medicare. No other payer or customer represented more than 10% of accounts receivable at either June 30, 2022 or December 31, 2021.

Marketable Securities

The Company considers all highly liquid investments in securities with a maturity of greater than three months at the time of purchase to be marketable securities. As of June 30, 2022, the Company's short-term marketable securities consisted of corporate debt securities with maturities of greater than three months but less than twelve months at the time of purchase, which were classified as current assets on the condensed consolidated balance sheet.

The Company classifies its short-term marketable securities as held-to-maturity at the time of purchase and reevaluates such designation at each balance sheet date. The Company has the positive intent and ability to hold these marketable securities to maturity. Short-term marketable securities are carried at amortized cost and are adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income, net on the condensed consolidated statements of operations. Realized gains and losses and declines in value judged to be other-than-temporary, if any, on short-term marketable securities are included in interest income, net. The cost of securities sold will be determined using specific identification.

The Company considers investments in securities with remaining maturities of over one year as long-term investments. As of June 30, 2022, the Company's long-term marketable securities consisted of corporate equity securities and corporate debt securities. These long-term marketable securities are classified as other assets on the condensed consolidated balance sheet.

The Company classifies its long-term marketable debt securities as available-for-sale and reevaluates such designation at each balance sheet date. Unrealized gains and losses from the revaluation of the long-term marketable debt securities, if any, are included in other comprehensive gain (loss) in the condensed consolidated statement of comprehensive income (loss). Realized gains and losses and declines in value judged to be other-than-temporary, if any, on long-term marketable securities are included in interest income, net.

The Company records its long-term marketable equity securities at fair market value. Unrealized gains and losses from the remeasurement of the long-term marketable equity securities to fair value are included in other income (expense), net, in the condensed consolidated statements of operations.

Leases

The Company adopted Accounting Standard Codification ("ASC") Topic 842, *Leases*, and determines if an arrangement is or contains a lease at contract inception. A right-of-use ("ROU") asset, representing the underlying asset during the lease term, and

a lease liability, representing the payment obligation arising from the lease, are recognized on the condensed consolidated balance sheet at lease commencement based on the present value of the payment obligation. For operating leases, expense is recognized on a straight-line basis over the lease term. For finance leases, interest expense on the lease liability is recognized using the effective interest method and amortization of the ROU asset is recognized on a straight-line basis over the shorter of the estimated useful life of the asset or the lease term. Short-term leases with an initial term of 12 months or less are not recorded on the balance sheet.

The present value of lease payments is determined by using the interest rate implicit in the lease, if that rate is readily determinable; otherwise, the Company uses its incremental borrowing rate. The incremental borrowing rate is determined by using the rate of interest that the Company would pay to borrow on a collateralized basis an amount equal to the lease payments for a similar term and in a similar economic environment.

As of June 30, 2022, the Company's leases had remaining terms of 0.04 years to 6.67 years, some of which include options to extend the lease term.

Recent Accounting Pronouncements

In November 2021, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2021-10, *Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance*, which contains amendments that require annual disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model. The disclosures include (1) the types of assistance, (2) an entity's accounting for the assistance, and (3) the effect of the assistance on an entity's financial statements. The amendments set forth in this ASU are effective for all entities for annual periods beginning after December 15, 2021. Early application of the amendments in this ASU is permitted. The amendments in this ASU should be applied either (1) prospectively to all transactions within the scope of the amendments that are reflected in financial statements at the date of initial application and new transactions that are entered into after the date of initial application or (2) retrospectively to those transactions. The Company adopted the standard prospectively on January 1, 2022. The adoption of this new standard had no impact on the Company's consolidated financial statements and disclosures.

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which requires that an entity recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). At the acquisition date, an acquirer should account for the related revenue contracts in accordance with ASC 606 as if it had originated the contracts. The amendments set forth in this ASU are effective for fiscal years beginning after December 15, 2022. Early adoption of the amendments is permitted. The amendments in this ASU should be applied prospectively to business combinations occurring on or after the effective date of the amendments. The Company early adopted the standard prospectively on January 1, 2022. The adoption of this new standard had no impact on the Company's consolidated financial statements and disclosures.

In May 2021, the FASB issued ASU No. 2021-04, *Earnings Per Share (Topic 260), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation-Stock Compensation (Topic 718), and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options* (a consensus of the FASB Emerging Issues Task Force), which contains amendments that clarify and reduce diversity in an issuer's accounting for modifications or exchanges of freestanding equity-classified written call options that remain equity classified after modification or exchange. The amendments set forth in this ASU are effective for all entities for annual periods beginning after December 15, 2021. Early application of the amendments in this ASU is permitted for all entities. The amendments in this ASU should be applied prospectively. The Company prospectively adopted the standard on January 1, 2022. The adoption of this new standard had no impact on the Company's consolidated financial statements and disclosures.

In October 2020, the FASB issued ASU No. 2020-10, *Codification Improvements*, which contains amendments that improve the consistency of the ASC by including all disclosure guidance in the appropriate Disclosure Section (Section 50). The FASB provided transition guidance for all the amendments in this ASU. The amendments in Sections B and C (Section A has been removed) of this ASU are effective for annual periods beginning after December 15, 2020 for public business entities. Early application of the amendments in this ASU is permitted for public business entities for any annual or interim period for which financial statements have not been issued. The amendments in this ASU should be applied retrospectively. The Company adopted the standard on January 1, 2021. The adoption of the new standard did not have an impact on the Company's consolidated financial statements and disclosures.

3. NET LOSS PER SHARE

Basic and diluted net loss per share have been computed by dividing the net loss by the weighted-average number of common shares outstanding during the period, without consideration of common share equivalents as their effect would have been antidilutive.

The following tables set forth the computation of the Company's basic and diluted net loss per share (in thousands, except shares and per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Numerator:				
Net loss used to compute basic and diluted net loss per share	\$ (21,697)	\$ (1,927)	\$ (41,345)	\$ (2,614)
Denominator:				
Weighted-average shares used to compute basic and diluted net loss per share	53,249,545	52,224,300	53,133,149	51,705,587
Net loss per share:				
Basic and diluted	\$ (0.41)	\$ (0.04)	\$ (0.78)	\$ (0.05)

The following potentially dilutive securities have been excluded from diluted net loss per share as of June 30, 2022 and 2021 because their effect would be antidilutive:

	Three and Six Months Ended	
	2022	2021
Shares of common stock subject to outstanding options	2,497,986	2,117,516
Shares of common stock subject to outstanding common stock warrants	3,132	3,132
Restricted stock units	2,591,882	1,868,980
Total common stock equivalents	5,093,000	3,989,628

4. FAIR VALUE MEASUREMENTS

The Company records its financial assets and liabilities at fair value. The carrying amounts of certain financial instruments of the Company, including cash and cash equivalents, prepaid expenses and other current assets, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The accounting guidance establishes a three-tiered hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value as follows:

- Level 1: Inputs that include quoted prices in active markets for identical assets and liabilities.
- Level 2: Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following tables set forth the Company's financial assets and liabilities, measured at fair value on a recurring basis, as of June 30, 2022 and December 31, 2021 (in thousands):

	June 30, 2022			
	Fair Value Measured Using			
	(Level 1)	(Level 2)	(Level 3)	Total Balance
Assets				
Cash equivalents:				
Money market funds	\$ 142,355	\$ —	\$ —	\$ 142,355
Long-term marketable securities:				
Corporate equity securities	2,771	—	—	2,771
Corporate debt securities	—	500	—	500
Total	<u>\$ 145,126</u>	<u>\$ 500</u>	<u>\$ —</u>	<u>\$ 145,626</u>
Liabilities				
Short-term liabilities:				
Contingent consideration	\$ —	\$ —	\$ 2,778	\$ 2,778
Long-term liabilities:				
Contingent consideration	—	—	2,877	2,877
Common stock warrant liability	—	—	64	64
Total	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 5,719</u>	<u>\$ 5,719</u>

	December 31, 2021			
	Fair Value Measured Using			
	(Level 1)	(Level 2)	(Level 3)	Total Balance
Assets				
Cash equivalents:				
Money market funds	\$ 335,107	\$ —	\$ —	\$ 335,107
Long-term marketable securities:				
Corporate equity securities	3,257	—	—	3,257
Corporate debt securities	—	500	—	500
Total	<u>\$ 338,364</u>	<u>\$ 500</u>	<u>\$ —</u>	<u>\$ 338,864</u>
Liabilities				
Short-term liabilities:				
Contingent consideration	\$ —	\$ —	\$ 2,114	\$ 2,114
Long-term liabilities:				
Contingent consideration	—	—	3,227	3,227
Common stock warrant liability	—	—	139	139
Total	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 5,480</u>	<u>\$ 5,480</u>

The following table presents the issuances, exercises, changes in fair value and reclassifications of the Company's Level 3 financial instruments that are measured at fair value on a recurring basis (in thousands):

	(Level 3)
Common Stock Warrant Liability and Contingent Consideration	
	\$ 5,480
Balance as of December 31, 2021	
Change in estimated fair value of common stock warrant liability	(75)
Change in estimated fair value of contingent consideration	564
Payments related to contingent consideration	(250)
Balance as of June 30, 2022	<u>\$ 5,719</u>

As of June 30, 2022, the Company had one investment in convertible preferred shares carried at cost. In the event the Company had to calculate the fair value of this investment, it would be based on Level 3 inputs. This investment is not considered material to the Company's condensed consolidated financial statements.

In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's instruments measured at fair value and their classification in the valuation hierarchy are summarized below:

- *Money market funds* – Investments in money market funds are classified within Level 1. Money market funds are valued at the closing price reported by the fund sponsor from an actively traded exchange. At June 30, 2022 and December 31, 2021, money market funds were included as cash and cash equivalents in the condensed consolidated balance sheets.
- *Short-term marketable securities* – Investments in short-term marketable securities are classified within Level 2. The securities are valued using third-party pricing sources. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly.
- *Long-term marketable equity and debt securities* – Investments in long-term marketable equity securities are classified within Level 1. The securities are recorded at fair value based on readily available quoted market prices in active markets. Investments in long-term marketable debt securities are classified within Level 2. The securities are recorded at fair value based on observable inputs for quoted prices for identical or similar assets in markets that are not active. Long-term marketable securities are located within other assets on the condensed consolidated balance sheets.
- *Contingent consideration* – Contingent consideration is classified within Level 3. Contingent consideration relates to asset acquisitions and business combinations. The Company recorded the estimate of the fair value of the contingent consideration based on its evaluation of the probability of the achievement of the contractual conditions that would result in the payment of the contingent consideration. Contingent consideration was estimated using the fair value of the milestones to be paid if the contingency is met multiplied by management's estimate of the probability of success at a discounted rate of 12% at June 30, 2022 and December 31, 2021. The significant input in the Level 3 measurement that is not supported by market activity is the Company's probability assessment of the achievement of the milestones. The value of the liability is subsequently remeasured to fair value at each reporting date, and the change in estimated fair value is recorded as a component of operating expenses until the milestones are paid, expire or are no longer achievable. Increases or decreases in the estimation of the probability percentage result in a directionally similar impact to the fair value measurement of the contingent consideration liability. The carrying amount of the contingent consideration liability represents its fair value.
- *Common stock warrant liability* – Common stock warrant liability is classified within Level 3. The Company utilizes intrinsic value to estimate the fair value of the warrants. The intrinsic value is computed as the difference between the fair value of the Company's common stock on the valuation date and the exercise price of the warrants. Increases (decreases) in the Company's stock price discussed above result in a directionally similar impact to the fair value of the common stock warrant liability. Prior to fiscal year 2022, the Company utilized a binomial lattice pricing model (the "Monte Carlo Simulation Model") which involves a market condition simulation to estimate the fair value of the warrants. The application of the Monte Carlo Simulation Model requires the use of a number of complex assumptions, including the Company's stock price, expected life of the warrants, stock price volatility determined from the Company's historical stock prices, and risk-free rates based on the implied yield currently available in the U.S. Treasury zero-coupon issues with a remaining term equal to the expected life of the warrants. The change in valuation method does not have material financial impact.

Common Stock Warrant Liability Valuation Assumptions Utilized at June 30, 2022 and December 31, 2021:

	June 30, 2022		December 31, 2021	
Private Placement Common Stock Warrant Liability				
Stock Price	\$	21.48	\$	45.48
Exercise Price	\$	1.12	\$	1.12
Remaining term (in years)		0.79		1.28
Volatility		N/A		66.00 %
Risk-free interest rate		N/A		0.49 %

5. CASH AND MARKETABLE SECURITIES

Cash, Cash Equivalents and Restricted Cash

A reconciliation of cash, cash equivalents, and restricted cash reported within the condensed consolidated balance sheets to the amount reported within the condensed consolidated statements of cash flows is shown in the table below (in thousands):

	June 30, 2022	June 30, 2021
Cash and cash equivalents	\$ 166,832	\$ 335,625
Restricted cash	204	268
Total cash, cash equivalents, and restricted cash at the end of the period	<u>\$ 167,036</u>	<u>\$ 335,893</u>

Marketable Securities

All short-term marketable securities were considered held-to-maturity at June 30, 2022. At June 30, 2022, some of the Company's short-term marketable securities were in an unrealized loss position. The Company determined that it had the positive intent and ability to hold until maturity all short-term marketable securities that have been in a continuous loss position, thus there was no recognition of any other-than-temporary impairment as of June 30, 2022. All short-term marketable securities with unrealized losses as of the balance sheet date have been in a loss position for less than twelve months. Contractual maturities of the short-term marketable securities were within one year or less at June 30, 2022.

The long-term marketable equity securities were recorded at fair market value at June 30, 2022 and December 31, 2021. The long-term marketable debt securities were considered available-for-sale at June 30, 2022 and December 31, 2021. The contractual maturity of the long-term marketable debt securities are less than three years.

The amortized cost, gross unrealized holding losses, and fair value of the Company's marketable securities by major security type at each balance sheet date are summarized in the tables below (in thousands):

	June 30, 2022		
	Amortized Cost	Unrealized Holding Losses	Fair Value
Short-term marketable securities:			
Corporate debt securities	\$ 139,388	\$ (835)	\$ 138,553
Total short-term marketable securities	<u>139,388</u>	<u>(835)</u>	<u>138,553</u>
Long-term marketable securities:			
Corporate equity securities	5,000	(2,229)	2,771
Corporate debt securities	500	—	500
Total long-term marketable securities	<u>5,500</u>	<u>(2,229)</u>	<u>3,271</u>
Total	<u>\$ 144,888</u>	<u>\$ (3,064)</u>	<u>\$ 141,824</u>
	December 31, 2021		
	Amortized Cost	Unrealized Holding Losses	Fair Value
Long-term marketable securities:			
Corporate equity securities	\$ 5,000	\$ (1,743)	\$ 3,257
Corporate debt securities	500	—	500
Total long-term marketable securities	<u>\$ 5,500</u>	<u>\$ (1,743)</u>	<u>\$ 3,757</u>

Contractual maturities of the marketable securities at each balance sheet date are as follows (in thousands):

	June 30, 2022	December 31, 2021
Within one year	\$ 139,388	\$ —
After one year through five years	500	500
Total	<u>\$ 139,888</u>	<u>\$ 500</u>

6. BUSINESS COMBINATIONS

The Transplant Pharmacy

In December 2021, the Company acquired TTP, a transplant focused pharmacy located in Mississippi. The Company acquired TTP with a combination of cash consideration paid upfront and contingent consideration with a fair value of \$1.3 million. TTP provides individualized transplant pharmacy services for patients at multiple transplant centers located throughout the U.S.

The Company accounted for the transaction as a business combination using the acquisition method of accounting. Acquisition-related costs of \$0.3 million were expensed as incurred, and classified as part of general and administrative expenses in the condensed consolidated statements of operations.

Goodwill of \$5.5 million arising from the acquisition primarily consists of additional growth opportunities within the pharmacy sector. The integration of TTP into the Company's portfolio is expected to continue to increase the transplant ecosystem for patients and make medication more accessible. The Company estimated net deferred tax liabilities of approximately \$0.6 million arising from temporary differences related to the assets acquired and liabilities assumed. None of the goodwill is expected to be deductible for income tax purposes. All of the goodwill has been assigned to the Company's existing operating segment.

The following table summarizes the fair value of the intangible asset acquired as of the acquisition date (\$ in thousands):

	Estimated Fair Value	Estimated Useful Life (Years)
Trademark	\$ 2,080	10

The trademark acquired consists primarily of the TTP brand and markings. The fair value of the trademark was determined using the relief-from-royalty method under the income approach. This method considers the value of the asset to be the value of the royalty payments from which the Company is relieved due to its ownership of the asset. The royalty rate of 2% was used to estimate the fair value of the trademark.

A discount rate of 13.5% was utilized in estimating the fair value of the trademark.

The pro forma impact of the TTP acquisition is not material, and the results of operations of the acquisition have been included in the Company's condensed consolidated statements of operations from the respective acquisition date.

MedActionPlan

In November 2021, the Company acquired MedActionPlan, a New Jersey-based provider of medication safety, medication adherence and patient education. The Company acquired MedActionPlan with a combination of cash consideration paid upfront and contingent consideration with a fair value of \$3.5 million. MedActionPlan is a leader in patient medication management for transplant patients and beyond.

The Company accounted for the transaction as a business combination using the acquisition method of accounting. Acquisition-related costs of \$0.6 million associated with the acquisition were expensed as incurred, and classified as part of general and administrative expenses in the condensed consolidated statement of operations.

Goodwill of \$4.9 million arising from the acquisition primarily consists of synergies from integrating the MedActionPlan technology with the current testing and digital solutions offered by the Company. The integration of MedActionPlan into centers with the Company's other software platforms will continue to increase the standard of care for transplant patient safety, increase efficiency and facilitate medication compliance. None of the goodwill is expected to be deductible for income tax purposes. All of the goodwill has been assigned to the Company's existing operating segment.

The following table summarizes the fair values of the intangible assets acquired as of the acquisition date (\$ in thousands):

	Estimated Fair Value	Estimated Useful Lives (Years)
Customer relationships	\$ 2,590	10
Developed technology	1,090	10
Trademarks	80	5
Total	<u>\$ 3,760</u>	

Customer relationships acquired by the Company represent the fair value of future projected revenue that is expected to be derived from sales of MedActionPlan's products to existing customers. The customer relationships' fair value has been estimated utilizing a multi-period excess earnings method under the income approach, which reflects the present value of the

projected cash flows that are expected to be generated by the customer relationships, less charges representing the contribution of other assets to those cash flows that use projected cash flows with and without the intangible asset in place. The economic useful life was determined based on the distribution of the present value of the cash flows attributable to the intangible asset.

The acquired developed technology represents the fair value of MedActionPlan's proprietary software. The trademark acquired consists primarily of the MedActionPlan brand and markings. The fair value of both the developed technology and the trademark were determined using the relief-from-royalty method under the income approach. This method considers the value of the asset to be the value of the royalty payments from which the Company is relieved due to its ownership of the asset. The royalty rates of 15% and 1% were used to estimate the fair value of the developed technology and the trademark, respectively.

A discount rate of 40.0% was utilized in estimating the fair value of these three intangible assets.

The pro forma impact of the MedActionPlan acquisition is not material, and the results of operations of the acquisition have been included in the Company's condensed consolidated statements of operations from the respective acquisition date.

TransChart LLC

In January 2021, the Company acquired TransChart for cash. TransChart provides EMR software to hospitals throughout the U.S. to care for patients who have or may need an organ transplant. As a result of the acquisition, the Company recognized goodwill of \$2.2 million and intangible assets of \$2.0 million.

The pro forma impact of the TransChart acquisition is not material, and the results of operations of the acquisition have been included in the Company's condensed consolidated statements of operations from the respective acquisition date.

Combined Consideration Paid

The following table summarizes the consideration paid for TTP, MedActionPlan and TransChart, and the provisional amounts of the assets acquired and liabilities assumed recognized at their estimated fair value at the acquisition date (in thousands):

	Total
Consideration	
Cash	\$ 17,166
Total consideration	<u>\$ 17,166</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Current assets	\$ 3,444
Fixed assets	23
Identifiable intangible assets	7,860
Other assets	2
Current liabilities	(3,915)
Noncurrent liabilities	<u>(2,883)</u>
Total identifiable net assets acquired	4,531
Goodwill	12,635
Total consideration	<u>\$ 17,166</u>

The allocation of the purchase price to assets acquired and liabilities assumed was based on the Company's best estimate of the fair value of such assets and liabilities as of the acquisition date.

7. GOODWILL AND INTANGIBLE ASSETS

Goodwill

Goodwill is recorded when the purchase price of an acquisition exceeds the fair value of the net tangible and identified intangible assets acquired.

Goodwill is tested annually for impairment at the reporting unit level during the fourth quarter or earlier upon the occurrence of certain events or substantive changes in circumstances. There were no indicators of impairment in the three and six months ended June 30, 2022. The balance of the Company's goodwill was \$37.1 million and \$37.0 million as of June 30, 2022 and December 31, 2021, respectively.

Intangible Assets

The following table presents details of the Company's intangible assets as of June 30, 2022 (\$ in thousands):

	June 30, 2022				
	Gross Carrying Amount	Accumulated Amortization	Foreign Currency Translation	Net Carrying Amount	Weighted Average Remaining Useful Life (In Years)
Intangible assets with finite lives:					
Acquired and developed technology	\$ 35,874	\$ (13,705)	\$ (2,281)	\$ 19,888	7.8
Customer relationships	21,898	(6,759)	(2,009)	13,130	9.4
Commercialization rights	11,579	(2,601)	—	8,978	7.1
Trademarks and tradenames	4,540	(1,170)	(298)	3,072	9.0
Total intangible assets with finite lives	73,891	(24,235)	(4,588)	45,068	
Acquired in-process technology	1,250	—	—	1,250	
Total intangible assets	\$ 75,141	\$ (24,235)	\$ (4,588)	\$ 46,318	

The following table presents details of the Company's intangible assets as of December 31, 2021 (\$ in thousands):

	December 31, 2021				
	Gross Carrying Amount	Accumulated Amortization	Foreign Currency Translation	Net Carrying Amount	Weighted Average Remaining Useful Life (In Years)
Intangible assets with finite lives:					
Acquired and developed technology	\$ 35,874	\$ (12,088)	\$ (1,513)	\$ 22,273	8.1
Customer relationships	21,898	(6,024)	(1,210)	14,664	9.9
Commercialization rights	10,579	(2,030)	—	8,549	7.6
Trademarks and tradenames	4,540	(988)	(155)	3,397	9.5
Other	250	(188)	—	62	0.2
Total intangible assets with finite lives	73,141	(21,318)	(2,878)	48,945	
Acquired in-process technology	1,250	—	—	1,250	
Total intangible assets	\$ 74,391	\$ (21,318)	\$ (2,878)	\$ 50,195	

Acquisition of Intangible Assets

In June 2021 and June 2022, the Company acquired commercialization rights in an exclusive partnership for comprehensive data analytics in relation to NGS-based metagenomics testing for infectious diseases. This is included within Commercialization rights as of June 30, 2022.

In June 2021, the Company acquired the Transplant Hero patient application. The patient application is included in Acquired and developed technology as of June 30, 2022.

In the fourth quarter of 2021, acquisition of intangible assets increased \$13.4 million primarily from business combinations. These acquisitions included \$4.7 million of Acquired and developed technology, \$2.5 million of Commercialization rights, \$3.7 million of Customer relationships, \$2.2 million of Trademarks and tradenames and \$0.3 million of Other intangible assets.

Amortization of Intangible Assets

Intangible assets are carried at cost less accumulated amortization. Amortization expenses are recorded to cost of testing services, cost of product, cost of patient and digital solutions, and sales and marketing expenses in the condensed consolidated statements of operations.

The following table summarizes the Company's amortization expense of intangible assets (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Cost of testing services	\$ 329	\$ 350	\$ 658	\$ 658
Cost of product	437	489	890	954
Cost of patient and digital solutions	236	141	472	249
Sales & marketing	543	449	1,148	842
Total	<u>\$ 1,545</u>	<u>\$ 1,429</u>	<u>\$ 3,168</u>	<u>\$ 2,703</u>

The following table summarizes the Company's estimated future amortization expense of intangible assets with finite lives as of June 30, 2022 (in thousands):

Years Ending December 31,	Cost of Testing Services	Cost of Product	Cost of Patient and Digital Solutions	Sales and Marketing	Total
Remainder of 2022	\$ 658	\$ 847	\$ 472	\$ 1,117	\$ 3,094
2023	1,316	1,694	945	2,223	6,178
2024	1,316	1,694	709	2,223	5,942
2025	1,316	1,694	540	2,223	5,773
2026	1,316	747	540	2,221	4,824
Thereafter	4,141	4,052	1,720	9,344	19,257
Total future amortization expense	<u>\$ 10,063</u>	<u>\$ 10,728</u>	<u>\$ 4,926</u>	<u>\$ 19,351</u>	<u>\$ 45,068</u>

8. BALANCE SHEET COMPONENTS

Inventory

Inventory consisted of the following (in thousands):

	June 30, 2022	December 31, 2021
Finished goods	\$ 3,602	\$ 3,911
Work in progress	3,944	2,828
Raw materials	11,315	10,447
Total inventory	<u>\$ 18,861</u>	<u>\$ 17,186</u>

Accrued and Other Liabilities

Accrued and other liabilities consisted of the following (in thousands):

	June 30, 2022	December 31, 2021
Clinical studies	\$ 13,325	\$ 10,653
Professional fees	8,257	5,780
Deferred revenue	4,295	4,208
Short-term lease liability	2,989	3,958
Deferred payments for intangible assets	2,906	2,000
Contingent consideration	2,778	2,114
Capital expenditures	2,537	2,612
Laboratory processing fees & materials	2,400	1,888
Accrued royalty	1,560	1,664
Accrued shipping expenses	704	670
Other accrued expenses	5,182	2,375
Total accrued and other liabilities	<u>\$ 46,933</u>	<u>\$ 37,922</u>

CMS Accelerated and Advance Payment Program for Medicare Providers

On March 27, 2020, the U.S. government enacted the CARES Act. Pursuant to the CARES Act, CMS expanded its Accelerated and Advance Payment Program in order to increase cash flow to providers of services and suppliers impacted by the COVID-19 pandemic. CMS was authorized to provide accelerated or advance payments during the period of the public health emergency to any Medicare provider who submitted a request to the appropriate Medicare Administrative Contractor and met the required qualifications. During April 2020, the Company received an advance payment from CMS of approximately \$20.5 million and recorded the payment as Deferred revenue - CMS advance payment on the Company's condensed consolidated balance sheet. During December 2020, the Company reassessed the Deferred revenue - CMS advance payment and repaid the entire amount in January 2021.

9. COMMITMENTS AND CONTINGENCIES

Leases

The Company leases its operating and office facilities for various terms under long-term, non-cancelable operating lease agreements in Brisbane, California; Columbus, Ohio; West Chester, Pennsylvania; Flowood, Mississippi; Gaithersburg, Maryland; Fremantle, Australia; and Stockholm, Sweden.

The Company's facility leases expire at various dates through 2029. In the normal course of business, it is expected that these leases will be renewed or replaced by leases on other properties.

As of June 30, 2022, the carrying value of the ROU asset was \$15.8 million. The related current and non-current liabilities as of June 30, 2022 were \$3.0 million and \$16.1 million, respectively. The current and non-current lease liabilities are included in accrued and other current liabilities and operating lease liability, less current portion, respectively, in the condensed consolidated balance sheets.

The following table summarizes the lease cost for the three and six months ended June 30, 2022 and 2021 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Operating lease cost	\$ 1,372	\$ 1,207	\$ 2,785	\$ 2,412
Finance lease cost	—	23	—	53
Total lease cost	\$ 1,372	\$ 1,230	\$ 2,785	\$ 2,465

Finance lease cost includes interest from the lease liability and amortization of the ROU asset.

	June 30, 2022
Other information:	
Weighted-average remaining lease term - Operating leases (in years)	5.76
Weighted-average discount rate - Operating leases (%)	9.9 %

Maturities of operating lease liabilities as of June 30, 2022 are as follows (in thousands):

Years Ending December 31,	Operating Leases
Remainder of 2022	\$ 2,305
2023	4,495
2024	4,318
2025	3,955
2026	3,196
Thereafter	7,140
Total lease payments	25,409
Less imputed interest	6,355
Present value of future minimum lease payments	19,054
Less operating lease liability, current portion	2,989
Operating lease liability, long-term portion	\$ 16,065

In June 2022, the Company signed a termination agreement (the "Termination Agreement") for its headquarters office lease in South San Francisco, California (the "South San Francisco Lease"). Pursuant to the Termination Agreement, the termination date for the South San Francisco Lease was modified from December 31, 2022 to July 15, 2022. As a result of such modification, the Company remeasured its lease liability using the current incremental borrowing rate and made an adjustment by reducing the ROU asset and lease liability by \$0.5 million.

In July 2022, the Company moved and relocated its headquarters from South San Francisco, California to Brisbane, California.

Also, in June 2022, the Company renewed the lease agreement for its offices in Fremantle, Australia, and extended the lease term for two years through May 2024.

Royalty Commitments

The Board of Trustees of the Leland Stanford Junior University ("Stanford")

In June 2014, the Company entered into a license agreement with Stanford (the "Stanford License"), which granted the Company an exclusive license to a patent relating to the diagnosis of rejection in organ transplant recipients using dd-cfDNA. Under the terms of the Stanford License, the Company is required to pay an annual license maintenance fee, six milestone payments and royalties in the low single digits of net sales of products incorporating the licensed technology.

Illumina

On May 4, 2018, the Company entered into a license agreement with Illumina, Inc. (the "Illumina Agreement"). The Illumina Agreement requires the Company to pay royalties in the mid-single to low-double digits on sales of products covered by the Illumina Agreement.

Cibiltech Commitments

Pursuant to that certain license and commercialization agreement that the Company entered into with Cibiltech SAS ("Cibiltech") effective April 30, 2019, the Company will share an agreed-upon percentage of revenue with Cibiltech, if and when revenues are generated from iBox.

Other Commitments

Pursuant to the Illumina Agreement, the Company has agreed to minimum purchase commitments of finished products and raw materials from Illumina, Inc. through 2023.

Litigation and Indemnification Obligations

In response to the Company's false advertising suit filed against Natera Inc. ("Natera"), on April 10, 2019, Natera filed a counterclaim against the Company on February 18, 2020, in the U.S. District Court for the District of Delaware (the "Court") alleging the Company made false and misleading claims about the performance capabilities of AlloSure. The suit seeks injunctive relief and unspecified monetary relief. On September 30, 2020, Natera requested leave of Court to amend its counterclaims to include additional allegations regarding purportedly false claims the Company made with respect to AlloSure, and the Court granted Natera's request. The trial commenced on March 7, 2022 and concluded on March 14, 2022, with the

jury awarding the Company \$44.9 million in damages, comprised of \$21.2 million in compensatory damages and \$23.7 million in punitive damages. Post-trial motion practice remains pending. The Company will not record the award until cash is received or the matter is otherwise resolved.

On July 19, 2022, the Federal Circuit court of appeals affirmed the district court's judgment dismissing the Company's patent infringement suit against Natera.

In addition, in response to the Company's patent infringement suit filed against Natera on March 26, 2019, Natera filed suit against the Company on January 13, 2020, in the Court alleging, among other things, that AlloSure infringes Natera's U.S. Patent 10,526,658. This case was consolidated with the Company's patent infringement suit on February 4, 2020. On March 25, 2020, Natera filed an amendment to the suit alleging, among other things, that AlloSure also infringes Natera's U.S. Patent 10,597,724. The suit seeks a judgment that the Company has infringed Natera's patents, an order preliminarily and permanently enjoining the Company from any further infringement of such patents and unspecified damages. On May 13, 2022, Natera filed two new complaints alleging that AlloSure infringes Natera's U.S. Patents 10,655,180 and 11,111,544. These two cases were consolidated with the patent infringement case on June 15, 2022. On May 17, 2022, Natera agreed to dismiss the case alleging infringement of Natera's U.S. Patent 10,526,658. On July 6, 2022, the Company moved to dismiss the rest of Natera's claims. The motion remains pending. The Company intends to defend both of these matters vigorously, and believes that the Company has good and substantial defenses to the claims alleged in the suits, but there is no guarantee that the Company will prevail. The Company has not recorded any liabilities for these suits.

United States Department of Justice and United States Securities and Exchange Commission Investigations

As previously disclosed, in 2021, the Company received a civil investigative demand ("CID") from the United States Department of Justice ("DOJ") requesting that the Company produce certain documents in connection with a False Claims Act investigation being conducted by the DOJ regarding certain business practices related to the Company's kidney testing and phlebotomy services, and a subpoena from the United States Securities and Exchange Commission ("SEC") in relation to an investigation by the SEC in respect of matters similar to those identified in the CID, as well as certain of the Company's accounting and public reporting practices. The Company also received an information request from a state regulatory agency and may receive additional requests for information from the DOJ, SEC, or other regulatory and governmental agencies regarding similar or related subject matters. The Company does not believe that the CID, the SEC subpoena or the state regulatory agency information request raise any issues regarding the safety or efficacy of any of the Company's products or services and are cooperating fully with the investigations. Although the Company remains committed to compliance with all applicable laws and regulations, it cannot predict the outcome of the DOJ or SEC investigations, the state regulatory agency information request, or any other requests or investigations that may arise in the future regarding these or other subject matters.

From time to time, the Company may become involved in litigation and other legal actions. The Company estimates the range of liability related to any pending litigation where the amount and range of loss can be estimated. The Company records its best estimate of a loss when the loss is considered probable. Where a liability is probable and there is a range of estimated loss with no best estimate in the range, the Company records a charge equal to at least the minimum estimated liability for a loss contingency when both of the following conditions are met: (i) information available prior to issuance of the condensed consolidated financial statements indicates that it is probable that a liability had been incurred at the date of the condensed consolidated financial statements, and (ii) the range of loss can be reasonably estimated.

Olympios Matter

On April 15, 2022, a complaint was filed by Michael Olympios against the Company in the Superior Court of the State of California for the County of San Mateo (the "San Mateo County Court"). The complaint alleges that the Company failed to pay certain fees and costs required to continue an arbitration proceeding against Dr. Olympios, and that the Company has defamed Dr. Olympios. Dr. Olympios also seeks to void restrictive covenants previously agreed to by him in favor of the Company and to recover damages purportedly incurred by Dr. Olympios. The Company filed a motion to compel arbitration and dismiss the case. On April 25, 2022, the San Mateo County Court granted the Company's *ex parte* application to stay the case and advance the hearing date to June 10, 2022 for the motion to compel arbitration and dismiss. At the June 10, 2022 hearing, the San Mateo County Court found that the decision should be made by the arbitrator, and stayed the case. The arbitration hearing is currently set for October 27, 2022. The Company intends to defend itself vigorously. The Company believes it has good and substantial defenses to the claims alleged in the suit, but there is no guarantee that the Company will prevail if the case continues. The Company has not recorded any liabilities for this suit.

Securities Class Action

On May 23, 2022, Plumbers & Pipefitters Local Union #295 Pension Fund filed a federal securities class action in the U.S. District Court for the Northern District of California against the Company, Reginald Seeto, its President, Chief Executive Officer and member of the Company's Board of Directors, Ankur Dhingra, its former Chief Financial Officer, Marcel Konrad, its former interim Chief Financial Officer and former Senior Vice President of Finance & Accounting, and Peter Maag, its

former President, former Chief Executive Officer, former Chairman of the Board and current member of the Company's Board of Directors. The action alleges that the Company and the individual defendants made materially false and/or misleading statements and/or omissions and that such statements violated Section 10(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 promulgated thereunder. The action also alleges that the individual defendants are liable pursuant to Section 20(a) of the Exchange Act as controlling persons of the Company. The suit seeks to recover damages caused by the alleged violations of federal securities laws, along with the plaintiffs' costs incurred in the lawsuit, including their reasonable attorneys' and experts' witness fees and other costs. The Company intends to defend itself vigorously, and believes that the Company has good and substantial defenses to the claims alleged in the suit, but there is no guarantee that the Company will prevail. The Company has not recorded any liabilities for this suit.

10. 401(K) PLAN

The Company sponsors a 401(k) defined contribution plan (the "401(k) Plan") covering all U.S. employees under the Internal Revenue Code of 1986, as amended. Employee contributions to the 401(k) Plan are voluntary and are determined on an individual basis subject to the maximum allowable under federal tax regulations. The Company incurred expenses related to contributions to the 401(k) Plan of \$0.5 million and \$0.3 million for the three months ended June 30, 2022 and 2021, respectively. The Company incurred expenses related to contributions to the plan of \$1.2 million and \$0.8 million for the six months ended June 30, 2022 and 2021, respectively.

11. WARRANTS

The Company issues common stock warrants in connection with debt or equity financings to lenders, placement agents and investors. Issued warrants are considered standalone financial instruments and the terms of each warrant are analyzed for equity or liability classification in accordance with U.S. GAAP. Warrants that are classified as liabilities usually have various features that would require net-cash settlement by the Company. Warrants that are not liabilities, derivatives and/or meet the exception criteria are classified as equity. Warrants liabilities are remeasured at fair value at each period end with changes in fair value recorded in the condensed consolidated statements of operations until expired or exercised. Warrants that are classified as equity are valued at their relative fair value on the date of issuance, recorded in additional paid in capital and not remeasured.

In the three and six months ended June 30, 2022, no warrants to purchase shares of common stock were exercised.

In the three and six months ended June 30, 2021, warrants to purchase approximately 3,000 shares of common stock were exercised for cash proceeds of \$4 thousand.

As of June 30, 2022, outstanding warrants to purchase common stock were:

	Classified as	Original Term	Exercise Price	Number of Shares Underlying Warrants
Original issue date:				
April 2016	Liability	7 years	\$ 1.12	3,132
				<u>3,132</u>

12. STOCK INCENTIVE PLANS

Stock Options and Restricted Stock Units (“RSU”)

The following table summarizes option and RSU activity under the Company’s 2014 Equity Incentive Plan, 2016 Inducement Equity Incentive Plan, and 2019 Inducement Equity Incentive Plan, and related information:

	Shares Available for Grant	Stock Options Outstanding	Weighted-Average Exercise Price	Number of RSU Shares	Weighted-Average Grant Date Fair Value
Balance—December 31, 2021	2,066,529	1,863,633	\$ 29.33	2,047,657	\$ 50.21
Additional shares authorized	2,116,934	—	—	—	—
Common stock awards for services	(3,082)	—	—	—	—
RSUs granted	(1,223,905)	—	—	1,223,905	34.20
RSUs vested	—	—	—	(408,565)	39.00
Options granted	(908,835)	908,835	34.68	—	—
Options exercised	—	(89,326)	22.51	—	—
Repurchase of common stock under employee incentive plans	126,796	—	—	—	—
RSUs forfeited	271,115	—	—	(271,115)	50.39
Options forfeited	177,860	(177,860)	39.34	—	—
Options expired	7,296	(7,296)	30.96	—	—
Balance—June 30, 2022	<u>2,630,708</u>	<u>2,497,986</u>	\$ 30.58	<u>2,591,882</u>	\$ 44.52

The total intrinsic value of options exercised was \$0.3 million and \$1.3 million for the three and six months ended June 30, 2022, respectively. The total intrinsic value of options exercised was \$25.9 million and \$35.0 million for the three and six months ended June 30, 2021, respectively.

As of June 30, 2022, the total intrinsic value of outstanding RSUs was approximately \$55.7 million and there were \$91.7 million of unrecognized compensation costs related to RSUs, which are expected to be recognized over a weighted-average period of 2.95 years.

Options outstanding that have vested and are expected to vest at June 30, 2022 are as follows:

	Number of Shares Issued (In thousands)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (In thousands)
Vested	1,134	\$ 23.80	6.35	\$ 5,857
Expected to vest	1,260	36.21	9.02	637
Total	<u>2,394</u>			<u>\$ 6,494</u>

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying stock options and the fair value of the Company’s common stock at June 30, 2022 for stock options that were in-the-money.

The total fair value of options that vested during the three and six months ended June 30, 2022 was \$2.4 million and \$6.3 million, respectively. As of June 30, 2022, there were approximately \$28.8 million of unrecognized compensation costs related to stock options, which are expected to be recognized over a weighted-average period of 2.96 years.

2014 Employee Stock Purchase Plan

The Company has an Employee Stock Purchase Plan (the “ESPP”), under which employees can purchase shares of its common stock based on a percentage of their compensation, but not greater than 15% of their respective earnings; provided, however, an eligible employee’s right to purchase shares of the Company’s common stock may not accrue at a rate which exceeds \$25,000 of the fair market value of such shares for each calendar year in which such rights are outstanding. The ESPP has consecutive offering periods of approximately six months in length. The purchase price per share must be equal to the lower of 85% of the fair value of the common stock on the first day of the offering period or on the exercise date.

During the offering period in 2022 that ended on June 30, 2022, 67,570 shares were purchased pursuant to the ESPP for aggregate proceeds of \$1.2 million from the issuance of such shares, which occurred on July 1, 2022.

During the offering period in 2021 that ended on December 31, 2021, 25,852 shares were purchased pursuant to the ESPP for aggregate proceeds of \$1.0 million from the issuance of such shares, which occurred on January 6, 2022.

Valuation Assumptions

The estimated fair values of employee stock options and ESPP shares were estimated using the Black-Scholes option pricing model based on the following weighted average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Employee stock options				
Expected term (in years)	5.9	5.6	5.9	5.9
Expected volatility	76.94%	78.07%	76.94%	77.78%
Risk-free interest rate	2.88%	1.03%	2.41%	0.76%
Expected dividend yield	—%	—%	—%	—%
Employee stock purchase plan				
Expected term (in years)	0.5	0.5	0.5	0.5
Expected volatility	67.79%	53.10%	67.79%	53.10%
Risk-free interest rate	2.51%	0.09%	2.51%	0.09%
Expected dividend yield	—%	—%	—%	—%

Risk-free Interest Rate: The Company based the risk-free interest rate over the expected term of the award based on the constant maturity rate of U.S. Treasury securities with similar maturities as of the date of grant.

Volatility: The Company used an average historical stock price volatility of its own stock.

Expected Term: The expected term represents the period for which the Company's stock-based compensation awards are expected to be outstanding and is based on analyzing the vesting and contractual terms of the awards and the holders' historical exercise patterns and termination behavior.

Expected Dividends: The Company has not paid and does not anticipate paying any dividends in the near future.

Stock-Based Compensation Expense

The following table summarizes stock-based compensation expense relating to employee and non-employee stock-based awards for the three and six months ended June 30, 2022 and 2021, included in the condensed consolidated statements of operations as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Cost of testing services	\$ 566	\$ 570	\$ 585	\$ 965
Cost of product	402	214	530	289
Cost of patient and digital solutions	391	230	583	338
Research and development	2,323	1,940	4,513	3,298
Sales and marketing	3,907	2,632	7,030	4,292
General and administrative	5,004	3,811	9,986	6,763
Total	\$ 12,593	\$ 9,397	\$ 23,227	\$ 15,945

No tax benefit was recognized related to stock-based compensation expense since the Company has never reported taxable income and has established a full valuation allowance to offset all of the potential tax benefits associated with its deferred tax assets. In addition, no amounts of stock-based compensation expense were capitalized for the periods presented.

13. INCOME TAXES

The Company's effective tax rate may vary from the U.S. federal statutory tax rate due to the change in the mix of earnings in tax jurisdictions with different statutory rates, benefits related to tax credits, and the tax impact of non-deductible expenses and other permanent differences between income before income taxes and taxable income.

For the three and six months ended June 30, 2022, the Company recorded an income tax benefit of \$49 thousand and \$61 thousand, respectively. For the three and six months ended June 30, 2021, the Company recorded an income tax benefit of \$0.1 million and \$0.4 million, respectively. The income tax benefit of \$49 thousand and \$61 thousand for the three and six months ended June 30, 2022 is primarily attributable to the recognition of deferred tax assets from foreign losses. The Company assesses the realizability of its net deferred tax assets by evaluating all available evidence, both positive and negative, including (i) cumulative results of operations in recent years, (ii) sources of recent losses, (iii) estimates of future taxable income, and (iv) the length of net operating loss carryforward periods. The Company believes that based on the history of its U.S. losses and other factors, the weight of available evidence indicates that it is more likely than not that it will not be able to realize its U.S. net deferred tax assets. The Company has also placed a valuation allowance on the net deferred tax assets of its Australian operations. Accordingly, the U.S. and Australian net deferred tax assets have been offset by a full valuation allowance.

14. SEGMENT REPORTING

Operating segments are defined as components of an enterprise for which separate financial information is available that is evaluated regularly by the Company's Chief Operating Decision Maker ("CODM"), or decision making group, whose function is to allocate resources to and assess the performance of the operating segments. The Company has identified its Chief Executive Officer as the CODM. In determining its reportable segments, the Company considered the markets and types of customers served and the products or services provided in those markets. The Company operates in a single reportable segment.

Revenues by geographic regions are based upon the customers' ship-to address for product revenue, the region of testing for testing services revenue, and the region of services provided for patient and digital solutions revenue. The following table summarizes reportable revenues by geographic regions (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Testing services revenue				
United States	\$ 66,905	\$ 64,839	\$ 133,128	\$ 123,860
Rest of World	230	51	451	311
	<u>\$ 67,135</u>	<u>\$ 64,890</u>	<u>\$ 133,579</u>	<u>\$ 124,171</u>
Product revenue				
United States	\$ 3,577	\$ 3,465	\$ 7,190	\$ 5,960
Europe	2,383	2,659	4,625	4,911
Rest of World	754	737	1,687	1,768
	<u>\$ 6,714</u>	<u>\$ 6,861</u>	<u>\$ 13,502</u>	<u>\$ 12,639</u>
Patient and digital solutions revenue				
United States	\$ 6,525	\$ 2,407	\$ 12,678	\$ 4,695
Europe	210	10	220	41
Rest of World	50	20	71	42
	<u>\$ 6,785</u>	<u>\$ 2,437</u>	<u>\$ 12,969</u>	<u>\$ 4,778</u>
Total United States	<u>\$ 77,007</u>	<u>\$ 70,711</u>	<u>\$ 152,996</u>	<u>\$ 134,515</u>
Total Europe	<u>\$ 2,593</u>	<u>\$ 2,669</u>	<u>\$ 4,845</u>	<u>\$ 4,952</u>
Total Rest of World	<u>\$ 1,034</u>	<u>\$ 808</u>	<u>\$ 2,209</u>	<u>\$ 2,121</u>
Total	<u><u>\$ 80,634</u></u>	<u><u>\$ 74,188</u></u>	<u><u>\$ 160,050</u></u>	<u><u>\$ 141,588</u></u>

The following table summarizes long-lived assets, consisting of property and equipment, net, by geographic regions (in thousands):

	June 30, 2022	December 31, 2021
Long-lived assets:		
United States	\$ 32,321	\$ 21,444
Europe	441	403
Rest of World	142	197
Total	<u>\$ 32,904</u>	<u>\$ 22,044</u>

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

The following discussion and analysis of our financial condition and results of operations should be read together with the unaudited condensed consolidated financial statements and related notes included elsewhere in Item 1 of Part I of this Quarterly Report on Form 10-Q and with the audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the Securities and Exchange Commission, or the SEC, on February 24, 2022.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements contained in this Quarterly Report on Form 10-Q other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “should,” “would,” “project,” “plan,” “target,” “contemplate,” “predict,” “expect” and the negative and plural forms of these words and similar expressions are intended to identify forward-looking statements.

These forward-looking statements may include, but are not limited to, statements concerning the following:

- the potential impact to our business, revenue, financial condition and employees, including disruptions to our testing services, laboratories, clinical trials, supply chain and operations, due to the COVID-19 global pandemic;
- our ability to generate revenue and increase the commercial success of our current and future testing services, products and patient and digital solutions;
- our ability to obtain, maintain and expand reimbursement coverage from payers for our current and other future testing services, if any;
- our plans and ability to continue updating our testing services, products and patient and digital solutions to maintain our leading position in transplantations;
- the outcome or success of our clinical trial collaborations and registry studies, including Kidney Allograft Outcomes AlloSure Registry, or K-OAR, the Outcomes of KidneyCare™ on Renal Allografts registry study, or OKRA, and the Surveillance HeartCare Outcomes Registry, or SHORE;
- the favorable review of our testing services and product offerings, and our future solutions, if any, in peer-reviewed publications;
- our ability to obtain additional financing on terms favorable to us, or at all;
- our anticipated cash needs and our anticipated uses of our funds, including our estimates regarding operating expenses and capital requirements;
- anticipated trends and challenges in our business and the markets in which we operate;
- our dependence on certain of our suppliers, service providers and other distribution partners;
- disruptions to our business, including disruptions at our laboratories and manufacturing facilities;
- our ability to retain key members of our management team;
- our ability to make successful acquisitions or investments and to manage the integration of such acquisitions or investments;
- our ability to expand internationally;
- our compliance with federal, state and foreign regulatory requirements;
- our ability to protect and enforce our intellectual property rights, our strategies regarding filing additional patent applications to strengthen our intellectual property rights, and our ability to defend against intellectual property claims that may be brought against us;
- our ability to successfully assert, defend against or settle any litigation brought by or against us or other legal matters or disputes; and
- our ability to comply with the requirements of being a public company.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the section entitled “Risk Factors” in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the SEC on February 24, 2022. Moreover, we operate in a very competitive and

rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially and adversely from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

You should read this Quarterly Report on Form 10-Q and the documents that we reference in this Quarterly Report on Form 10-Q and have filed with the SEC as exhibits to this Quarterly Report on Form 10-Q with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect. We qualify all forward-looking statements by these cautionary statements.

Overview and Recent Highlights

CareDx, Inc., or collectively, the Company, we, us and our, is a leading precision medicine company focused on the discovery, development and commercialization of clinically differentiated, high-value diagnostic solutions for transplant patients and caregivers. We offer testing services, products, and digital healthcare solutions along the pre- and post-transplant patient journey, and we are a leading provider of genomics-based information for transplant patients.

Highlights for the Three Months Ended June 30, 2022 and Recent Highlights

- Delivered 45,000 patient test results, representing growth of 21% compared to second quarter of 2021
- Achieved revenue of \$80.6 million, increasing 9% year-over-year
- Sustained strong overall GAAP gross margin of 66%
- Strong capital position with \$306M cash, cash equivalents, marketable securities, and no debt

Testing Services

Kidney

AlloSure Kidney, our transplant surveillance solution, was commercially launched in October 2017 and is our donor-derived cell-free DNA, or dd-cfDNA offering built on a next generation sequencing, or NGS, platform. In transplantation, more than 100 papers from over 50 studies globally have shown the value of dd-cfDNA in the management of solid organ transplantation. AlloSure Kidney is able to discriminate dd-cfDNA from recipient-cell-free DNA, targeting polymorphisms between donor and recipient. This single nucleotide polymorphism, or SNP, approach across all the somatic chromosomes is specifically designed for transplantation, allowing a scalable, high-quality test to differentiate dd-cfDNA.

AlloSure Kidney has received positive coverage decisions for reimbursement from Medicare. The Medicare reimbursement rate for AlloSure Kidney is \$2,841. AlloSure Kidney has received positive coverage decisions from several commercial payers, and is reimbursed by other private payers on a case-by-case basis.

Multiple studies have demonstrated that significant allograft injury can occur in the absence of changes in serum creatinine. Thus, clinicians have limited ability to detect injury early and intervene to prevent long-term damage using this marker. While histologic analysis of the allograft biopsy specimen remains the standard method used to assess injury and differentiate rejection from other injury in kidney transplants, as an invasive test with complications, repetitive biopsies are not well tolerated. AlloSure Kidney provides a non-invasive test, assessing allograft injury that enables more frequent, quantitative and safer assessment of allograft rejection and injury status. Beyond allograft rejection, the assessment of molecular inflammation has shown further utility in the assessment of proteinuria, the formation of De Novo donor specific antibodies, or DSAs, and as a surrogate predictive measure of estimated glomerular filtration rate, or eGFR, decline. Monitoring of graft injury through AlloSure Kidney allows clinicians to optimize allograft biopsies, identify allograft injury and guide immunosuppression management more accurately.

Since the analytical validation paper in the Journal of Molecular Diagnostics in 2016 before the commercial launch of AlloSure Kidney, there has been an increasing body of evidence supporting the use of AlloSure Kidney dd-cfDNA in the assessment and surveillance of kidney transplants. Bloom et al evaluated 102 kidney recipients and demonstrated that dd-cfDNA levels could

discriminate accurately and non-invasively distinguish rejection from other types of graft injury. In contrast, serum creatinine has area under the curve of 50%, showing no significant difference between patients with and without rejection. Multiple publications and abstracts have shown AlloSure Kidney's value in the management of BK viremia, as well as numerous pathologies that cause molecular inflammation and injury such as DSAs and eGFR decline. Most recently its utility in the assessment of T-cell mediated rejection (TCMR) 1A and borderline rejection was published in the American Journal of Transplant, or AJT, and the outcomes of 1,000 patients was published in Kidney International.

The prospective multicenter trial, the K-OAR study, has enrolled over 1,700 patients, with plans to survey patients with AlloSure Kidney for 3 years and provide further clinical utility of AlloSure Kidney in the surveillance of kidney transplant recipients.

KidneyCare

KidneyCare combines the dd-cfDNA analysis of AlloSure Kidney with the gene expression profiling technology of AlloMap Kidney and the predictive artificial intelligence technology of iBox in one surveillance solution. We have not yet made any applications to private payers for reimbursement coverage of AlloMap Kidney or iBox.

In September 2019, we announced the enrollment of the first patient in the OKRA study, which is an extension of the K-OAR study. OKRA is a prospective, multi-center, observational registry of patients receiving KidneyCare for surveillance. Combined with K-OAR, 3,000 patients will be enrolled into the study.

Heart

AlloMap Heart is a gene expression test that helps clinicians monitor and identify heart transplant recipients with stable graft function who have a low probability of moderate-to-severe acute cellular rejection. Since 2008, we have sought to expand the adoption and utilization of our AlloMap Heart solution through ongoing studies to substantiate the clinical utility and actionability of AlloMap Heart, secure positive reimbursement decisions from large private and public payers, develop and enhance our relationships with key members of the transplant community, including opinion leaders at major transplant centers, and explore opportunities and technologies for the development of additional solutions for post-transplant surveillance.

We believe the use of AlloMap Heart, in conjunction with other clinical indicators, can help healthcare providers and their patients better manage long-term care following a heart transplant, can improve patient care by helping healthcare providers avoid the use of unnecessary, invasive surveillance biopsies and may help to determine the appropriate dosage levels of immunosuppressants. In 2008, AlloMap Heart received 510(k) clearance from the U.S. Food and Drug Administration for marketing and sale as a test to aid in the identification of heart transplant recipients, who have a low probability of moderate/severe acute cellular rejection at the time of testing, in conjunction with standard clinical assessment.

AlloMap Heart has been a covered service for Medicare beneficiaries since January 1, 2006. The Medicare reimbursement rate for AlloMap Heart is currently \$3,240.

AlloMap Heart has also received positive coverage decisions for reimbursement from many of the largest U.S. private payers.

In October 2020, we received a final Palmetto MoDx Medicare coverage decision for AlloSure Heart. In November 2020, Noridian Healthcare Solutions, our Medicare Administrative Contractor, issued a parallel coverage policy granting coverage when used in conjunction with AlloMap Heart, which became effective in December 2020. The Medicare reimbursement rate for AlloSure Heart is currently \$2,753. AlloSure Heart has received positive coverage decisions from several commercial payers.

We have also successfully completed several landmark clinical trials in the transplant field demonstrating the clinical utility of AlloMap Heart for surveillance of heart transplant recipients. We initially established the analytical and clinical validity of AlloMap Heart based on our Cardiac Allograft Rejection Gene Expression Observational (Deng, M. et al., Am J Transplantation 2006) study, which was published in the AJT. A subsequent clinical utility trial, Invasive Monitoring Attenuation through Gene Expression (Pham MX et al., N. Eng. J. Med., 2010), published in The New England Journal of Medicine, demonstrated that clinical outcomes in recipients managed with AlloMap Heart surveillance were equivalent (non-inferior) to outcomes in recipients managed with biopsies. The results of our clinical trials have also been presented at major medical society congresses. AlloMap Heart is now recommended as part of the ISHLT (International Society for Heart and Lung Transplantation) guidelines.

HeartCare

HeartCare includes the gene expression profiling technology of AlloMap Heart with the dd-cfDNA analysis of AlloSure Heart in one surveillance solution. An approach to surveillance using HeartCare provides information from two complementary measures: (i) AlloMap Heart – a measure of immune activation, and (ii) AlloSure Heart – a measure of graft injury.

Clinical validation data from the Donor-Derived Cell-Free DNA-Outcomes AlloMap Registry (NCT02178943), or D-OAR, was published in the AJT in 2019. D-OAR was an observational, prospective, multicenter study to characterize the AlloSure Heart dd-cfDNA in a routine, clinical surveillance setting with heart transplant recipients. The D-OAR study was designed to validate that plasma levels of AlloSure Heart dd-cfDNA can discriminate acute rejection from no rejection, as determined by endomyocardial biopsy criteria.

HeartCare provides robust information about distinct biological processes, such as immune quiescence, active injury, acute cellular rejection and antibody mediated rejection. In September 2018, we initiated the SHORE study. SHORE is a prospective, multi-center, observational, registry of patients receiving HeartCare for surveillance. Patients enrolled in SHORE will be followed for 5 years with collection of clinical data and assessment of 5-year outcomes.

Lung

In February 2019, AlloSure Lung became available for lung transplant patients through a compassionate use program while the test is undergoing further studies. One of these studies, launched in April 2020, is the ALARM study, or AlloSure Lung Allograft Remote Monitoring, with Johns Hopkins University, where the impact of AlloSure Lung combined with RemoTraC will be measured. AlloSure Lung applies proprietary NGS technology to measure dd-cfDNA from the donor lung in the recipient bloodstream to monitor graft injury. In June 2020, we submitted an application to the Palmetto MolDx Technology Assessment program seeking coverage and reimbursement for AlloSure Lung. In October 2021, we launched AlloSure Lung as part of the CHEST 2021 Annual Meeting. We have gained early adoption with some commercial payers.

Cellular Therapy

In April 2020, we initiated a research partnership for AlloCell, a surveillance solution that monitors the level of engraftment and persistence of allogeneic cells for patients who have received cell therapy. AlloCell is being commercialized through research agreements with biopharma companies developing cell therapies. In 2021, we executed multiple additional agreements with biopharma therapeutics companies to use AlloCell in research and clinical studies.

In July 2021, we launched the Assessing Chimerism and Relapse of Bone marrow/ HCT transplant using AlloHeme Testing, or ACROBAT Study. The ACROBAT Study is a prospective, multicenter, observational cohort study to evaluate the use of AlloHeme, a microchimerism NGS tool to predict post-transplant relapse in patients with allogeneic hematopoietic cell transplants, or HCT.

Products

We develop, manufacture, market and sell products that increase the chance of successful transplants by facilitating a better match between a solid organ or stem cell donor and a recipient, and help to provide post-transplant surveillance of these recipients.

QTYPE enables Human Leukocyte Antigen, or HLA, typing at a low to intermediate resolution for samples that require a fast turn-around-time and uses real-time polymerase chain reaction, or PCR, methodology. Olerup SSP is used to type HLA alleles based on the sequence specific primer, or SSP, technology.

On May 4, 2018, we entered into a license and collaboration agreement with Illumina, Inc., or Illumina, which provides us with worldwide distribution, development and commercialization rights to Illumina's NGS products and technologies for use in transplantation diagnostic testing.

On June 1, 2018, we became the exclusive worldwide distributor of Illumina's TruSight HLA product line. TruSight HLA is a high-resolution solution that uses NGS methodology. In addition, we were granted the exclusive right to develop and commercialize other NGS product lines in the field of bone marrow and solid organ transplantation on diagnostic testing. These NGS products include: AlloSeq Tx, a high-resolution HLA typing solution, AlloSeq cfDNA, our surveillance solution designed to measure dd-cfDNA in blood to detect active rejection in transplant recipients, and AlloSeq HCT, a NGS solution for chimerism testing for stem cell transplant recipients.

In September 2019, we commercially launched AlloSeq cfDNA, our surveillance solution designed to measure dd-cfDNA in blood to detect active rejection in transplant recipients, and we received CE mark authorization on January 10, 2020. Our ability to increase the clinical uptake for AlloSeq cfDNA will be a result of multiple factors, including local clinical education, customer lab technical proficiency and levels of country-specific reimbursement.

Also in September 2019, we commercially launched AlloSeq Tx, the first of its kind NGS high-resolution HLA typing solution utilizing hybrid capture technology. This technology enables the most comprehensive sequencing, covering more of the HLA genes than other solutions on the market and adding coverage of non-HLA genes that may impact transplant patient matching and management. AlloSeq Tx has simple NGS workflow, with a single tube for processing and steps to reduce errors. AlloSeq Tx 17 received CE mark authorization on May 15, 2020.

In June 2020, we commercially launched AlloSeq HCT, a NGS solution for chimerism testing for stem cell transplant recipients. This technology has the potential to provide better sensitivity and data analysis compared to current solutions on the market. AlloSeq HCT received CE mark authorization in May 2022.

In March 2021, we acquired certain assets of BFS Molecular S.R.L., or BFS Molecular, a software company focused on NGS-based patient testing solutions. BFS Molecular brings extensive software and algorithm development capabilities for NGS transplant surveillance products.

Patient and Digital Solutions

In 2019, we began providing digital solutions to transplant centers following the acquisitions of Ottr, Inc., or Ottr, and XynManagement, Inc., or XynManagement.

On May 7, 2019, we acquired 100% of the outstanding common stock of Ottr. Ottr was formed in 1993 and is a leading provider of transplant patient management software, or the Ottr software, which provides comprehensive solutions for transplant patient management. The Ottr software enables integration with electronic medical records, or EMR, systems, including Cerner and Epic, providing patient surveillance management tools and outcomes data to transplant centers.

On August 26, 2019, we acquired 100% of the outstanding common stock of XynManagement. XynManagement provides two unique solutions, XynQAPI software, or XynQAPI and XynCare. XynQAPI simplifies transplant quality tracking and Scientific Registry of Transplant Recipients reporting. XynCare includes a team of transplant assistants who maintain regular contact with patients on the waitlist to help prepare for their transplant and maintain eligibility.

In September 2020 we launched AlloCare, a mobile app that provides a patient-centric resource for transplant recipients to manage medication adherence, coordinate with Patient Care Managers for AlloSure scheduling and measure health metrics.

In January 2021, we acquired TransChart LLC, or TransChart. TransChart provides EMR software to hospitals throughout the United States to care for patients who have or may need an organ transplant. As part of our acquisition of TransChart in January 2021, we acquired Tx Access, a cloud-based service that allows nephrologists and dialysis centers to electronically submit referrals to transplant programs, closely follow and assist patients through the transplant waitlist process, and ultimately, through transplantation.

In June 2021, we acquired the Transplant Hero patient application. The application helps patients manage their medications through alarms and interactive logging of medication events.

In June 2021, we entered into a strategic agreement, which was amended in April 2022, with OrganX to develop clinical decision support tools across the transplant patient journey. Together, we and OrganX will develop advanced analytics that integrate AlloSure, the first transplant specific dd-cfDNA assay, with large transplant databases to provide clinical data solutions. This partnership delivers the next level of innovation beyond multi-modality by incorporating a variety of clinical inputs to create a universal composite scoring system.

In November 2021, we acquired MedActionPlan.com, LLC, or MedActionPlan, a New Jersey-based provider of medication safety, medication adherence and patient education. MedActionPlan is a leader in patient medication management for transplant patients and beyond.

In December 2021, we acquired The Transplant Pharmacy, LLC, or TTP, a transplant focused pharmacy located in Mississippi. TTP provides individualized transplant pharmacy services for patients at multiple transplant centers located throughout the U.S.

COVID-19 Impact

In the final weeks of March and during April 2020, with hospitals increasingly caring for COVID-19 patients, hospital administrators chose to limit or even defer, non-emergency procedures. Immunosuppressed transplant patients either self-prescribed or were asked to avoid transplant centers and caregiver visits to reduce the risk of contracting COVID-19. As a result, with transplant surveillance visits down, we experienced a slowdown in testing services volumes in the final weeks of March and during April 2020. As a response to the COVID-19 pandemic, and to enable immune-compromised transplant patients to continue to have their blood drawn, in late March 2020, we launched RemoTraC, a remote home-based blood draw solution using mobile phlebotomy for AlloSure and AlloMap surveillance tests, as well as for other standard monitoring tests.

There continues to be uncertainty around the COVID-19 pandemic as the Omicron variant, including its sub-variants, has caused an increase in COVID-19 cases globally, impacted the availability of medical personnel in transplant centers and the volume of transplant procedures. A sustained reduction in transplant volume can negatively impact the testing volumes, as we saw in the early part of the first quarter of 2022.

Our product business experienced a reduction in forecasted sales volume throughout the second and third quarters of 2020, as we were unable to undertake onsite discussions and demonstrations of our recently launched NGS products, including AlloSeq

Tx 17, which was awarded CE mark authorization in May 2020. Our product business regained normalized sales volumes during the fourth quarter of 2020.

We are maintaining our testing, manufacturing, and distribution facilities while implementing specific protocols to reduce contact among our employees. In areas where COVID-19 impacts healthcare operations, our field-based sales and clinical support teams are supporting providers through virtual platforms.

Although the executive orders that placed certain restrictions on operations in San Mateo County and the State of California, where our laboratory and headquarters are located, were lifted effective June 15, 2021, new orders or restrictions may be adopted in the future depending upon the COVID-19 transmission rates in our county and state, as well as other factors.

In addition, we created, and continue to have, a COVID-19 task force that is responsible for crisis decision making, employee communications, and enforcing all safety, monitoring and testing protocols in line with local regulations.

Due to COVID-19, quarantines, shelter-in-place and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur or could impact personnel at third-party suppliers in the United States and other countries, or the availability or cost of materials, and there may be disruptions in our supply chain. Any manufacturing supply interruption of materials could adversely affect our ability to conduct ongoing and future research and testing activities.

In addition, our clinical studies may be affected by the COVID-19 pandemic. Clinical site initiation and patient enrollment may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic or reduced staffing due to staff members contracting COVID-19. Some patients may not be able to comply with clinical study protocols if quarantines impede patient movement or interrupt healthcare services. Similarly, the ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to, or become infected with, COVID-19, may adversely impact our clinical trial operations.

Financial Operations Overview

Revenue

We derive our revenue from testing services, products sales, patient and digital solutions revenues. Revenue is recorded considering a five-step revenue recognition model that includes identifying the contract with a customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations and recognizing revenue when, or as, an entity satisfies a performance obligation.

Testing Services Revenue

Our testing services revenue is derived from AlloSure Kidney, AlloMap Heart, AlloSure Heart and AlloSure Lung tests, which represented 83% of our total revenue for each of the three and six months ended June 30, 2022, and 87% and 88% of our total revenue for the three and six months ended June 30, 2021, respectively. Our testing services revenue depends on a number of factors, including (i) the number of tests performed; (ii) establishment of coverage policies by third-party insurers and government payers; (iii) our ability to collect from payers with whom we do not have positive coverage determination, which often requires that we pursue a case-by-case appeals process; (iv) our ability to recognize revenues on tests billed prior to the establishment of reimbursement policies, contracts or payment histories; and (v) how quickly we can successfully commercialize new product offerings.

We currently market testing services to healthcare providers through our direct sales force that targets transplant centers and their physicians, coordinators and nurse practitioners as well as general nephrologists managing transplant recipients. The healthcare providers that order the tests and on whose behalf we provide our testing services are generally not responsible for the payment of these services. Amounts received by us vary from payer to payer based on each payer's internal coverage practices and policies. We generally bill third-party payers upon delivery of a test result report to the ordering physician. As such, we take the assignment of benefits and the risk of collection from the third-party payer and individual patients.

Product Revenue

Our product revenue is derived primarily from sales of AlloSeq Tx, Olerup SSP and QTYPE products. Product revenue represented 8% of our total revenue for each of the three and six months ended June 30, 2022, and 9% of our total revenue for each of the three and six months ended June 30, 2021. We recognize product revenue from the sale of products to end-users, distributors and strategic partners when all revenue recognition criteria are satisfied. We generally have a contract or a purchase order from a customer with the specified required terms of order, including the number of products ordered. Transaction prices are determinable and products are delivered and risk of loss passed to the customer upon either shipping or delivery, as per the terms of the agreement. There are no further performance obligations related to a contract and revenue is recognized at the point of delivery consistent with the terms of the contract or purchase order.

Patient and Digital Solutions Revenue

Our patient and digital solutions revenue is mainly derived from sales of our Ottr software, XynQAPI, MedActionPlan, TTP, TransChart and Tx Access licenses, services and SaaS agreements across the digital portfolio. Patient and digital solutions revenue represented 8% of our total revenue for each of the three and six months ended June 30, 2022, and 3% of our total revenue for each of the three and six months ended June 30, 2021.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with United States Generally Accepted Accounting Principles. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are described in Note 2 of the condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q. Some of these accounting policies require us to make difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. We believe that the following critical accounting policies reflect the more significant estimates and assumptions used in the preparation of our financial statements. We believe the following critical accounting policies are affected by significant judgments and estimates used in the preparation of our unaudited condensed consolidated financial statements:

- Revenue recognition;
- Business combinations;
- Acquired intangible assets;
- Impairment of goodwill, intangible assets and other long-lived assets; and
- Stock-based compensation.

There were no material changes in the matters for which we make critical accounting estimates in the preparation of our unaudited condensed consolidated financial statements during the three and six months ended June 30, 2022 as compared to those disclosed in 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, 2021, filed with the SEC on February 24, 2022.

Recently Issued Accounting Standards

Refer to Note 2, Summary of Significant Accounting Policies - Recent Accounting Pronouncements, to the unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for a description of recently issued accounting pronouncements, including the expected dates of adoption and estimated effects on our results of operations, financial position and cash flows.

Results of Operations

Comparison of the Three Months Ended June 30, 2022 and 2021

(In thousands)

	Three Months Ended June 30,		
	2022	2021	Change
Revenue:			
Testing services revenue	\$ 67,135	\$ 64,890	\$ 2,245
Product revenue	6,714	6,861	(147)
Patient and digital solutions revenue	6,785	2,437	4,348
Total revenue	80,634	74,188	6,446
Operating expenses:			
Cost of testing services	18,230	17,235	995
Cost of product	3,887	5,205	(1,318)
Cost of patient and digital solutions	5,422	1,533	3,889
Research and development	22,632	19,036	3,596
Sales and marketing	26,950	19,599	7,351
General and administrative	25,232	16,322	8,910
Total operating expenses	102,353	78,930	23,423
Loss from operations	(21,719)	(4,742)	(16,977)
Other (expense) income:			
Interest income, net	478	1	477
Change in estimated fair value of common stock warrant liability	48	(65)	113
Other (expense) income, net	(553)	2,779	(3,332)
Total other (expense) income	(27)	2,715	(2,742)
Loss before income taxes	(21,746)	(2,027)	(19,719)
Income tax benefit	49	100	(51)
Net loss	\$ (21,697)	\$ (1,927)	\$ (19,770)

Testing Services Revenue

Testing services revenue increased by \$2.2 million, or 3%, for the three months ended June 30, 2022 compared to the same period in 2021. The increase is primarily due to an increase of more than 7,000 patient results provided in the three months ended June 30, 2022, compared to the same period in 2021.

Patient and Digital Solutions Revenue

Patient and digital solutions revenue increased by \$4.3 million, or 178%, for the three months ended June 30, 2022 compared to the same period in 2021, primarily due to the acquisition of TTP and MedActionPlan during the fourth quarter of 2021.

Cost of Testing Services

Cost of testing services increased by \$1.0 million, or 6%, for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to increased testing volume, stock-based compensation of \$0.5 million and depreciation expense of \$0.3 million.

Cost of Product

Cost of product decreased by \$1.3 million, or (25)%, for the three months ended June 30, 2022, compared to the same period in 2021. The decrease is primarily due to lower standard cost.

Cost of Patient and Digital Solutions

Cost of patient and digital solutions increased by \$3.9 million, or 254%, for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to the acquisition of TTP and MedActionPlan.

Research and Development

Research and development expenses increased by \$3.6 million, or 19%, for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in headcount and personnel-related costs of \$1.4 million, an increase in consultants of \$0.8 million, an increase in software expense of \$0.6 million and an increase in stock-based compensation expense of \$0.4 million.

Sales and Marketing

Sales and marketing expenses increased by \$7.4 million, or 38%, for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in headcount and personnel-related costs of \$2.7 million, an increase in travel and tradeshow expenses of \$2.9 million, and an increase in stock-based compensation expense of \$1.3 million.

General and Administrative

General and administrative expenses increased by \$8.9 million, or 55%, for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in legal expenses of \$5.1 million, an increase in stock-based compensation expense of \$1.2 million, an increase in consultants of \$0.8 million, an increase in other expenses of \$1.3 million.

Interest Income, net

Interest income, net increased by \$0.5 million for the three months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to interest income earned on the corporate debt securities.

Other (expense) income, net

Other (expense) income, net decreased by \$3.3 million for the three months ended June 30, 2022, compared to the same period in 2021, primarily due to the unrealized loss on the investment in Miromatrix.

Comparison of the Six Months Ended June 30, 2022 and 2021

(In thousands)

	Six Months Ended June 30,		
	2022	2021	Change
Revenue:			
Testing services revenue	\$ 133,579	\$ 124,171	\$ 9,408
Product revenue	13,502	12,639	863
Patient and digital solutions revenue	12,969	4,778	8,191
Total revenue	160,050	141,588	18,462
Operating expenses:			
Cost of testing services	35,858	33,718	2,140
Cost of product	8,286	8,852	(566)
Cost of patient and digital solutions	10,277	2,982	7,295
Research and development	44,512	35,040	9,472
Sales and marketing	50,098	35,051	15,047
General and administrative	51,791	31,545	20,246
Total operating expenses	200,822	147,188	53,634
Loss from operations	(40,772)	(5,600)	(35,172)
Other (expense) income:			
Interest income, net	667	127	540
Change in estimated fair value of common stock warrant liability	75	(38)	113
Other (expense) income, net	(1,376)	2,534	(3,910)
Total other (expense) income	(634)	2,623	(3,257)
Loss before income taxes	(41,406)	(2,977)	(38,429)
Income tax benefit	61	363	(302)
Net loss	\$ (41,345)	\$ (2,614)	\$ (38,731)

Testing Services Revenue

Testing services revenue increased by \$9.4 million, or 8%, for the six months ended June 30, 2022 compared to the same period in 2021. The increase is primarily due to an increase of more than 17,000 patient results provided in the six months ended June 30, 2022, compared to the same period in 2021.

Product Revenue

Product revenue increased by \$0.9 million, or 7%, for the six months ended June 30, 2022, compared to the same period in 2021, primarily due to growth from the NGS typing products.

Patient and Digital Solutions Revenue

Patient and digital solutions revenue increased by \$8.2 million, or 171%, for the six months ended June 30, 2022 compared to the same period in 2021, primarily due to the acquisition of TTP and MedActionPlan during the fourth quarter of 2021.

Cost of Testing Services

Cost of testing services increased by \$2.1 million, or 6%, for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to increased testing volume, offset by stock-based compensation expense.

Cost of Product

Cost of product decreased by \$0.6 million, or (6)%, for the six months ended June 30, 2022, compared to the same period in 2021. The decrease is primarily due to lower standard cost and decreased freight costs.

Cost of Patient and Digital Solutions

Cost of patient and digital solutions increased by \$7.3 million, or 245%, for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to the acquisition of TTP and MedActionPlan.

Research and Development

Research and development expenses increased by \$9.5 million, or 27%, for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in headcount and personnel-related costs of \$3.4 million, an increase in consulting expense of \$2.1 million, an increase in stock-based compensation expense of \$1.2 million, an increase in software expense of \$1.1 million, an increase in partnership and collaboration expenses of \$0.6 million and an increase in travel expense of \$0.3 million.

Sales and Marketing

Sales and marketing expenses increased by \$15.0 million, or 43%, for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in headcount and personnel-related costs of \$7.2 million, an increase in stock-based compensation expense of \$2.7 million, an increase in travel expense of \$2.2 million, an increase in marketing programs and tradeshow expense of \$1.3 million and an increase in depreciation and amortization expense of \$0.6 million.

General and Administrative

General and administrative expenses increased by \$20.2 million, or 64%, for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to an increase in legal expenses of \$11.5 million, an increase in stock-based compensation expense of \$3.2 million, an increase in consultants of \$2.6 million and an increase in computer hardware and software expense of \$1.0 million.

Interest income, net

Interest income, net increased by \$0.5 million for the six months ended June 30, 2022, compared to the same period in 2021. The increase is primarily due to interest income earned on the corporate debt securities.

Other (expense) income, net

Other (expense) income, net decreased by \$3.9 million for the six months ended June 30, 2022, compared to the same period in 2021, primarily due to the unrealized loss on the investment in Miromatrix.

Cash Flows for the Six Months Ended June 30, 2022 and 2021

The following table summarizes the primary sources and uses of cash for the periods presented:

	Six Months Ended June 30,	
	2022	2021
	(in thousands)	
Net cash (used in) provided by:		
Operating activities	\$ (25,345)	\$ (23,842)
Investing activities	(155,242)	35,292
Financing activities	(1,132)	189,609
Effect of exchange rate changes on cash, cash equivalents and restricted cash	59	(105)
Net (decrease) increase in cash, cash equivalents and restricted cash	<u>\$ (181,660)</u>	<u>\$ 200,954</u>

Operating Activities

Net cash used in operating activities consists of net loss, adjusted for certain noncash items in the condensed consolidated statements of operations and changes in operating assets and liabilities.

Cash used in operating activities for the six months ended June 30, 2022 was \$25.3 million. Our net loss of \$41.3 million was our primary use of cash in operating activities that included a number of noncash items. Our noncash items included \$23.2 million in stock-based compensation expense, \$5.4 million of depreciation and amortization expense and \$1.8 million of amortization of right-of-use assets. Net operating assets decreased \$15.9 million.

Cash used in operating activities for the six months ended June 30, 2021 was \$23.8 million. Our net loss of \$2.6 million was our primary use of cash in operating activities that included a number of noncash items. Our noncash items included \$15.9 million in stock-based compensation expense, \$4.1 million of depreciation and amortization expense and \$3.1 million of unrealized gain on long-term marketable securities. Net operating assets decreased by \$19.5 million, and Refund liability - CMS advance payment decreased by \$20.5 million.

Investing Activities

For the six months ended June 30, 2022, net cash used in investing activities of \$155.2 million was primarily related to the purchases of marketable securities of \$182.9 million and \$13.1 million related to additions of capital expenditures, net.

For the six months ended June 30, 2021, net cash provided by investing activities of \$35.3 million was primarily related to the maturities of marketable securities of \$55.1 million. These proceeds were partially offset by the acquisition of TransChart, net of cash acquired of \$3.5 million, \$6.7 million related to payments for acquired intangibles, \$5.5 million related to purchases of long-term marketable securities and \$4.1 million related to additions of capital expenditures, net.

Financing Activities

Net cash used in financing activities for the six months ended June 30, 2022 of \$1.1 million was primarily related to taxes paid for net share settlements of restricted stock units of \$3.9 million and payments of contingent consideration \$0.3 million. These payments were partially offset by proceeds from exercises of stock options of \$2.0 million and proceeds from issuances of common stock under our employee stock purchase plan of \$1.0 million.

Net cash provided by financing activities for the six months ended June 30, 2021 of \$189.6 million was primarily related to \$188.8 million of proceeds from the issuance of shares of common stock in an underwritten offering, net of issuance costs, proceeds from exercises of stock options of \$9.0 million and proceeds from issuances of common stock under our employee stock purchase plan of \$0.8 million. These proceeds were partially offset by taxes paid related to net share settlements of restricted stock units of \$9.0 million.

Liquidity and Capital Resources

We have incurred significant losses and negative cash flows from operations since our inception and had an accumulated deficit of \$424.5 million at June 30, 2022. As of June 30, 2022, we had cash, cash equivalents and marketable securities of \$306.2 million and no debt outstanding.

The spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, a continued widespread pandemic could result in significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity.

Since March 31, 2020, and in response to the outbreak of the COVID-19 pandemic, we have increased our cash and cash equivalents. With our continuing growth, we may require additional financing in the future to fund working capital and our development of future products. Additional financing might include issuance of equity securities, including through underwritten public offerings or “at-the-market” offerings, debt offerings or financings or a combination of these financings. There can be no assurance that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us. We believe our existing cash balance and expected cash from existing operations, including cash from current license agreements and future license and collaboration agreements, or a combination of these, will be sufficient to meet our anticipated cash requirements for the next 12 months.

CMS Accelerated and Advance Payment Program for Medicare Providers

On March 27, 2020, the U.S. government enacted the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act. Pursuant to the CARES Act, the Centers for Medicare & Medicaid Services, or CMS, expanded its Accelerated and Advance Payment Program in order to increase cash flow to providers of services and suppliers impacted by the COVID-19 pandemic. CMS was authorized to provide accelerated or advance payments during the period of the public health emergency to any Medicare provider who submitted a request to the appropriate Medicare Administrative Contractor and met the required qualifications. During April 2020, we received an advance payment from CMS of approximately \$20.5 million and recorded the payment as Deferred revenue - CMS advance payment on our condensed consolidated balance sheet. During December 2020, we reassessed the Deferred revenue - CMS advance payment and repaid the entire amount in January 2021.

CARES Act Provider Relief Fund for Medicare Providers

Pursuant to the CARES Act, the U.S. Department of Health & Human Services, or HHS, distributed an initial tranche of \$30.0 billion in funds to healthcare providers that received Medicare fee-for-service, or FFS, reimbursements in 2019. These

payments to healthcare providers are not loans and will not be required to be repaid. As a condition to receiving these payments, providers must agree to certain terms and conditions and submit sufficient documentation demonstrating that the funds are being used for healthcare-related expenses or lost revenue attributable to the COVID-19 pandemic. Due to the recent enactment of legislation and absence of definitive guidance, there is a high degree of uncertainty around the CARES Act's implementation and we continue to assess the impact on our business. Furthermore, HHS has indicated that it, along with the Office of Inspector General, will be closely monitoring and auditing providers to ensure that recipients comply with the terms and conditions of relief programs and to prevent fraud and abuse. All providers will be subject to civil and criminal penalties for any deliberate omissions, misrepresentations or falsifications of any information given to HHS. Providers will be distributed a portion of the initial \$30.0 billion based on their share of total Medicare FFS reimbursements made by the U.S. in 2019. During April 2020, we received a payment of approximately \$4.8 million, representing our portion of the initial tranche of funds recorded in other income (expense), net on the condensed consolidated statements of operations.

We are complying with the key terms and provisions of the CARES Act Provider Relief Fund which includes, among other things, the requirement that we maintain appropriate records and cost documentation. During the quarter ended September 30, 2021, we were notified by HHS that the Provider Relief Fund Reporting Portal was open for reporting on the use of Provider Relief Fund payments, and we completed and submitted a report indicating our use of the funds we received pursuant to the CARES Act.

January 2021 Underwritten Public Offering of Common Stock

On January 25, 2021, we sold 1,923,077 shares of our common stock through an underwritten public offering at a public offering price of \$91.00 per share. The net proceeds to us from the offering were approximately \$164.0 million, after deducting underwriting discounts and commissions and offering expenses.

On February 11, 2021, we sold 288,461 shares of our common stock pursuant to the full exercise of the overallotment option granted to the underwriters in connection with the offering. The net proceeds to us from the full exercise of the underwriters' overallotment option were approximately \$24.7 million.

At-the-Market Equity Offering

On April 14, 2022, we entered into a sales agreement (the "Sales Agreement") with Jefferies, LLC as sales agent ("Jefferies"), pursuant to which we may offer and sell, from time to time, through Jefferies, up to \$200.0 million in shares of our common stock, by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended. Jefferies is entitled to compensation for its services equal to 3% of the gross proceeds of any shares of common stock sold through Jefferies under the Sales Agreement. Any shares of common stock offered and sold pursuant to the Sales Agreement will be issued and sold pursuant to our Registration Statement on Form S-3ASR (File No. 333-239049), filed with the SEC on June 9, 2020, including a base prospectus dated June 9, 2020, and a prospectus supplement dated April 14, 2022.

Factors Affecting Our Performance

COVID-19 Pandemic

COVID-19 may impact personnel at third-party suppliers in the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain. Any manufacturing supply interruption of materials could adversely affect our ability to conduct ongoing and future research and testing activities. Clinical trials, clinical site initiation and patient enrollment may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic or reduced staffing due to staff members contracting COVID-19. Some patients may not be able to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services. Similarly, the ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to, or become infected with, COVID-19, may adversely impact our clinical trial operations. COVID-19 may impact availability of medical personnel and reduction in transplant procedure volumes, which in-turn, could adversely affect our testing volumes.

The Number of AlloMap Heart, AlloSure Kidney, AlloSure Lung, and AlloSure Heart Tests We Receive and Report

The growth of our testing services business is tied to the number of AlloSure Kidney, AlloSure Lung, AlloMap Heart and AlloSure Heart patient samples we receive and patient results we report. We incur costs in connection with collecting and shipping all samples and a portion of the costs when we cannot ultimately issue a report. As a result, the number of patient samples received largely correlates directly to the number of patient results reported.

Reimbursement for AlloMap Heart

AlloMap Heart test volume and the corresponding reimbursement revenue has generally increased over time since the launch of AlloMap Heart, as the ISHLT included AlloMap in guidelines, payers adopted coverage policies and no longer consider AlloMap Heart to be experimental and investigational. The rate at which our tests are covered and reimbursed has varied, and is expected to continue to vary, by payer. Revenue growth depends on our ability to maintain Medicare and third party payer reimbursement, and to expand utilization by healthcare providers.

The Protecting Access to Medicare Act of 2014, or PAMA, included a substantial new payment system for clinical laboratory tests under the Clinical Laboratory Fee Schedule, or CLFS. Under PAMA, laboratories that receive the majority of their Medicare revenues from payments made under the CLFS would report initially and then on a subsequent three-year basis thereafter (or annually for advanced diagnostic laboratory tests, or ADLTs), private payer payment rates and volumes for their tests. The final PAMA ruling was issued June 17, 2016 indicating that data for reporting for the new PAMA process would begin in 2017 and the new market based rates took effect on January 1, 2018. Effective January 1, 2018, Medicare reimburses us \$3,240 for AlloMap Heart testing of Medicare beneficiaries, an increase from the 2017 reimbursement rate of \$2,841. The CARES Act froze then-current (2020) CMS CLFS rates through 2021. Further, the CARES Act delayed the reporting cycle under PAMA to January 1 and March 31, 2022. The next data collection period will become January 1 through June 30, 2025.

AlloMap Heart has also received positive coverage decisions for reimbursement from many of the largest U.S. private payers.

Reimbursement for AlloSure Kidney

On September 26, 2017, we received notice that the MolDX Program developed by Palmetto GBA had set AlloSure Kidney reimbursement at \$2,841. Effective October 9, 2017, AlloSure Kidney was made available for commercial testing with Medicare coverage and reimbursement. We believe the use of AlloSure Kidney, in conjunction with other clinical indicators, can help healthcare providers and their patients better manage long-term care following a kidney transplant. In particular, we believe AlloSure Kidney can improve patient care by helping healthcare providers to reduce the use of invasive biopsies and determine the appropriate dosage levels of immunosuppressants.

Reimbursement for AlloSure Heart

In October 2020, we received a final Palmetto MolDx Medicare coverage decision for AlloSure Heart. In November 2020, Noridian Healthcare Solutions, our Medicare Administrative Contractor, issued a parallel coverage policy granting coverage when used in conjunction with AlloMap Heart, which became effective in December 2020. The Medicare reimbursement rate for AlloSure Heart is currently \$2,753.

Continued Growth of Product Sales

We develop, manufacture, market and sell products that increase the chance of successful transplants by facilitating a better match between a donor and a recipient of stem cells and solid organs.

QTYPE enables speed and precision in HLA typing at a low to intermediate resolution for samples that require a fast turn-around-time and uses real-time PCR methodology. QTYPE received CE mark certification on April 10, 2018. Olerup SSP is used to type HLA alleles based on the SSP technology.

On May 4, 2018, we entered into a license and collaboration agreement with Illumina, which provides us with worldwide distribution, development and commercialization rights to Illumina's NGS product line for use in transplantation diagnostic testing. As a result, on June 1, 2018, we became the exclusive worldwide distributor of Illumina's TruSight HLA product line. TruSight HLA is a high-resolution solution that uses NGS methodology. In addition, we were granted the exclusive right to develop and commercialize other NGS product lines for use in the field of bone marrow and solid organ transplantation diagnostic testing. These NGS products include: AlloSeq Tx, a high-resolution HLA typing solution, AlloSeq cfDNA, our surveillance solution designed to measure dd-cfDNA in blood to detect active rejection in transplant recipients, and AlloSeq HCT, a NGS solution for chimerism testing for stem cell transplant recipients.

In September 2019, we commercially launched AlloSeq cfDNA, our surveillance solution designed to measure dd-cfDNA in blood to detect active rejection in transplant recipients, which received CE mark authorization on January 20, 2020. Our ability to increase the clinical uptake for AlloSeq cfDNA will be a result of multiple factors, including local clinical education, customer lab technical proficiency and levels of country-specific reimbursement.

Also in September 2019, we commercially launched AlloSeq Tx, the first of its kind NGS high-resolution HLA typing solution utilizing hybrid capture technology. This technology enables the most comprehensive sequencing, covering more of the HLA genes than current solutions and adding coverage of non-HLA genes that may impact transplant patient matching and management. AlloSeq Tx has a simple NGS workflow that reduces complexity and can reduce errors. AlloSeq Tx 17 received CE mark authorization on May 15, 2020.

In June 2020, we commercially launched AlloSeq HCT, a NGS solution for chimerism testing for stem cell transplant recipients. This technology has the potential to provide better sensitivity and data analysis compared to current solutions on the market. AlloSeq HCT received CE mark authorization in May 2022.

Continued Growth of Patient and Digital Sales

The growth of our patient and digital revenues is tied to the continued successful implementation of our Ottr, MedActionPlan and XynQAPI software businesses, as well as continued support and maintenance of existing MedActionPlan, Ottr, Inc. and XynManagement customers. The Ottr software, TransChart, Tx Access and XynQAPI are currently implemented in multiple locations in the U.S. The Ottr software implementation and XynQAPI implementation and support teams are based in Omaha, Nebraska. In addition, patient solutions offered by TTP in Flowood, Mississippi include hospital-affiliated pharmacies located on-site at the transplant center and specialty pharmacies that provide transplant-specific care and dispensing services.

Development of Additional Services and Products

Our development pipeline includes other transplant diagnostic solutions to help clinicians and transplant centers make personalized treatment decisions throughout a transplant patient's lifetime. We expect to invest in research and development in order to develop additional products. Our success in developing new products and services will be important in our efforts to grow our business by expanding the potential market for our services and products and diversifying our sources of revenue.

Timing of Research and Development Expenses

Our spending on research and development may vary substantially from quarter to quarter. We conduct clinical studies to validate our new products, as well as on-going clinical and outcome studies to further the published evidence to support our commercialized tests. Spending on research and development for both experiments and studies may vary significantly by quarter depending on the timing of these various expenses.

Contractual Obligations

For a discussion regarding our significant contractual obligations as of June 30, 2022 and the effect those obligations are expected to have on our liquidity and cash flows in future periods, please refer to Note 9 of the condensed consolidated financial statements, and the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources", respectively, included elsewhere in this Quarterly Report on Form 10-Q.

Foreign Operations

The accompanying unaudited condensed consolidated balance sheets contain certain recorded assets in foreign countries, namely Stockholm, Sweden and Fremantle, Australia. Although these countries are considered economically stable and we have experienced no notable burden from export duties or government regulations, unanticipated events in foreign countries could have a material adverse effect on our operations.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. We had cash, cash equivalents and marketable securities of \$306.2 million at June 30, 2022, which consisted of bank deposits, money market funds and corporate debt securities, and we had cash and cash equivalents of \$348.5 million at December 31, 2021, which consisted of bank deposits and money market funds. However, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates. A hypothetical 100 basis point increase or decrease in interest rates during any of the periods presented would have an approximate impact of \$3.1 million on our condensed consolidated financial statements.

Foreign Currency Exchange Risk

We have operations in Sweden and Australia and sell to other countries throughout the world. As a result, we are subject to significant foreign currency risks, including transacting in foreign currencies, investment in a foreign entity, as well as assets and debts denominated in foreign currencies. Our testing services revenue is primarily denominated in U.S. dollars. Our product revenue is denominated primarily in U.S. dollars and the Euro. Our patient and digital solutions revenue is primarily denominated in U.S. dollars. Consequently, our revenue denominated in foreign currency is subject to foreign currency exchange risk. A portion of our operating expenses are incurred outside of the U.S. and are denominated in Swedish Krona, the Euro, and the Australian Dollar, which are also subject to fluctuations due to changes in foreign currency exchange rates. An unfavorable 10% change in foreign currency exchange rates for our assets and liabilities denominated in foreign currencies at

June 30, 2022, would have negatively impacted our financial results for the six months ended June 30, 2022 by \$0.2 million and our revenue by \$0.7 million. Currently, we do not have any near-term plans to enter into a formal hedging program to mitigate the effects of foreign currency volatility. We will continue to reassess our approach to managing our risk relating to fluctuations in foreign currency exchange rates.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Management, including our Chief Executive Officer and Interim Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures, as such terms are defined in Rules 13a-15(b) and 15d-15(e) promulgated under the Exchange Act, as of June 30, 2022. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Based on such evaluation, the Chief Executive Officer and Interim Chief Financial Officer concluded that, as of June 30, 2022, our disclosure controls and procedures are effective to provide reasonable assurance that information required to be disclosed in the reports we file and submit under the Exchange Act, is (i) recorded, processed, summarized and reported as and when required and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Interim Chief Financial Officer, as appropriate to allow timely discussion regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended June 30, 2022 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information set forth in Note 9, *Commitments and Contingencies*, under the caption “Litigation and Indemnification Obligations”, to the unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q is incorporated herein by reference.

ITEM 1A. RISK FACTORS

Our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission or the SEC, on February 24, 2022, or the Form 10-K, Part I—Item 1A, Risk Factors, describes important risk factors that could cause our business, financial condition, results of operations and growth prospects to differ materially from those indicated or suggested by forward-looking statements made in this Quarterly Report on Form 10-Q or presented elsewhere by management from time to time. There have been no material changes in the risk factors that appear in Part I - Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 24, 2022, other than those listed below. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially and adversely affect our business.

Risks Related to Our Business

We have a history of losses, and we expect to incur net losses for the next several years.

We have incurred substantial net losses since our inception, and we may continue to incur additional losses for the next several years. For the quarter ended June 30, 2022, our net loss was \$21.7 million. As of June 30, 2022, we had an accumulated deficit of \$424.5 million. We expect to continue to incur significant operating expenses and anticipate that our expenses will increase due to costs relating to, among other things:

- researching, developing, validating and commercializing potential new testing services, products and patient and digital solutions, including additional expenses in connection with our continuing development and commercialization of KidneyCare, HeartCare, AlloSeq, AiTraC and other future solutions;
- developing, presenting and publishing additional clinical and economic utility data intended to increase payer coverage and clinician adoption of our current and future solutions;
- expansion of our operating capabilities;
- maintenance, expansion and protection of our intellectual property portfolio and trade secrets;
- the process of fully integrating acquired companies and operations and the associated potential disruptions to our business;
- future clinical trials;
- expansion of the size and geographic reach of our sales force and our marketing capabilities to commercialize our existing and future solutions;
- employment of additional clinical, quality control, scientific, customer service, laboratory, billing and reimbursement and management personnel;
- compliance with existing and changing laws, regulations and standards, including those relating to corporate governance and public disclosure and regulations implemented by the Securities and Exchange Commission, or the SEC, and The Nasdaq Stock Market LLC;
- employment of operational, financial, accounting and information systems personnel, consistent with expanding our operations and our status as a public company; and
- failure to achieve expected operating results may cause a future impairment of goodwill or other assets.

Even if we achieve significant revenues, we may not become profitable, and even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain consistently profitable could adversely affect the market price of our common stock and could significantly impair our ability to raise capital, expand our business or continue to pursue our growth strategy or even continue to operate. For a detailed discussion of our financial condition and results of operations, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

We may require additional financing.

As of June 30, 2022, we had cash, cash equivalents and marketable securities of \$306.2 million and an accumulated deficit of \$424.5 million. We may require additional financing in the future to fund working capital, pay our obligations as they come due and fund our acquisitions of complementary businesses and assets. Additional financing might include issuance of equity securities, debt, cash from collaboration agreements, or a combination of these. However, there can be no assurance that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us.

We receive a substantial portion of our revenues from Medicare, and the loss of, or a significant reduction in, reimbursement from Medicare would severely and adversely affect our financial performance.

For the quarter ended June 30, 2022, revenue from Medicare for AlloMap Heart, AlloSure Kidney and AlloSure Heart represented 65% of testing services revenue. However, we may not be able to maintain or increase our tests reimbursed by Medicare for a variety of reasons, including changes in reimbursement practices, general policy shifts, or reductions in reimbursement amounts. We cannot predict whether Medicare reimbursements will continue at the same payment amount or with the same breadth of coverage in the future, if at all.

The Protecting Access to Medicare Act of 2014, or PAMA, included a substantial new payment system for clinical laboratory tests under the Clinical Laboratory Fee Schedule, or CLFS. Under PAMA, laboratories that receive the majority of their Medicare revenues from payments made under the CLFS report initially and then on a subsequent three-year basis thereafter (or annually for advanced diagnostic laboratory tests, or ADLTs), private payer payment rates and volumes for their tests. The final PAMA ruling was issued June 17, 2016 and the new market based rates took effect January 1, 2018. The Centers for Medicare & Medicaid Services, or CMS, uses the rates and volumes reported by laboratories to develop Medicare payment rates for the tests equal to the volume-weighted median of the private payer payment rates for the tests. Under PAMA, the reimbursement rate for AlloMap Heart is currently \$3,240 for Medicare beneficiaries.

On September 26, 2017, we announced that the Molecular Diagnostic Services, or MolDX, Program developed by Palmetto GBA, or Palmetto, has set AlloSure Kidney reimbursement at \$2,841. AlloSure Kidney began to be reimbursed for kidney transplants covered by Medicare across the United States on October 9, 2017, the effective date of the Palmetto local coverage determination, or LCD.

In October 2020, AlloSure Heart received a final Palmetto MolDx Medicare coverage decision for AlloSure Heart. In November 2020, Noridian Healthcare Solutions, our Medicare Administrative contractor, issued a parallel coverage policy granting coverage when used in conjunction with AlloMap Heart, which became effective in December 2020. The Medicare reimbursement rate for AlloSure Heart is currently \$2,753.

If an AlloMap Heart, AlloSure Kidney or AlloSure Heart reimbursement rate that is significantly lower than the current rate is set by CMS or MolDx in the future, it could cause us to discontinue AlloMap Heart, AlloSure Kidney or AlloSure Heart testing for Medicare patients because providing tests at a substantially lowered reimbursement rate may not be economically viable. Given the significant portion of payments represented by Medicare, our remaining test revenue may be insufficient to sustain our operations.

If future reimbursement levels are less than the current price, our revenues and our ability to achieve profitability could be impaired, and the market price of our common stock could decline. We may also not be able to maintain or increase the portion of our tests reimbursed by Medicare for a variety of other reasons, including changes in reimbursement practices and general policy shifts.

On a five-year rotational basis, Medicare requests bids for its regional Medicare Administrative Contractors, or MAC, services. The MAC for California is currently Noridian Healthcare Solutions. Our current Medicare coverage through Noridian provides for reimbursement for tests performed for qualifying Medicare patients throughout the U.S. so long as the tests are performed in our California laboratory. We cannot predict whether Noridian or any future MAC will continue to provide reimbursement for AlloMap Heart, AlloSure Kidney or AlloSure Heart at the same payment amount or with the same breadth of coverage in the future, if at all. Additional changes in the MAC processing Medicare claims for AlloSure Kidney, AlloMap Heart or AlloSure Heart could impact the coverage or payment amount for our tests and our ability to obtain Medicare coverage for any products we may launch in the future.

Any decision by CMS or its local contractors to reduce or deny coverage for our tests would have a significant adverse effect on our revenue and results of operations and ability to operate and raise capital. Any such decision could also cause affected clinicians treating Medicare covered patients to reduce or discontinue the use of our tests.

We could become subject to legal proceedings that could be time consuming, result in costly litigation and settlements/judgments, require significant amounts of management attention and result in the diversion of significant operational resources, which could adversely affect our business, financial condition and results of operations.

We have in the past been, and from time to time in the future may become, involved in lawsuits, claims and proceedings incident to the ordinary course of, or otherwise in connection with, our business. For example, in response to our false advertising suit filed against Natera Inc., or Natera, on April 10, 2019, Natera filed a counterclaim against us on February 18, 2020 in the U.S. District Court for the District of Delaware, or the Court, alleging we made false and misleading claims about the performance capabilities of AlloSure. The suit seeks injunctive relief and unspecified monetary relief. On September 30, 2020, Natera requested leave of the Court to amend its counterclaims to include additional allegations regarding purportedly false claims we made with respect to AlloSure, and the Court granted Natera's request. The trial date commenced on March 7, 2022 and concluded on March 14, 2022, with the jury awarding us \$44.9 million in damages, comprised of \$21.2 million in compensatory damages and \$23.7 million in punitive damages. Post-trial motion practice remains pending. We will not record the award until cash is received or the matter is otherwise resolved.

On July 19, 2022, the Federal Circuit court of appeals affirmed the district court's judgment dismissing our patent infringement suit against Natera.

In addition, in response to our patent infringement suit filed against Natera on March 26, 2019, Natera filed suit against us on January 13, 2020 in the Court alleging, among other things, that AlloSure infringes Natera's U.S. Patent 10,526,658. This case was consolidated with our patent infringement suit on February 4, 2020. On March 25, 2020, Natera filed an amendment to the suit alleging, among other things, that AlloSure also infringes Natera's U.S. Patent 10,597,724. The suit seeks a judgment that we have infringed Natera's patents, an order preliminarily and permanently enjoining us from any further infringement of such patents and unspecified damages. On May 13, 2022, Natera filed two new complaints alleging that AlloSure infringes Natera's U.S. Patents 10,655,180 and 11,111,544. These two cases were consolidated with the patent infringement case on June 15, 2022. On May 17, 2022, Natera agreed to dismiss the case alleging infringement of Natera's U.S. Patent 10,526,658. On July 6, 2022, we moved to dismiss the rest of Natera's claims. The motion remains pending. We intend to defend both of these matters vigorously, and believe that we have good and substantial defenses to the claims alleged in the suits, but there is no guarantee that we will prevail.

Furthermore, on May 23, 2022, Plumbers & Pipefitters Local Union #295 Pension Fund filed a federal securities class action in the U.S. District Court for the Northern District of California against us, Reginald Seeto, our President, Chief Executive Officer and member of our Board of Directors Ankur Dhingra, our former Chief Financial Officer; Marcel Konrad, our former interim Chief Financial Officer and former Senior Vice President of Finance & Accounting; and Peter Maag, our former President, former Chief Executive Officer, former Chairman of the Board and current member of our Board of Directors. The action alleges that we and the individual defendants made materially false and/or misleading statements and/or omissions and that such statements violated Section 10(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 promulgated thereunder. The action also alleges that the individual defendants are liable pursuant to Section 20(a) of the Exchange Act as controlling persons of our Company. The suit seeks to recover damages caused by the alleged violations of federal securities laws, along with the plaintiffs' costs incurred in the lawsuit, including their reasonable attorneys' and experts' witness fees and other costs. We intend to defend itself vigorously, and believe that we have good and substantial defenses to the claims alleged in the suit, but there is no guarantee that we will prevail.

Litigation is inherently unpredictable. It is possible that an adverse result in one or more of these possible future events could have a material adverse effect on us including increased expenses to defend, settle or resolve such litigation.

If our laboratory facility in the U.S. becomes inoperable, we will be unable to perform AlloSure Kidney, AlloSure Lung, AlloMap Heart, AlloSure Heart, and future testing solutions, if any, and our business will be harmed.

We perform all of our testing services for the U.S. in our laboratory located in Brisbane, California. We do not have redundant laboratory facilities. Brisbane, California is situated on or near earthquake fault lines. Our facility and the equipment we use to perform testing services would be costly to replace and could require substantial lead time to repair or replace if damaged or destroyed. Our facilities may be harmed or rendered inoperable by natural or man-made disasters, including earthquakes, power outages, wildfires, flooding, droughts and other extreme weather events and changing weather patterns, which are increasing in frequency due to the impacts of climate change and may render it difficult or impossible for us to perform our tests for some period of time. The inability to perform our tests may result in the loss of customers or harm our reputation, and we may be unable to regain those customers in the future. Although we possess insurance for damage to our property and the disruption of our business, we do not have earthquake insurance and thus coverage may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

In order to establish a redundant laboratory facility, we would have to spend considerable time and money securing adequate space, constructing the facility, recruiting and training employees and establishing the additional operational and administrative infrastructure necessary to support a second facility. Additionally, any new clinical laboratory facility opened by us in the U.S.

would be required to be certified under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. We would also be required to secure and maintain state licenses required by several states, including California, Florida, Maryland, New York, Rhode Island and Pennsylvania, which can take a significant amount of time and result in delays in our ability to begin operations at that facility.

If we failed to secure any such licenses, we would not be able to process samples from recipients in such states. We also expect that it would be difficult, time-consuming and costly to train, equip and use a third-party to perform tests on our behalf. We could only use another facility with the established state licensures and CLIA certification necessary to perform AlloSure Kidney, AlloSure Lung, AlloMap Heart, AlloSure Heart, or future solutions following validation and other required procedures. We cannot be certain that we would be able to find another CLIA-certified facility willing or able to adopt AlloSure Kidney, AlloSure Lung, AlloMap Heart, AlloSure Heart or future solutions or able to comply with the required quality and regulatory standards, or that this laboratory would be willing or able to perform the tests for us on commercially reasonable terms.

Since the onset of the COVID-19 pandemic, federal, state and local governments have imposed various quarantines, shelter-in-place and similar government orders, including several orders that previously impacted operations in San Mateo County, where our laboratory and headquarters are located. These orders and others may be reinstated depending upon the COVID-19 transmission rates in our county and state, as well as other factors. If the operations in our laboratory are deemed non-essential, or if sufficient numbers of our laboratory staff are infected with COVID-19 and are unable to perform their roles, we may not be able to perform our tests for the duration of any shelter-in-place order or while we have insufficient numbers of laboratory staff, either of which could negatively impact our business, operating results and financial condition.

Investors' expectations of our performance relating to environmental, social and governance factors may impose additional costs and expose us to new risks.

There is an increasing focus from certain investors, employees, regulators and other stakeholders concerning corporate responsibility, specifically related to environmental, social and governance, or ESG, factors. Some investors and investor advocacy groups may use these factors to guide investment strategies and, in some cases, investors may choose not to invest in our company if they believe our policies relating to corporate responsibility are inadequate. Third-party providers of corporate responsibility ratings and reports on companies have increased to meet growing investor demand for measurement of corporate responsibility performance, and a variety of organizations currently measure the performance of companies on such ESG topics, and the results of these assessments are widely publicized. Investors, particularly institutional investors, use these ratings to benchmark companies against their peers and if we are perceived as lagging with respect to ESG initiatives, these investors may engage with us to improve ESG disclosures or performance and may also make voting decisions, or take other actions, to hold us and our board of directors accountable. In addition, the criteria by which our corporate responsibility practices are assessed may change, which could result in greater expectations of us and cause us to undertake costly initiatives to satisfy such new criteria. If we elect not to or are unable to satisfy such new criteria, investors may conclude that our policies with respect to corporate responsibility are inadequate. We may face reputational damage in the event that our corporate responsibility procedures or standards do not meet the standards set by various constituencies.

We may face reputational damage in the event our corporate responsibility initiatives or objectives do not meet the standards set by our investors, stockholders, lawmakers, listing exchanges or other constituencies, or if we are unable to achieve an acceptable ESG or sustainability rating from third-party rating services. A low ESG or sustainability rating by a third-party rating service could also result in the exclusion of our common stock from consideration by certain investors who may elect to invest with our competition instead. Ongoing focus on corporate responsibility matters by investors and other parties as described above may impose additional costs or expose us to new risks. Any failure or perceived failure by us in this regard could have a material adverse effect on our reputation and on our business, share price, financial condition or results of operations, including the sustainability of our business over time. In addition, the SEC has announced proposed rules that, among other matters, will establish a framework for reporting of climate-related risks. To the extent the proposed rules impose additional reporting obligations, we could face increased costs. Separately, the SEC has also announced that it is scrutinizing existing climate-change related disclosures in public filings, increasing the potential for enforcement if the SEC were to allege our existing climate disclosures are misleading or deficient.

Performance issues, service interruptions or price increases by our shipping carriers could adversely affect our business and harm our reputation and ability to provide our services on a timely basis.

Expedited, reliable shipping is essential to our operations. We rely heavily on providers of transport services for reliable and secure point-to-point transport of recipient samples to our laboratory and enhanced tracking of these recipient samples. Should a carrier encounter delivery performance issues such as loss, damage or destruction of a sample, it may be difficult to replace our patient samples in a timely manner and such occurrences may damage our reputation and lead to decreased demand for our services and increased cost and expense to our business. In addition, any significant increase in shipping rates could adversely affect our operating margins and results of operations. Similarly, strikes, severe weather, natural disasters or other service

interruptions, including those related or attributable to the COVID-19 pandemic, or related to the ongoing conflict between Ukraine and Russia and the global impact of restrictions and sanctions imposed on Russia, affecting delivery services we use would adversely affect our ability to receive and process recipient samples on a timely basis.

If we are unable to raise additional capital on acceptable terms in the future, it may limit our ability to develop and commercialize new diagnostic solutions and technologies, and we may have to curtail or cease operations.

We expect capital outlays and operating expenditures to increase over the next several years as we expand our infrastructure, commercial operations and research and development activities. Specifically, we may need to raise additional capital to, among other things:

- develop other solutions for clinical surveillance in transplantation;
- increase our selling and marketing efforts to drive market adoption and address competitive developments;
- expand our clinical laboratory operations;
- fund our clinical validation study activities;
- expand our research and development activities;
- sustain or achieve broader commercialization of AlloSure Kidney, AlloSure Lung, KidneyCare, AlloMap Heart, AlloSure Heart, HeartCare, our products and patient and digital solutions or enhancements to those tests, products and patient and digital solutions;
- acquire or license products or technologies including through acquisitions; and
- finance our capital expenditures and general and administrative expenses.

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

- the level of research and development investment required to develop our new solutions;
- costs of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights;
- our need or decision to acquire or license complementary technologies or acquire complementary businesses;
- changes in test development plans needed to address any difficulties in commercialization;
- competing technological and market developments;
- whether our diagnostic solutions become subject to additional FDA or other regulation; and
- changes in regulatory policies or laws that affect our operations.

Additional capital, if needed, may not be available on satisfactory terms, or at all. Furthermore, if we raise additional funds by issuing equity securities, dilution to our existing stockholders could result. Any equity securities issued also may provide for rights, preferences or privileges senior to those of holders of our common stock and would result in dilution to our stockholders. Moreover, we have the ability to sell up to \$200.0 million of additional shares of our common stock to the public through an “at the market” offering pursuant to the Sales Agreement we entered into with Jefferies, LLC on April 14, 2022. Any shares of common stock issued in the at-the-market offering will result in dilution to our existing stockholders. If we raise additional funds by issuing debt securities, these debt securities would have rights, preferences and privileges senior to those of holders of our common stock, and the terms of the debt securities issued could impose significant restrictions on our operations. If we raise additional funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our technologies or our solutions under development, or grant licenses on terms that are not favorable to us, which could lower the economic value of those programs to us. If adequate funds are not available, we may have to scale back our operations or limit our research and development activities, which may cause us to grow at a slower pace, or not at all, and our business could be adversely affected.

We rely extensively on third party service providers. Failure of these parties to perform as expected, or interruptions in our relationship with these providers or their provision of services or supplies to us, could interfere with our ability to provide test results for our testing services business and kits for our products business.

Our relationship with any of our third party service providers may impair our ability to perform our services. The failure of any of our third party service providers to adequately perform their service obligations may reduce our revenues and increase our

expenses or prevent us from providing our products and services in a timely manner if at all. In addition, our reputation, business and financial performance could be materially harmed if we are unable to, or are perceived as unable to provide test kits and perform reliable services.

We rely solely on certain suppliers to supply some of the laboratory instruments and key reagents that we use in the production of our products and/or in the performance of our tests. These sole source suppliers include Thermo Fisher, which supplies us with instruments, laboratory reagents and consumables; Roche Molecular Systems, which supplies us with laboratory reagents and consumables; Illumina, Inc., or Illumina, which supplies us with instruments, laboratory reagents, and consumables; Avantor, which supplies us with kitting services, laboratory reagents and consumables; Becton, Dickinson and Company, and Streck, which supplies us with cell preparation tubes; Beckman Coulter, which provides laboratory reagents and consumables; and Qiagen N.V., which supplies us with a proprietary buffer reagent and reagent kits. We do not have guaranteed supply agreements with Thermo Fisher, Becton, Dickinson and Company or Avantor, which exposes us to the risk that these suppliers may choose to discontinue doing business with us at any time. We periodically forecast our needs to these sole source suppliers and enter into standard purchase orders based on these forecasts.

In addition, our ABI 7900 Thermocycler, a real time PCR instrument used in AlloMap Heart, is no longer in production. Thermo Fisher has committed to provide service and support of this instrument through 2022. We believe that there are relatively few suppliers other than Thermo Fisher, Roche, Illumina, Becton, Dickinson and Company and Qiagen N.V. that are currently capable of supplying the instruments, reagents and other supplies necessary for our current products and services. Even if we were to identify secondary suppliers, there can be no assurance that we will be able to enter into agreements with such suppliers on a timely basis on acceptable terms, if at all. If we should encounter delays or difficulties in securing from Thermo Fisher, Becton, Dickinson and Company or Avantor, or Avantor encounters delays or difficulties in securing from Qiagen N.V., including as a result of impacts on their respective businesses due to the COVID-19 pandemic or the ongoing conflict between Ukraine and Russia and the global impact of restrictions and sanctions imposed on Russia, the quality and quantity of reagents, supplies or instruments that we require for our current products and services or other solutions we develop, we may need to reconfigure our test processes, which would result in delays in commercialization or an interruption in sales. Clinicians and customers who order our current products and services rely on the continued and timely availability of our products and services. If we are unable to provide results within a timely manner, clinicians may elect not to use our products or services in the future and our business and operating results could be harmed.

International expansion of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

As part of our longer-term growth strategy, we intend to target select international markets to grow our presence outside of the U.S. We also currently distribute products directly in Germany, UK, New Zealand, Sweden, Austria, Belgium, Netherlands and Australia and sell products via sub-distributors, in Canada and in significant markets in Europe such as France, Italy, UK and Turkey, and to certain countries in Asia, the Middle East, and Central and South America. To promote the growth of our business internationally, we will need to attract additional partners to expand into new markets.

Relying on partners for our sales and marketing subjects us to various risks, including:

- our partners may fail to commit the necessary resources to develop a market for our products, may spend the majority of their time selling products unrelated to ours, or may be unsuccessful in marketing our products for other reasons;
- under certain agreements, our partners' obligations, including their required level of promotional activities, may be conditioned upon our ability to achieve or maintain a specified level of reimbursement coverage;
- agreements with our partners may terminate prematurely due to disagreements or may result in disputes or litigation with our partners;
- we may not be able to renew existing partner agreements, or enter into new agreements, on acceptable terms;
- our existing relationships with partners may preclude us from entering into additional future arrangements;
- our partners may violate local laws or regulations, potentially causing reputational or monetary damage to our business;
- our partners may engage in sales practices that are locally acceptable but do not comply with standards required under U.S. laws that apply to us; and
- our partners may be negatively affected by the financial instability of, and austerity measures implemented by, the countries in which they operate.

If our present or future partners do not perform adequately, or we are unable to enter into agreements in new markets, we may be unable to achieve revenue growth or market acceptance in jurisdictions in which we depend on partners. In addition, conducting international operations subjects us to risks that, generally, we have not faced in the U.S., including:

- uncertain or changing regulatory registration and approval processes;
- failure by us to obtain regulatory approvals or adequate reimbursement for the use of our current and future solutions in various countries;
- competition from companies located in the countries in which we offer our products that may put us at a competitive disadvantage;
- financial risks, such as longer accounts receivable payment cycles and difficulties in collecting accounts receivable;
- logistics and regulations associated with shipping recipient samples, including infrastructure conditions and transportation delays;
- limits in our ability to penetrate international markets if we are not able to process solutions locally;
- difficulties in managing and staffing international operations and assuring compliance with foreign corrupt practices laws;
- potentially adverse tax consequences, including the complexities of foreign value added tax systems, tax inefficiencies related to our corporate structure and restrictions on the repatriation of earnings;
- increased financial accounting and reporting burdens and complexities;
- multiple, conflicting and changing laws and regulations such as healthcare regulatory requirements and other governmental approvals, permits and licenses;
- the imposition of trade barriers such as tariffs, quotas, trade wars, preferential bidding or import or export licensing requirements;
- political and economic instability, including interruptions in international relations, wars, terrorism and political unrest, general security concerns, outbreak of disease, boycotts, curtailment of trade and other business restrictions, including the ongoing conflict between Ukraine and Russia and the global impact of restrictions and sanctions imposed on Russia;
- fluctuations in currency exchange rates;
- regulatory and compliance risks that relate to maintaining accurate information and control over activities that may fall within the purview of the Foreign Corrupt Practices Act of 1977, its books and records provisions or its anti-bribery provisions, as well as risks associated with other anti-bribery and anti-corruption laws; and
- reduced or varied protection for intellectual property rights in some countries.

The occurrence of any one of the above could harm our business and, consequently, our revenues and results of operations. Our expanding international operations could be affected by changes in laws, trade regulations, labor and employment regulations, and procedures and actions affecting approval, production, pricing, reimbursement and marketing of our current and future products and solutions, as well as by inter-governmental disputes. Any of these changes could adversely affect our business. Additionally, operating internationally requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required in establishing operations in other countries will produce desired levels of revenue or profitability.

In addition, any failure to comply with applicable legal and regulatory obligations could impact us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments, and restrictions on certain business activities. Also, the failure to comply with applicable legal and regulatory obligations could result in the disruption of our distribution and sales activities.

We are also unable to predict how changing global economic conditions or potential global health concerns such as the COVID-19 pandemic will affect our partners, suppliers and distributors. Any negative impact of such matters on our partners, suppliers or distributors may also have an adverse impact on our results of operations or financial condition.

Our success expanding internationally will depend, in part, on our ability to develop and implement policies and strategies that are effective in anticipating and managing these and other risks in the countries in which we do business. Failure to manage these and other risks may have a material adverse effect on our operations in any particular country and on our business as a whole.

Risks Related to the Healthcare Regulatory Environment

In order to operate our laboratory, we have to comply with the CLIA and federal state laws and regulations governing clinical laboratories and laboratory developed tests, including FDA regulations.

We are subject to the CLIA, a federal law that regulates clinical laboratories that perform testing on specimens taken from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. If our laboratory is out of compliance with the CLIA requirements, we may be subject to sanctions such as suspension, limitation or revocation of our CLIA certificate, as well as a direct plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit or criminal penalties. We must maintain the CLIA compliance and certification to be eligible to bill for services provided to Medicare beneficiaries. If we were to be found to be out of compliance with the CLIA program requirements and subjected to sanction, our business could be materially harmed.

Licensure is also required for our laboratory under California law in order to conduct testing. California laws establish standards for day-to-day operation of our clinical laboratory, including the training and skills required of personnel and quality control. Moreover, several states, including New York, require that we hold licenses to test specimens from patients residing in those states. Other states have similar requirements or may adopt similar requirements in the future. In addition to our California certifications, we currently hold licenses in Florida, Maryland, New York, Pennsylvania and Rhode Island. The loss of any of these state certifications would impact our ability to provide services in those states, which could negatively affect our business.

Finally, we may be subject to regulation in foreign jurisdictions where we offer our test. Failure to maintain certification in those states or countries where it is required could prevent us from testing samples from those states or countries, could lead to the suspension or loss of licenses, certificates or authorizations, and could have an adverse effect on our business.

We were inspected as part of the customary College of American Pathologists audit and recertified in March 2022 as a result of passing that inspection. We expect the next regular inspection under the CLIA to occur in 2024.

If we were to lose our CLIA accreditation or California license, whether as a result of a revocation, suspension or limitation, we would no longer be able to perform AlloMap Heart, AlloSure Kidney or AlloSure Heart, which would limit our revenues and materially harm our business. If we were to lose our license in other states where we are required to hold licenses, we would not be able to test specimens from those states, which could also have a material adverse effect on our business.

The FDA has traditionally chosen not to exercise its authority to regulate laboratory developed tests, or LDTs, because it believes that laboratories certified as high complexity under the CLIA, such as ours, have demonstrated expertise and ability in test procedures and analysis. However, beginning in September 2006, the FDA issued draft guidance on a subset of LDTs known as “in vitro diagnostic multivariate index assays,” or IVDMIAs. According to the draft guidance, IVDMIAs do not fall within the scope of LDTs over which the FDA has exercised enforcement discretion because such tests incorporate complex and unique interpretation functions, which require clinical validation. We believed that AlloMap Heart met the definition of IVDMIA set forth in the draft guidance document. As a result, we applied for, and obtained in August 2008, 510(k) clearance for AlloMap Heart for marketing and sale as a test to aid in the identification of recipients with a low probability of moderate or severe rejection. A 510(k) submission is a premarketing submission made to the FDA. Clearance may be granted by the FDA if it finds the device or test provides satisfactory evidence pertaining to the claimed intended uses and indications for the device or test.

While we believe that we are currently in material compliance with applicable laws and regulations relating to our LDTs, we cannot be certain that the FDA or other regulatory agencies would agree with our determination. A determination that we have violated these laws, or a public announcement that we are being investigated for possible violation of these laws, could hurt our business and our reputation.

Risks Related to Our Intellectual Property

Our competitive position depends on maintaining intellectual property protection.

Our ability to compete and to achieve and maintain profitability depends on our ability to protect our proprietary discoveries and technologies. We currently rely on a combination of patents, copyrights, trademarks, trade secrets, confidentiality agreements and license agreements to protect our intellectual property rights.

Our patent position for AlloMap Heart is based on issued patents disclosing identification of genes differentially expressed between activated and resting leukocytes and demonstration of correlation between gene expression patterns and specific clinical states and outcomes. As of June 30, 2022, we had 18 issued U.S. patents related to transplant rejection and autoimmunity. We have two issued U.S. patents covering methods of diagnosing transplant rejection using all 11 informative

genes measured in AlloMap Heart. The expiration dates of these patents range from 2023 to 2024. We have four additional patents covering additional genes or gene variants for diagnosing transplant rejection or autoimmune disease.

In connection with our June 2014 acquisition of ImmuMetrix, Inc., we obtained an exclusive license from Stanford to one U.S. patent issued in April 2014 relating to the diagnosis of rejection in organ transplant recipients using dd-cfDNA. Additional patents from Stanford included in the exclusive license were issued, including one in 2017, two in 2019, and four in 2021 that further cover the use of dd-cfDNA to diagnose and predict transplant status or outcome. These patents are expiring between 2030 and 2032.

Our patents and the patents we exclusively license from others may be successfully challenged by third parties as being invalid or unenforceable. For example, in September 2021, the Court in the patent infringement case against Natera ruled that three of the patents we asserted against Natera are invalid. The Court's finding does not have any impact on our ability to continue providing AlloSure, and we have appealed the decision. However, if the Court's invalidity ruling is upheld, it may limit our ability to prevent Natera and other competitors and third parties from developing and marketing products similar to ours and we may not be able to prevent Natera and others from developing or selling products that are covered by our products or technologies, without payment to us. Third parties may independently develop similar or competing technology that avoids the patents we own or exclusively license. We cannot be certain that the steps we have taken will prevent the misappropriation and use of our intellectual property, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States.

The extent to which the patent rights of life sciences companies effectively protect their products and technologies is often highly uncertain and involves complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the proper scope of allowable claims of patents held by such companies has emerged to date in the United States. Various courts, including the United States Supreme Court, have rendered decisions that impact the scope of patentability of certain inventions or discoveries relating to diagnostic solutions or genomic diagnostics. In the *Ariosa Diagnostics, Inc. v. Sequenom, Inc.* (Fed. Cir. 2015) case, a federal court recently determined that a cfDNA product for fetal testing was not eligible for patent protection. These decisions generally stand for the proposition that inventions that recite laws of nature are not themselves patentable unless they have sufficient additional features that provide practical assurance that the processes are genuine inventive applications of those laws rather than patent drafting efforts designed to monopolize a law of nature itself. What constitutes a "sufficient" additional feature for this purpose is uncertain. This evolving case law in the United States may adversely impact our ability to obtain new patents and may facilitate third-party challenges to our existing owned and exclusively licensed patents.

Changes in either the patent laws or in interpretations of patent laws in the United States or other countries may diminish the value of our intellectual property rights. In particular, in September 2011, the United States Congress passed the Leahy-Smith America Invents Act, or the AIA, which became effective in March 2013. The AIA reforms United States patent law in part by changing the standard for patent approval for certain patents from a "first to invent" standard to a "first to file" standard and developing a post-grant review system. This has not yet had a material impact on the operation of our business and the protection and enforcement of our intellectual property, but it may in the future. The AIA and its implementation could still increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition. Patent applications in the United States and many foreign jurisdictions are not published until at least eighteen months after filing, and it is possible for a patent application filed in the United States to be maintained in secrecy until a patent is issued on the application. In addition, publications in the scientific literature often lag behind actual discoveries.

We therefore cannot be certain that others have not filed patent applications that cover inventions that are the subject of pending applications that we own or exclusively license or that we or our licensors, as applicable, were the first to invent the technology (pre-AIA) or first to file (post-AIA). Our competitors may have filed, and may in the future file, patent applications covering technology that is similar to or the same as our technology. Any such patent application may have priority over patent applications that we own or exclusively license and, if a patent issues on such patent application, we could be required to obtain a license to such patent in order to carry on our business. If another party has filed a United States patent application covering an invention that is similar to, or the same as, an invention that we own or license, we or our licensors may have to participate in an interference or other proceeding in the PTO or a court to determine priority of invention in the United States for pre-AIA applications and patents.

For post-AIA applications and patents, we or our licensors may have to participate in a derivation proceeding to resolve disputes relating to inventorship. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in our inability to obtain or retain any United States patent rights with respect to such invention.

We may face intellectual property infringement claims that could be time-consuming and costly to defend and could result in our loss of significant rights and the assessment of treble damages.

We may in the future receive offers to license patents or notices of claims of infringement, misappropriation or misuse of other parties' proprietary rights. We may also initiate claims to defend our intellectual property. Intellectual property litigation, regardless of outcome, is unpredictable, expensive and time-consuming, could divert management's attention from our business and have a material negative effect on our business, operating results or financial condition. If there is a successful claim of infringement against us, we may be required to pay substantial damages (including treble damages if we were to be found to have willfully infringed a third party's patent) to the party claiming infringement, develop non-infringing technology, stop selling our test or using technology that contains the allegedly infringing intellectual property or enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Our failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm our business.

In addition, revising our current or future solutions to exclude any infringing technologies would require us to re-validate the test, which would be costly and time consuming. Also, we may be unaware of pending patent applications that relate to our current or future solutions. Parties making infringement claims on future issued patents may be able to obtain an injunction that would prevent us from selling our current or future solutions or using technology that contains the allegedly infringing intellectual property, which could harm our business. For example, see the risk factor above titled: "We could become subject to legal proceedings that could be time consuming, result in costly litigation and settlements/judgments, require significant amounts of management attention and result in the diversion of significant operational resources, which could adversely affect our business, financial condition and results of operations" for a discussion of our recently completed and ongoing litigation with Natera.

We may be required to take further action to maintain and protect our intellectual property rights against third parties.

In the event we determine that a party is infringing our intellectual property rights, we may try to negotiate a license arrangement with such party or we may determine to initiate a lawsuit against such party. The process of negotiating a license with a third party can be lengthy, and may take months or even years in some circumstances. In addition, it is possible that third parties who we believe are infringing our intellectual property rights are unwilling to license our intellectual property from us on terms we can accept, or at all. For example, see the risk factor above titled: "We could become subject to legal proceedings that could be time consuming, result in costly litigation and settlements/judgments, require significant amounts of management attention and result in the diversion of significant operational resources, which could adversely affect our business, financial condition and results of operations" for a discussion of our recently completed and ongoing litigation with Natera.

The decision to commence litigation over infringement of a patent is complex and may lead to several risks to us, including the following, among others:

- the time, significant expense and distraction to management of managing such litigation;
- the uncertainty of litigation and its potential outcomes;
- the possibility that in the course of such litigation, the defendant may challenge the validity of our patents, which could result in a re-examination or post grant review of our patents and the possibility that the claims in our patents may be limited in scope or invalidated altogether;
- the potential that the defendant may successfully persuade a court that their technology or products do not infringe our intellectual property rights;
- the impact of such litigation on other licensing relationships we have or seek to establish, including the timing of renewing or entering into such relationships, as applicable, as well as the terms of such relationships;
- the potential that a defendant may assert counterclaims against us; and
- adverse publicity to us or harm to relationships we have with customers or others.

Our business is dependent on licenses from third parties.

We license technology from third parties necessary to develop and commercialize our products. In connection with our acquisition of ImmuMetrix, Inc., we obtained an exclusive license from Stanford to one U.S. patent issued in April 2014 relating to the diagnosis of rejection in organ transplant recipients using dd-cfDNA. This technology is critical to AlloSure Kidney under the terms of the Stanford license, we are required to pay certain fees. Additional patents from Stanford included in the exclusive license were issued, including one in 2017, two in 2019, and four in 2021 that further cover the use of dd-cfDNA to diagnose and predict transplant status or outcome. These patents are expiring between 2030 and 2032.

On May 4, 2018, we entered into the License Agreement with Illumina, which provides us with worldwide distribution, development and commercialization rights to Illumina's NGS product line for use in transplantation diagnostic testing. As a result, on June 1, 2018, we became the exclusive worldwide distributor of Illumina's TruSight HLA product line.

On April 30, 2019, we entered into the Cibiltech Agreement, pursuant to which we were granted an irrevocable, non-transferable right to commercialize Cibiltech's proprietary software, iBox, for the predictive analysis of post-transplantation kidney allograft loss in the field of transplantation in the U.S. for a period of ten years.

In April 2020, we entered into a license agreement with Cornell University pursuant to which we were granted exclusive rights to three patents and two patent applications covering methods and technology for measurement of gene expression in urine to diagnose kidney transplant rejection.

In June 2021, we entered into a strategic agreement, which was amended in April 2022, with OrganX to develop clinical decision support tools across the transplant patient journey. Together, we and OrganX will develop advanced analytics that integrate AlloSure, the first transplant specific dd-cfDNA assay, with large transplant databases to provide clinical data solutions. This partnership delivers the next level of innovation beyond multi-modality by incorporating a variety of clinical inputs to create a universal composite scoring system.

Our rights to use this and other licensed technologies, data and materials and to employ the inventions claimed in licensed patents are subject to the continuation of and our compliance with the terms of the applicable licenses.

Termination of the license could prevent us from producing or selling some or all of our products. Failure of a licensor to abide by the terms of a license or to prevent infringement by third parties could also harm our business and negatively impact our market position.

Risks Related to Cybersecurity

We face four primary risks relative to protecting critical information: loss of access risk, inappropriate disclosure risk, inappropriate modification risk and the risk of our being unable to identify and audit our controls over the first three risks. In addition, an application, data security or network incident may allow unauthorized access to our systems or data or our customers' data, disable access to our service, harm our reputation, create additional liability and adversely impact our financial results.

We are highly dependent on information technology networks and systems, including the Internet, to securely process, transmit and store our critical information. Security breaches of this infrastructure, including physical or electronic break-ins, computer viruses, attacks by hackers and similar breaches, can create system disruptions, shutdowns or unauthorized disclosure or modification of confidential information. The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions. In addition, as a result of the COVID-19 pandemic, we may face increased cybersecurity risks due to our reliance on internet technology which may create additional opportunities for cybercriminals to exploit vulnerabilities. While we maintain monitoring practices and protections for our information technology to reduce these risks and test our systems on an ongoing basis for any potential threats, there can be no assurance that these efforts will prevent a cyber-attack or other security breach.

Third parties have attempted, and may in the future attempt, to fraudulently induce employees, contractors or consumers into disclosing sensitive information such as user names, passwords or other information or otherwise compromise the security of our internal networks, electronic systems and/or physical facilities in order to gain access to our data or our critical information, which could result in significant legal and financial exposure. We have experienced cybersecurity incidents and expect that we will continue to be subject to cybersecurity attacks in the future. In addition, a contractor or other third party with whom we do business, as well as parties with which we do not do business, may attempt to circumvent our security measures or obtain such information, and may purposefully or inadvertently cause a breach involving sensitive information. While we still continue to evaluate and implement additional protective measures to reduce the risk and detect cyber incidents, cyberattacks are becoming more sophisticated and frequent and the techniques used in such attacks change rapidly. Despite our cybersecurity measures (including employee and third party training regarding phishing, malware, and other cyber risks, monitoring of networks and systems and maintenance of back up of protective systems), which are continuously reviewed and upgraded, our information technology networks and infrastructure may still be vulnerable to damage, disruptions or shut downs due to attack by hackers or breaches, phishing scams, ransomware, systems failures, computer viruses, employee errors or other malfeasance. A security breach or privacy violation that leads to disclosure or modification of or prevents access to consumer information (including personally identifiable information or protected health information) could harm our reputation, compel us to comply with disparate state breach notification laws, require us to verify the correctness of database contents and otherwise subject us to liability under laws that protect personal data, resulting in increased costs or loss of revenue. If we are unable to prevent such security breaches or privacy violations or implement satisfactory remedial measures, our operations could be disrupted, and we may suffer loss of reputation, financial loss and other regulatory penalties because of lost or misappropriated information,

including sensitive consumer data. In addition, these breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above.

Any such breach or interruption could compromise our networks or those of our third-party billing agent, and the information stored there could be inaccessible or could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such interruption in access, improper access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and regulatory penalties. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to perform tests, provide test results, bill our payers or patients, process claims and appeals, provide customer assistance services, conduct research and development activities, collect, process and prepare company financial information, provide information about our current and future products and solutions and other patient and clinician education and outreach efforts through our website, and manage the administrative aspects of our business, any of which could damage our reputation and adversely affect our business. Any such breach could also result in the compromise of our trade secrets and other proprietary information, which could adversely affect our competitive position. We have insurance coverage in place for certain potential liabilities and costs relating to service interruptions, data corruption, cybersecurity risks, data security incidents and/or network security breaches, but this insurance is limited in amount, subject to a deductible, and may not be adequate to cover us for all costs arising from these incidents. Furthermore, in the future such insurance may not be available on commercially reasonable terms, or at all.

In addition, the interpretation and application of consumer, health-related, privacy and data protection laws in the U.S., Europe and elsewhere are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business. For example, the California Consumer Privacy Act, or the CCPA, took effect on January 1, 2020. The CCPA, among other things, requires covered companies to provide disclosures to California consumers concerning the collection and sale of personal information, and will give such consumers the right to opt-out of certain sales of personal information. The CCPA may increase our compliance costs and potential liability, and we cannot yet predict the impact of the CCPA on our business. Internationally, the General Data Protection Regulation, or the GDPR, took effect in May 2018 within the European Economic Area, or the EEA, and many EEA jurisdictions have also adopted their own data privacy and protection laws in addition to the GDPR. Furthermore, other international jurisdictions, including Singapore, South Korea, China, Brazil, Mexico and Australia, have also implemented laws relating to data privacy and protection.

Risks Related to Our Common Stock

Our operating results may fluctuate, which could cause our stock price to decrease.

Fluctuations in our operating results may lead to fluctuations, including declines, in the share price for our common stock. From January 3, 2022 to June 30, 2022, our closing stock price ranged from \$20.49 to \$46.60 per share. Our operating results and our share price may fluctuate from period to period due to a variety of factors, including:

- demand by clinicians and recipients for our current and future solutions, if any;
- coverage and reimbursement decisions by third-party payers and announcements of those decisions;
- clinical trial results and publication of results in peer-reviewed journals or the presentation at medical conferences;
- the inclusion or exclusion of our current and future solutions in large clinical trials conducted by others;
- new or less expensive tests and services or new technology introduced or offered by our competitors or us;
- the level of our development activity conducted for new solutions, and our success in commercializing these developments;
- our ability to efficiently integrate the business of new acquisitions;
- the level of our spending on test commercialization efforts, licensing and acquisition initiatives, clinical trials, and internal research and development;
- changes in the regulatory environment, including any announcement from the FDA regarding its decisions in regulating our activities;
- changes in recommendations of securities analysts or lack of analyst coverage;
- failure to meet analyst expectations regarding our operating results;
- additions or departures of key personnel;

- public health emergencies such as the COVID-19 pandemic; and
- general market conditions.

Variations in the timing of our future revenues and expenses could also cause significant fluctuations in our operating results from period to period and may result in unanticipated earning shortfalls or losses. In addition, national stock exchanges, and in particular the market for life science companies, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Moreover, we may be subject to additional securities class action litigation as a result of volatility in the price of our common stock, which could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business, prospects, results of operations and financial condition.

The market price of our common stock has been and will likely continue to be volatile, and you could lose all or part of your investment.

Our common stock is currently traded on the Nasdaq Global Market, but we can provide no assurances that there will be active trading on that market or on any other market in the future. If there is no active market or if the volume of trading is limited, holders of our common stock may have difficulty selling their shares. From January 3, 2022 to June 30, 2022, our closing stock price ranged from \$20.49 to \$46.60 per share. The market price of our common stock has been and may continue to be subject to wide fluctuations in response to various factors, some of which are beyond our control. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 24, 2022, factors that could cause fluctuations in the market price of our common stock include the following:

- price and volume fluctuations in the overall stock market from time to time;
- volatility in the market prices and trading volumes of life sciences stocks;
- changes in operating performance and stock market valuations of other life sciences companies generally, or those in our industry in particular;
- sales of shares of our common stock by us or our stockholders;
- entering into financing or other arrangements with rights or terms senior to the interests of common stockholders;
- failure of securities analysts to maintain coverage of us, changes in financial estimates by securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- the financial projections we may provide to the public, any changes in those projections or failure to meet those projections;
- announcements by us or our competitors of new products or services;
- the public's reaction to our press releases, other public announcements and filings with the SEC;
- rumors and market speculation involving us or other companies in our industry;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- actual or anticipated developments in our business, our competitors' businesses or the competitive landscape generally;
- litigation involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;
- developments or disputes concerning our intellectual property or other proprietary rights;
- announced or completed acquisitions of businesses or technologies by us or our competitors;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidelines, interpretations or principles;
- any significant change in our management;
- public health emergencies, including the COVID-19 pandemic; and
- general economic conditions and slow or negative growth of our markets.

General Risk Factors

The impact of the Russian invasion of Ukraine on the global economy, energy supplies and raw materials is uncertain, but may prove to negatively impact our business and operations.

The short and long-term implications of Russia's invasion of Ukraine are difficult to predict at this time. We continue to monitor any adverse impact that the outbreak of war in Ukraine and the subsequent institution of sanctions against Russia by the United States and several European and Asian countries may have on the global economy in general, on our business and operations and on the businesses and operations of our suppliers and customers. For example, a prolonged conflict may result in increased inflation, escalating energy prices and constrained availability, and thus increasing costs, of raw materials. We will continue to monitor this fluid situation and develop contingency plans as necessary to address any disruptions to our business operations as they develop. To the extent the war in Ukraine may adversely affect our business as discussed above, it may also have the effect of heightening many of the other risks described herein. Such risks include, but are not limited to, adverse effects on macroeconomic conditions, including inflation; disruptions to our global technology infrastructure, including through cyberattack, ransom attack, or cyber-intrusion; adverse changes in international trade policies and relations; our ability to maintain or increase our product prices; disruptions in global supply chains; our exposure to foreign currency fluctuations; and constraints, volatility, or disruption in the capital markets, any of which could negatively affect our business and financial condition.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS***Issuer Purchases of Equity Securities***

We satisfy certain U.S. federal and state tax withholding obligations due upon the vesting of restricted stock unit awards by automatically withholding from the shares being issued in connection with such award a number of shares of our common stock with an aggregate fair market value on the date of vesting equal to the minimum tax withholding obligations. The following table sets forth information with respect to shares of our common stock repurchased by us to satisfy certain tax withholding obligations during the three months ended June 30, 2022:

	(a) Total Number of Shares (or Units) Purchased	(b) Average Price Paid per Share (or Unit)
April 1, 2022 - April 30, 2022	67,279 (1)	\$ 14.43
May 1, 2022 - May 31, 2022	6,576 (1)	8.39
June 1, 2022 - June 30, 2022	17,304 (1)	4.15
Total	91,159	—

(1) Represents shares of our common stock withheld from employees for the payment of taxes.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

On June 14, 2022, we entered into an office lease agreement with HCP Life Science REIT, Inc., or the Brisbane Lease Agreement, to lease approximately 26,506 square feet of an office building located at 8000 Marina Boulevard, Brisbane, California, and relocated our headquarters from South San Francisco, California to the Brisbane location effective July 1, 2022. The term of the lease is six years with an expiration date of June 30, 2028, and rental payments are initially \$127,228.80 per month, which are subject to an annual 3.0% increase. We have the option to extend the term of lease for one additional 5 year term. The foregoing description of the Brisbane Lease Agreement is qualified by reference to the full text of the Brisbane Lease Agreement, which is filed as Exhibit 10.4 to this Quarterly Report on Form 10-Q and incorporated herein by reference.

ITEM 6. EXHIBITS

Exhibit Number	
3.1(1)	Amended and Restated Certificate of Incorporation.
3.2(2)	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of CareDx, Inc., filed June 17, 2021.
3.3(3)	Amended and Restated Bylaws.
4.1(4)	Form of Registrant's common stock certificate.
4.2(5)#	2014 Equity Incentive Plan, as amended.
4.3(6)#	Form of Option Agreement under the 2014 Equity Incentive Plan for New Options.
4.4(7)#	2014 Employee Stock Purchase Plan and forms of agreements thereunder.
4.5(8)#	2016 Inducement Equity Incentive Plan.
4.6(9)	Form of Warrant.
4.7(10)#	CareDx, Inc. 2019 Inducement Equity Incentive Plan.
10.1*†	Amended and Restated Exclusive Agreement, dated January 27, 2014, by and between the Board of Trustees of the Leland Stanford Junior University and ImmuMetrix, Inc.
10.2#*	Consulting Agreement, dated May 20, 2022, by and between the Registrant and Ankur Dhirga.
10.3#*	Promotion Letter, dated May 21, 2022, by and between the Registrant and Abhishek Jain.
10.4+*	Lease, dated June 14, 2022, by and between the Registrant and HCP Life Science REIT, Inc.
31.1*	Certification of Periodic Report by Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Periodic Report by Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)
(1)	Incorporated by reference to Exhibit 3.1 to the Registrant's Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on August 28, 2014.
(2)	Incorporated by reference to Exhibit 3.1 to the Registrant's Form 8-K filed with the SEC on June 21, 2021.
(3)	Incorporated by reference to Exhibit 3.2 to the Registrant's Form 8-K filed with the SEC on June 21, 2021.
(4)	Incorporated by reference to Exhibit 4.1 to the Registrant's Form 10-K filed with the SEC on March 31, 2015.
(5)	Incorporated by reference to Exhibit 4.2 to the Registrant's Form 10-Q filed with the SEC on July 29, 2021.
(6)	Incorporated by reference to Exhibit 99(d)(3) to the Registrant's Form SC TO-I filed with the SEC on October 12, 2017.
(7)	Incorporated by reference to Exhibit 4.5 to the Registrant's Form S-8 filed with the SEC on July 18, 2014.
(8)	Incorporated by reference to Exhibit 4.5 to the Registrant's Form 10-Q filed with the SEC on July 29, 2021.
(9)	Incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K filed with the SEC on April 14, 2016.
(10)	Incorporated by reference to Exhibit 4.7 to the Registrant's Form 10-Q filed with the SEC on July 29, 2021.

#	Indicates management contract or compensatory plan or arrangement.
*	Filed herewith.
**	Furnished herewith.
†	Certain identified information has been omitted pursuant to Item 601(b)(10) of Regulation S-K because such information is both (i) not material and (ii) information that the Registrant treats as private or confidential. The Registrant hereby undertakes to furnish supplemental copies of the unredacted exhibit upon request by the SEC.
+	Non-material schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Registrant hereby undertakes to furnish supplementally copies of any of the omitted schedules and exhibits upon request by the SEC.

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.

Date: August 4, 2022

CAREDX, INC.

(Registrant)

By: /s/ REGINALD SEETO, MBBS

Reginald Seeto, MBBS

President and Chief Executive Officer

(Principal Executive Officer)

By: /s/ ABHISHEK JAIN

Abhishek Jain

Interim Chief Financial Officer

(Principal Accounting and Financial Officer)

*** Certain identified information has been omitted from this exhibit because it is both (i) not material and (ii) of the type that the Registrant treats as private or confidential. Such omitted information is indicated by brackets (“[***]”) in this exhibit. ***

S09-367: GWK

AMENDED AND RESTATED EXCLUSIVE AGREEMENT

This Amended and Restated Agreement (“Restated Agreement”) between THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY (“Stanford”), an institution of higher education having powers under the laws of the State of California, and ImmuMetrix, Inc. (“ImmuMetrix”), a corporation having a principal place of business at 3183 Porter Drive, Palo Alto, CA, is effective on the 27th day of January, 2014, (“Restatement Effective Date”).

1 BACKGROUND

Stanford has an assignment of an invention for a rapid, inexpensive, non-invasive method to monitor organ transplant recipients for life-threatening graft rejection. It is entitled “Non-invasive diagnosis of graft rejection in organ transplant patients,” was invented in the laboratory of Dr. Stephen Quake, a Howard Hughes Medical Institute (“HHMI”) investigator at Stanford, and is described in Stanford Docket S09-367. The invention was made in the course of research supported by the National Institutes of Health and HHMI. Stanford wants to have the invention perfected and marketed as soon as possible so that resulting products may be available for public use and benefit.

Effective as of August 19, 2011 (“Original Sequencing Effective Date”), Stanford and ImmuMetrix, LLC entered into the Exclusive License Agreement (“Sequencing Agreement”) pursuant to which ImmuMetrix, LLC obtained from Stanford a world-wide exclusive license under the Licensed Patents for use in research and diagnostic fields using sequencing, as more completely set forth in the Sequencing Agreement. Additionally, effective as of February 10, 2012 (“Original PCR Effective Date”), Stanford and ImmuMetrix, LLC entered into the Exclusive License Agreement (“PCR Agreement”) pursuant to which ImmuMetrix, LLC obtained from Stanford a world-wide exclusive license under the Licensed Patents for use in research and diagnostic fields using PCR assays, as more completely set forth in the PCR Agreement.

As described, and consented to by Stanford, in that certain letter from ImmuMetrix, LLC to Stanford dated March 26, 2013, ImmuMetrix, LLC assigned to ImmuMetrix, Inc. all rights and obligations under the Sequencing Agreement and the PCR Agreement.

Now, the parties desire to amend the terms of the Sequencing Agreement and the PCR Agreement and restate the Sequencing Agreement and PCR Agreement in their entirety on the terms and conditions as set forth in this Restated Agreement.

2 DEFINITIONS

- 2.1 “Agreement” means collectively, (i) the Sequencing Agreement as in effect from the Original Sequencing Agreement Effective Date until the Restatement Effective Date, (ii) the PCR Agreement as in effect from the Original PCR Effective Date until the Restatement Effective Date and (iii) this Restated Agreement, which pursuant to Section 20.6 below, replaces the Sequencing Agreement and the PCR Agreement in their entirety as of the Restatement Effective Date.
- 2.2 “Fully Diluted Basis” means the total number of shares of ImmuMetrix’s issued and outstanding common stock, assuming:
- (A) the conversion of all issued and outstanding securities convertible into common stock;
 - (B) the exercise of all issued and outstanding warrants or options, regardless of whether then exercisable; and
 - (C) the issuance, grant, and exercise of all securities reserved for issuance pursuant to any ImmuMetrix stock or stock option plan then in effect.
- 2.3 “HHMI Indemnitees” means HHMI and its trustees, officers, employees, and agents.
- 2.4 “Licensed Field of Use” means any and all fields of use.

- 2.5 “Licensed Patent” means any domestic or foreign patent application or patent that claims priority to, or common priority with, any application listed in Appendix C. Any claim of an unexpired Licensed Patent is presumed to be valid unless it has been held to be invalid by a final judgment of a court of competent jurisdiction from which no appeal can be or is taken. “Licensed Patent” excludes any continuation-in-part (CIP) patent application or patent, provided however that neither party shall file any such patent applications that claim priority to any patent applications that are licensed under this Agreement without the prior written consent of the other party.
- 2.6 “Licensed Product” means a product or part of a product in the Licensed Field of Use the making, using, importing or selling of which, absent this license, infringes, induces infringement, or contributes to infringement of a Valid Claim of a Licensed Patent. For clarity, discovery or development of a product using Licensed Patents or technology or rights licensed hereunder does not cause such product to be a Licensed Product.
- 2.7 “Licensed Territory” means worldwide.
- 2.8 “Net Sales” means all gross revenue derived through ImmuMetrix or sublicensees from sales of Licensed Product. Net Sales excludes the following items (but only as they pertain to the making, using, importing or selling of Licensed Products, are included in gross revenue, and are separately billed):
- (D) import, export, excise and sales taxes, and custom duties;
 - (E) costs of insurance, packing, and transportation from the place of manufacture to the customer’s premises or point of installation;
 - (F) costs of installation at the place of use; and credit for returns, allowances, or trades.
- 2.9 “Nonroyalty Sublicensing Consideration” means any consideration received by ImmuMetrix from a sublicensee as consideration for and allocable to the grant of a Sublicense under rights under the Licensed Patents in the Licensed Field of Use such as up front fees, annual fees, and milestone fees, without limitation, but excluding any consideration for an earned royalty that is calculated based on sales of Licensed Product, investments in ImmuMetrix stock or debt, payment or reimbursement of R&D expenses calculated on a fully burdened basis, supply of Licensed Products or other products or materials to such sublicensee, reimbursement for patent prosecution costs and patent maintenance expenses, licensing of patents or other intellectual property other than Licensed Patents, and the sale of all or substantially all of the business or assets of ImmuMetrix (or its assignee) whether by merger, sale of stock or assets or otherwise.
- 2.10 “Stanford Indemnitees” means Stanford and Stanford Hospitals and Clinics, and their respective trustees, officers, employees, students, and agents.
- 2.11 “Sublicense” means any agreement between ImmuMetrix and a third party that contains a grant to Stanford’s Licensed Patents regardless of the name given to the agreement by the parties; however, an agreement to make, have made, use or sell Licensed Products on behalf of ImmuMetrix is not considered a Sublicense.
- 2.12 “Technology” means the Licensed Patents and that additional information or materials listed in Appendix D that will be provided by Stanford to ImmuMetrix. Technology may or may not be confidential in nature.
- 2.13 “Valid Claim” means a claim contained in an issued and unexpired patent or a pending patent application which has not been held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been admitted to be invalid or unenforceable through abandonment, reissue, disclaimer or otherwise. Notwithstanding the foregoing, if a claim of a pending patent application within the Licensed Patents has not issued as a claim of an issued patent within the Licensed Patents, within five (5) years after the filing date from which such claim takes priority, such pending claim shall not be a Valid Claim for purposes of this Agreement.
- 3 GRANT**
- 3.1 **Grant.** Subject to the terms and conditions of this Agreement, Stanford grants ImmuMetrix (a) an exclusive license under the Licensed Patent in the Licensed Field of Use to make, have made, use, import, offer to sell and sell Licensed Product in the Licensed Territory and (b) a non-exclusive license under the

Technology in the Licensed Field of Use to research, develop, make, have made, use, import, offer to sell and sell Licensed Product and otherwise exploit Technology in the Licensed Territory.

- 3.2 **Term.** The license terminates when the last of the Licensed Patents expires, provided that ImmuMetrix's non-exclusive license under the Technology set forth in Section 3.1(b) shall survive such expiration with respect to Technology in ImmuMetrix's possession.
- 3.3 **Retained Rights.** Stanford retains the right, on behalf of itself and all other non-profit academic research institutions, to practice the Licensed Patent and use Technology for any non-profit purpose, including sponsored research and collaborations. ImmuMetrix agrees that, notwithstanding any other provision of this Agreement, it has no right to enforce the Licensed Patent against any such institution. Stanford and any such other institution have the right to publish any information included in the Technology or a Licensed Patent. ImmuMetrix acknowledges that HHMI has retained an irrevocable, perpetual, worldwide, royalty-free, nonexclusive, nontransferable license to the Licensed Patents and Technology.
- 3.4 **Specific Exclusion.** Stanford does not:
- (A) grant to ImmuMetrix any other licenses, implied or otherwise, to any patents or other rights of Stanford other than those rights granted under Licensed Patent, regardless of whether the patents or other rights are dominant or subordinate to any Licensed Patent, or are required to exploit any Licensed Patent or Technology;
 - (B) commit to ImmuMetrix to bring suit against third parties for infringement, except as described in Article 14; and
 - (C) agree to furnish to ImmuMetrix any technology or technological information other than the Technology or to provide ImmuMetrix with any assistance.
- 4 SUBLICENSING**
- 4.1 **Permitted Sublicensing.** ImmuMetrix may grant and authorize sublicenses in the Licensed Field of Use only if at the time of such grant ImmuMetrix or its sublicensee is developing or selling Licensed Products. Sublicenses with any exclusivity must include diligence requirements commensurate with the diligence requirements of Appendix A. Stanford agrees that ImmuMetrix may apportion a commercially reasonable percentage of sublicensing payments made to Stanford pursuant to Section 4.6, provided however that ImmuMetrix provides Stanford with the proposed apportionment and justification prior ImmuMetrix's payment pursuant to Section 8.1. Stanford and ImmuMetrix agree to meet to discuss such proposed apportionment if in Stanford's opinion the apportionment does not reasonably reflect the value of the Licensed Patents.
- 4.2 **Required Sublicensing.** If ImmuMetrix is unable or unwilling to serve or develop a potential market or market territory for which there is a company willing to be a sublicensee, ImmuMetrix will, at Stanford's request, negotiate in good faith a Sublicense with any such sublicensee. Stanford would like licensees to address unmet needs, such as those of neglected patient populations or geographic areas, giving particular attention to improved therapeutics, diagnostics and agricultural technologies for the developing world.
- 4.3 **Sublicense Requirements.** Any Sublicense granted under this Agreement:
- (D) is subject to this Agreement;
 - (E) will prohibit sublicensee from paying royalties to an escrow or other similar account;
 - (F) will expressly include the provisions of Articles 8, 9, 10, 12, and Section 19.4 for the benefit of Stanford and/or HHMI, as the case may be; and
 - (G) will require the transfer of all the sublicensee's applicable obligations to ImmuMetrix with respect to the sublicense, including the payment of royalties specified in the Sublicense (up to the earned royalty rates set forth in Article 7)), to Stanford or its designee, if this Agreement is terminated. If the sublicensee is a spin-out from ImmuMetrix, ImmuMetrix must guarantee the sublicensee's performance with respect to the payment of Stanford's share of Sublicense royalties.

- 4.1 Copy of Sublicenses and Sublicensee Royalty Reports. ImmuMetrix will submit to Stanford a copy of each Sublicense, any subsequent amendments and all copies of sublicensees' royalty reports. Beginning with the first Sublicense, the Chief Financial Officer or equivalent will certify annually regarding the name and number of sublicensees.
- 4.2 **Litigation by Sublicensee.** Any Sublicense must include the following clauses:
- (H) In the event sublicensee brings an action seeking to invalidate any Licensed Patent:
- (1) sublicensee will double the payment paid to the ImmuMetrix during the pendency of such action. Moreover, should the outcome of such action determine that any claim of a patent challenged by the sublicensee is both valid and infringed by a Licensed Product, sublicensee will pay triple times the payment paid under the original Sublicense;
 - (2) sublicensee will have no right to recoup any royalties paid before or during the period challenge;
 - (3) any dispute regarding the validity of any Licensed Patent shall be litigated in the courts located in Santa Clara County, and the parties agree not to challenge personal jurisdiction in that forum;
 - (4) sublicensee shall not pay royalties into any escrow or other similar account.
- (I) Sublicensee will provide written notice to Stanford at least three months prior to bringing an action seeking to invalidate a Licensed Patent. Sublicensee will include with such written notice an identification of all prior art it believes invalidates any claim of the Licensed Patent.
- Notwithstanding the foregoing, in the event a sublicensee files a counterclaim asserting invalidity of one or more Licensed Patents in response to an actual suit by Stanford, such sublicensee shall not be deemed to have brought an action to invalidate a Licensed Patent and this Section 4.5 shall not apply.
- 4.4 **Sharing of Sublicensing Income.** ImmuMetrix will pay Stanford the following percent of all Nonroyalty Sublicensing Consideration, excluding earned royalties (ImmuMetrix shall guarantee earned royalties for sales by sublicensees as if the sales were made by ImmuMetrix):
- (J) [***] % of Nonroyalty Sublicensing Consideration before and [***]% of Nonroyalty Consideration after demonstration, that cell free DNA of a transplanted organ, other than a human heart, may be detected in the blood or other bodily fluids or tissues of the host, and that the cell free DNA concentration increases during a transplant rejection event as identified by other established clinical means, but before occurrence of an event listed in clause (B) below;
 - (K) [***]% of Nonroyalty Sublicensing Consideration after the earlier of (i) commercial launch as indicated by a first sale or (ii) expenditure after the Restatement Effective date of \$[***] for the research, development, regulatory approval and/or commercialization, in either case of a Licensed Product by ImmuMetrix directly or through its Affiliates, sublicensees and/or other contractors, but before occurrence of the event listed in clause (C) below; or
 - (L) [***] % of Nonroyalty Sublicensing Consideration after annual sales of Licensed Product by ImmuMetrix, its Affiliates and/or its sublicensees reach \$[***].
- 4.3 **Royalty-Free Sublicenses.** If ImmuMetrix pays all royalties due Stanford from a sublicensee's Net Sales, ImmuMetrix may grant that sublicensee a royalty-free or non-cash:
- (M) Sublicense or
 - (N) cross-license.

5 GOVERNMENT RIGHTS

This Agreement is subject to Title 35 Sections 200-204 of the United States Code. Among other things, these provisions provide the United States Government with nonexclusive rights in the Licensed Patent. They also impose

the obligation that Licensed Product sold or produced in the United States be “manufactured substantially in the United States.” ImmuMetrix will ensure all obligations of these provisions are met.

6 DILIGENCE

- 6.1 **Milestones.** Because the invention is not yet commercially viable as of the Original Sequencing Effective Date, ImmuMetrix, directly or through its Affiliates, sublicensees and/or other contractors, will diligently develop, manufacture, and sell and/or otherwise commercialize Licensed Product and will diligently develop markets for Licensed Product. In addition, ImmuMetrix, directly or through its Affiliates, sublicensees and/or other contractors, will meet the milestones shown in Appendix A, and notify Stanford in writing as each milestone is met. Notwithstanding the foregoing and 15.2(A)(3), Stanford shall not unreasonably withhold its consent to any revision of the milestones described in Appendix A when requested in writing by ImmuMetrix to the extent such request is supported by evidence of technical difficulties or delays, including in clinical studies or regulatory processes, outside of ImmuMetrix’s reasonable control. Additionally, ImmuMetrix shall be entitled to extend the due date of any one and any subsequent milestones described on Appendix A by [***] year upon payment to Stanford of [***] Dollars (\$[***]) (a “[***]-Year Extension”), but only once for each milestone. ImmuMetrix shall have the right to extend such due dates from time to time for additional [***]-Year Extensions in accordance with the foregoing, but only after discussion and agreement by Stanford, such agreement not to be unreasonably withheld. Any such extension of a milestone due date shall also extend the due date for all subsequent related milestones by [***] year.
- 6.2 **Progress Report.** By March 1 of each year, ImmuMetrix will submit a written annual report to Stanford covering the preceding calendar year. The report will include information sufficient to enable Stanford to satisfy reporting requirements of the U.S. Government and for Stanford to ascertain progress by ImmuMetrix toward meeting this Agreement’s diligence requirements. Each report will describe, where relevant: ImmuMetrix’s progress toward commercialization of Licensed Product, including work completed, key scientific discoveries, summary of work-in-progress, current schedule of anticipated events or milestones, market plans for introduction of Licensed Product, and significant corporate transactions involving Licensed Product.
- 6.3 **Clinical Trial Notice.** ImmuMetrix will notify Stanford prior to commencing any clinical trials at Stanford.
- 6.4 **Completed Milestones.** Stanford acknowledges and agrees that ImmuMetrix has met the milestones numbered 1 through 6 set forth in Appendix A.

7 ROYALTIES

- 7.1 **Issue Royalty.** Stanford and ImmuMetrix acknowledge and agree that in consideration of the grant of the license hereunder, ImmuMetrix has paid to Stanford a noncreditable, nonrefundable license issue royalty of \$20,000 upon signing the PCR Agreement and a noncreditable, nonrefundable license issue royalty of \$20,000 upon signing the Sequencing Agreement and no addition issue royalty, except as set forth in Section 7.16 hereof, shall be due upon the signing of this Restated Agreement.
- 7.2 **License Maintenance Fee.** ImmuMetrix will pay Stanford a yearly license maintenance fee as follows:
- (A) \$[***] upon the first anniversary of the Restated Agreement;
 - (B) \$[***] upon the second anniversary of the Restated Agreement; and
 - (C) \$[***] upon the third and each subsequent anniversary of the Restated Agreement during the term of this Restated Agreement.
- Yearly maintenance payments are nonrefundable, but they are creditable each year as described in Section 7.6.
- 7.3 **Milestone Payments.** ImmuMetrix will pay Stanford the following milestone payments with respects of the first Licensed Product:

(a)	Initiation of any clinical trial	\$[***]
(a)	First commercial sale	\$[***]
(a)	FDA or ex-US equiv. approval	\$[***]
(a)	Sales > \$[***]	\$[***]
(a)	Patent Issuance	\$[***]
(a)	Net Sales of Licensed Product exceeds \$[***]	\$[***]

7.1 Earned Royalty. ImmuMetrix will pay Stanford earned royalties (Y%) on Net Sales as follows:

ImmuMetrix or its sublicensee will pay Stanford a [***]% royalty on Net Sales of each Licensed Product sold.

Earned royalties paid to third parties will offset Stanford earned royalties at a rate [***]% for each [***]% that ImmuMetrix pays to third parties provided that the third party technology for which ImmuMetrix pays earned royalties is reasonably useful and the earned royalty rate ImmuMetrix pays them is commercially reasonable for the type of technology and such license is reasonably useful to make, use and sell the Licensed Product, licensed hereunder. In no event shall the royalty be reduced by more than [***]%.

In the event that a Licensed Product is sold in combination with one or more other products or components for which no royalty would be due hereunder if sold separately ("Other Product(s)"), Net Sales from such sales shall be calculated by multiplying the net selling price of the combination product by the fraction $A/(A + B)$, where A is the average gross selling price during the applicable calendar quarter of the Licensed Product sold separately and B is the average gross selling price during the applicable calendar quarter of the Other Product(s). In the event that separate sales of the Licensed Product and/or of the Other Product(s) were not made during the applicable calendar quarter, then the Net Sales on the combination product shall be as reasonably as mutually agreed upon by Stanford and ImmuMetrix in good faith, between such Licensed Product and such Other Product(s), based upon their relative importance and proprietary protection. In the event that Stanford reasonably believes that the average gross selling price during the applicable calendar quarter of the Licensed Product sold separately and the Other Product(s) sold separately do not accurately reflect the relative importance and proprietary protection of the Licensed Product and such Other Product(s) for the purposes of determining Net Sales of a combination product, Stanford may provide ImmuMetrix notice thereof and the parties thereafter shall reasonably discuss and agree in good faith upon an alternative allocation with respect thereto. If the parties cannot so agree, the matter will be resolved by arbitration in accordance with Article 17.

For clarity, ImmuMetrix's right to offset earned royalties for third party technology as set forth above shall not apply with respect to third party technology reasonably useful to make, use and sell a Licensed Product that is a combination product for which Net Sales is calculated as set forth in the preceding paragraph to the extent such third party technology is only useful for the making, using or selling the Other Product(s) in such combination product separately.

7.2 Earned Royalty if ImmuMetrix or Sublicensee Challenges the Patent. Notwithstanding the above, should ImmuMetrix bring an action seeking to invalidate any Licensed Patent, ImmuMetrix will pay royalties to Stanford at the rate of [***] x Y percent ([***] x Y%) of the Net Sales of all Licensed Products sold during the pendency of such action. Moreover, should the outcome of such action determine that any claim of a patent challenged by ImmuMetrix is both valid and infringed by a Licensed Product, ImmuMetrix will pay royalties at the rate of [***] x Y percent ([***] x Y%) of the Net Sales of all Licensed Products sold. Notwithstanding the foregoing, in the event ImmuMetrix files a counterclaim asserting invalidity of one or more Licensed Patents in response to an actual suit by Stanford, ImmuMetrix shall not be deemed to have brought an action to invalidate a Licensed Patent and this Section 7.5 shall not apply.

7.3 Creditable Payments. The license maintenance fee for a year may be offset against earned royalty payments due on Net Sales occurring in that year.

For example:

- (D) if ImmuMetrix pays Stanford a \$[***] maintenance payment for year Y, and according to Section 7.4 \$[***] in earned royalties are due Stanford for Net Sales in year Y, ImmuMetrix will only need to pay Stanford an additional \$[***] for that year's earned royalties.
- (E) if ImmuMetrix pays Stanford a \$[***] maintenance payment for year Y, and according to Section 7.4 \$[***] in earned royalties are due Stanford for Net Sales in year Y, ImmuMetrix will not need to pay Stanford any earned royalty payment for that year. ImmuMetrix will not be able to offset the remaining \$[***] against a future year's earned royalties.

- 7.4 **Obligation to Pay Royalties.** A royalty is due Stanford under this Agreement for any activity conducted under the licenses granted. For convenience's sake, the amount of that royalty is calculated using Net Sales. Nonetheless, if certain Licensed Products are made, used, imported, or offered for sale before the date this Agreement terminates, and those Licensed Products are sold after the termination date, ImmuMetrix will pay Stanford an earned royalty for its exercise of rights based on the Net Sales of those Licensed Products.
- 7.5 **No Escrow.** ImmuMetrix shall not pay royalties into any escrow or other similar account.
- 7.6 **Currency.** ImmuMetrix will calculate the royalty on sales in currencies other than U.S. Dollars using the appropriate foreign exchange rate for the currency quoted by the Wall Street Journal on the close of business on the last banking day of each calendar quarter. ImmuMetrix will make royalty payments to Stanford in U.S. Dollars.
- 7.7 **Non-U. S. Taxes.** ImmuMetrix will pay all non-U.S. taxes related to royalty payments. These payments are not deductible from any payments due to Stanford.
- 7.8 **Interest.** Any payments not made when due will bear interest at the lower of (a) the Prime Rate published in the Wall Street Journal plus 200 basis points or (b) the maximum rate permitted by law.
- 7.9 **[***]% Purchase Right.** In any private offering of ImmuMetrix's equity securities for cash (or in satisfaction of debt issued for cash), Stanford may purchase for cash up to [***]% of the securities issued in such offering. This right will expire following the first round of bona fide equity investment in ImmuMetrix from a single or group of investors which includes at least one venture capital, professional angel, corporate or other similar institutional investor and which either (i) is at least \$[***] in size or (ii) involves the sale to outside investors of at least [***]% of the shares outstanding after such round on a Fully-Diluted Basis, but will apply to all shares to be issued in such round.
- 7.10 **Future Offerings.** In any private offering of ImmuMetrix's equity securities in exchange for cash (or in satisfaction of debt issued for cash), Stanford may purchase for cash that number of the securities issued in such offering as is necessary for Stanford to maintain its pro rata ownership interest in ImmuMetrix on a Fully-Diluted Basis. This right is in addition to Stanford's rights under Section 7.12. If both Section 7.12 and this Section 7.13 apply to an offering, the provision granting Stanford the greater purchase rights will govern.
- 7.11 **Purchase Terms and Procedure, Exceptions; Public Offering.** In any offering subject to Section 7.12 or 7.13, (i) Stanford's purchase right shall be on the same terms as the other investors in the financing in question, except that Stanford shall not have any board representation or board meeting attendance rights, (ii) ImmuMetrix will give Stanford notice of the terms of the offering, including the names of the investors and the amounts to be invested by each, and Stanford may elect to exercise its right of purchase, in whole or in part, by notice given to ImmuMetrix within 20 days after receipt of ImmuMetrix's notice and (iii) if Stanford elects not to purchase, or fails to give an election notice within such period, Stanford's purchase right will not apply to the offering if (and only if and to the extent) it is consummated within 90 days on the same or less favorable (to the investor) terms as stated in ImmuMetrix's notice to Stanford. Stanford's rights under Sections 7.12 and 7.13 will not apply to the issuance of stock: (i) to employees and other service providers pursuant to a plan approved by ImmuMetrix's Board of Directors; (ii) as additional consideration in lending or leasing transactions, or (iii) to any person or entity pursuant to an arrangement that the ImmuMetrix's Board of Directors determines in good faith is a strategic partnership, licensing transaction or other arrangement which is not primarily for the purpose of raising capital. In the event of the closing of a firm commitment underwritten public offering, the rights granted in Sections 7.12 and 7.13 will terminate (in addition to any earlier termination pursuant to their terms) immediately before such closing. The rights granted in Section 7.13 will also terminate upon a bona- fide acquisition of ImmuMetrix by a third party if the acquisition is deemed by ImmuMetrix's Board of Directors to be in the

best interest of its stockholders and the acquisition results in the termination of all such similar rights held by its stockholders in connection with the acquisition.

- 7.12 **Repurchase Obligation.** If Stanford is to conduct any clinical trial on behalf of ImmuMetrix or any agent of ImmuMetrix, ImmuMetrix will repurchase all Stanford's equity interest in ImmuMetrix prior to beginning such trial, if requested by Stanford. The repurchase price for any such equity interest will be the fair market value for that equity at the time ImmuMetrix and Stanford enter into a definitive agreement under which any such clinical research will be performed. Fair market value of publicly traded equity instruments will be determined by taking the average of the closing price for such equity over the five days preceding such date. Fair market value of non-public equity instruments will be at least as high as the greater of:
- (F) the last value placed on any such equity in ImmuMetrix through an arms-length transaction regarding the issuance or sale of any equity in ImmuMetrix; or
 - (G) the last value placed on any such equity by ImmuMetrix's Board of Directors in connection with any transaction other than this repurchase of shares from Stanford.
- 7.4 **Equity Interest.** As further consideration for the license granted hereunder and the restatement of the Sequencing Agreement and the PCR Agreement into this Restated Agreement, ImmuMetrix shall, subject to the approval of ImmuMetrix's Board of Directors and Stanford's execution and delivery to ImmuMetrix of ImmuMetrix's standard form of stock purchase agreement attached hereto as Appendix E, grant to Stanford 700,000 shares of common stock in ImmuMetrix. When issued, those shares will represent 1.451% of the common stock in ImmuMetrix on a Fully Diluted Basis. ImmuMetrix agrees to provide Stanford with a capitalization table upon which the above calculation is made. ImmuMetrix will, subject to each inventor's execution and delivery to ImmuMetrix of ImmuMetrix's standard form of stock purchase agreement attached hereto as Appendix E, issue 28.34% of all shares granted to Stanford pursuant to this Section 7.16 directly to and in the name of the inventors listed allocated as stated below:
- A) **Stephen Quake** — 66,127 shares
 - B) **Thomas Snyder** — 66,127 shares
 - C) **Hannah Valantine**- 66,127 shares

8 ROYALTY REPORTS, PAYMENTS, AND ACCOUNTING

- 8.1 **Quarterly Earned Royalty Payment and Report.** Beginning with the first sale of a Licensed Product by ImmuMetrix or a sublicensee, ImmuMetrix will submit to Stanford a written report (even if there are no sales) and an earned royalty payment within 30 days after the end of each calendar quarter. This report will be in the form of Appendix B and will state the number, description, and aggregate Net Sales of Licensed Product during the completed calendar quarter. The report will include an overview of the process and documents relied upon to permit Stanford to understand how the earned royalties are calculated. With each report ImmuMetrix will include any earned royalty payment due Stanford for the completed calendar quarter (as calculated under Section 7.4).
- 8.2 **No Refund.** In the event that a validity or non-infringement challenge of a Licensed Patent brought by ImmuMetrix is successful, ImmuMetrix will have no right to recoup any royalties paid before or during the period challenge.
- 8.3 **Termination Report.** ImmuMetrix will pay to Stanford all applicable royalties and submit to Stanford a written report within 90 days after the license terminates. ImmuMetrix will continue to submit earned royalty payments and reports to Stanford after the license terminates, until all Licensed Products made or imported under the license have been sold.
- 8.4 **Accounting.** ImmuMetrix will maintain records showing manufacture, importation, sale, and use of a Licensed Product for 7 years from the date of sale of that Licensed Product. Records will include general-ledger records showing cash receipts and expenses, and records that include: production records, customers, invoices, serial numbers, and related information in sufficient detail to enable Stanford to determine the royalties payable under this Agreement.
- 8.5 **Audit by Stanford.** ImmuMetrix will allow Stanford or its designee to examine ImmuMetrix's records to verify payments made by ImmuMetrix under this Agreement.

- 8.6 **Paying for Audit.** Stanford will pay for any audit done under Section 8.5. But if the audit reveals an underreporting of earned royalties due Stanford of 5% or more for the period being audited, ImmuMetrix will pay the audit costs.
- 8.7 **Self-audit.** ImmuMetrix will conduct an independent audit of sales and royalties at least every 2 years if annual sales of Licensed Product are over \$5,000,000. The audit will address, at a minimum, the amount of gross sales by or on behalf of ImmuMetrix during the audit period, the amount of funds owed to Stanford under this Agreement, and whether the amount owed has been paid to Stanford and is reflected in the records of ImmuMetrix. ImmuMetrix will submit the auditor's report promptly to Stanford upon completion. ImmuMetrix will pay for the entire cost of the audit.
- 9 EXCLUSIONS AND NEGATION OF WARRANTIES**
- 9.1 **Negation of Warranties.** Stanford provides ImmuMetrix the rights granted in this Agreement AS IS and WITH ALL FAULTS. Stanford makes no representations and extends no warranties of any kind, either express or implied. Among other things, Stanford disclaims any express or implied warranty:
- (A) of merchantability, of fitness for a particular purpose,
 - (B) of non-infringement or
 - (C) arising out of any course of dealing.
- 9.2 **No Representation of Licensed Patent.** ImmuMetrix also acknowledges that Stanford does not represent or warrant:
- (D) the validity or scope of any Licensed Patent, or
 - (E) that the exploitation of Licensed Patent or Technology will be successful.
- 10 INDEMNITY**
- 10.1 **Indemnification.**
- (F) ImmuMetrix will indemnify, hold harmless, and defend all Stanford Indemnitees against any claim of any kind arising out of or related to the exercise of any rights granted ImmuMetrix under this Agreement or the breach of this Agreement by ImmuMetrix.
 - (G) HHMI Indemnitees will be indemnified, defended by counsel acceptable to HHMI, and held harmless by ImmuMetrix from and against any claim, liability, cost, expense, damage, deficiency, loss, or obligation, of any kind or nature (including, without limitation, reasonable attorneys' fees and other costs and expenses of defense) (collectively, "Claims"), based upon, arising out of, or otherwise relating to this Agreement, including without limitation any cause of action relating to product liability. The previous sentence will not apply to any Claim that is determined with finality by a court of competent jurisdiction to result solely from the gross negligence or willful misconduct of an HHMI Indemnitee.
- 10.2 **No Indirect Liability.** Stanford is not liable for any special, consequential, lost profit, expectation, punitive or other indirect damages in connection with any claim arising out of or related to this Agreement, whether grounded in tort (including negligence), strict liability, contract, or otherwise.
- 10.3 **Workers' Compensation.** ImmuMetrix will comply with all statutory workers' compensation and employers' liability requirements for activities performed under this Agreement.
- 10.4 **Insurance.** Upon the first use of Licensed Products with human samples, including but not limited to testing or clinical trials but excluding tests with human tissues obtained from tissue banks or discarded human tissues under an IRB approved study, ImmuMetrix will maintain Comprehensive General Liability Insurance, including Product Liability insurance, with a reputable and financially secure insurance carrier to cover the activities of ImmuMetrix and its sublicensees. The insurance will provide minimum limits of liability of \$2,000,000 and will include all Stanford Indemnitees and HHMI Indemnitees as additional insureds. Insurance must cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement and must be placed with carriers with ratings of at least A- as rated by A.M.

Best. Within 15 days after Stanford's request and after the first use of Licensed Products with human samples as described above, ImmuMetrix will furnish a Certificate of Insurance evidencing primary coverage and additional insured requirements. ImmuMetrix will provide to Stanford 30 days prior written notice of cancellation or material change to this insurance coverage. ImmuMetrix will advise Stanford in writing that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All insurance of ImmuMetrix will be primary coverage; insurance of the Stanford Indemnitees and the HHMI Indemnitees will be excess and noncontributory.

11 EXPORT

ImmuMetrix and its affiliates and sublicensees shall comply with all United States laws and regulations controlling the export of licensed commodities and technical data. (For the purpose of this paragraph, "licensed commodities" means any article, material or supply but does not include information; and "technical data" means tangible or intangible technical information that is subject to US export regulations, including blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions.) These laws and regulations may include, but are not limited to, the Export Administration Regulations (15 CFR 730-774), the International Traffic in Arms Regulations (22 CFR 120-130) and the various economic sanctions regulations administered by the US Department of the Treasury (31 CFR 500-600).

Among other things, these laws and regulations prohibit or require a license for the export or retransfer of certain commodities and technical data to specified countries, entities and persons. ImmuMetrix hereby gives written assurance that it will comply with, and will cause its affiliates and sublicensees to comply with all United States export control laws and regulations, that it bears sole responsibility for any violation of such laws and regulations by itself or its affiliates or sublicensees, and that it will indemnify, defend and hold Stanford harmless for the consequences of any such violation.

12 MARKING

Before any Licensed Patent issues, ImmuMetrix will mark Licensed Product with the words "Patent Pending." Otherwise, ImmuMetrix will mark Licensed Product with the number of any issued Licensed Patent.

13 NAMES AND MARKS

IMMUMETRIX WILL NOT IDENTIFY STANFORD OR HHMI IN ANY PROMOTIONAL STATEMENT, OR OTHERWISE USE THE NAME OF ANY STANFORD OR HHMI FACULTY MEMBER, EMPLOYEE, OR STUDENT, OR ANY TRADEMARK, SERVICE MARK, TRADE NAME, OR SYMBOL OF STANFORD OR STANFORD HOSPITALS AND CLINICS, OR HHMI, INCLUDING THE STANFORD OR HHMI NAME, UNLESS IMMUMETRIX HAS RECEIVED STANFORD'S OR HHMI'S PRIOR WRITTEN CONSENT, AS THE CASE MAY BE, PERMISSION MAY BE WITHHELD AT STANFORD'S OR HHMI'S SOLE DISCRETION.

14 PROSECUTION AND PROTECTION OF PATENTS

- 14.1 **Patent Prosecution.** Following the Original Sequencing Effective Date, Stanford will be responsible for preparing, filing, and prosecuting broad patent claims (including any interference or reexamination actions) for Stanford's benefit in the Licensed Territory and for maintaining all Licensed Patents. Stanford will notify ImmuMetrix before taking any substantive actions in prosecuting the claims, and Stanford will have final approval on how to proceed with any such actions.
- 14.2 **Patent Costs.** Within 30 days after receiving a statement from Stanford, ImmuMetrix will reimburse Stanford for all Licensed Patent's patenting expenses, including any interference or reexamination matters, ("Patent Costs") incurred by Stanford after the Restatement Effective Date. In all instances, Stanford will pay the fees prescribed for large entities to the United States Patent and Trademark Office.
- 14.3 **Infringement Procedure.** Each party will promptly notify the other if it believes a third party infringes a Licensed Patent or if a third party files a declaratory judgment action relating to the Licensed Patents. During the term of this Agreement and if ImmuMetrix is developing Licensed Product, ImmuMetrix may have the right to institute a suit against this third party as provided in Sections 14.4 - 14.8.
- 14.4 **ImmuMetrix Suit.** ImmuMetrix, itself or through a designee, has the first right to institute suit, or defend any action for declaratory judgment, relating to the Licensed Patents and may name Stanford, subject to the requirements of this Section 14.4, as a party for standing purposes. If ImmuMetrix decides to institute suit,

it will notify Stanford in writing. ImmuMetrix will bear the entire cost of the litigation. Stanford may be named as a party in a suit initiated by ImmuMetrix (other than in accordance with Section 14.5) only if:

- (A) ImmuMetrix's and Stanford's counsel recommend that such action is necessary in their reasonably opinion to achieve standing or a court has required or will require such joinder to pursue the action.
- (B) Stanford is not the first name party in the action; and
- (C) The pleadings and any public statements about the action state that ImmuMetrix is pursuing the action and that ImmuMetrix has the right to join Stanford as a party.

14.5 **Joint Suit.** If Stanford and ImmuMetrix so agree, they may institute suit jointly. If so, they will:

- (D) prosecute the suit in both their names;
- (E) bear the out-of-pocket costs equally;
- (F) share any recovery or settlement equally; and
- (G) agree how they will exercise control over the action.

14.1 **Stanford Suit.** If ImmuMetrix does not initiate an enforcement action within 120 days of a request by Stanford to do so or ImmuMetrix does not elect to control a declaratory judgment action within 90 days of receiving notice that such action has been filed, Stanford may institute and prosecute a suit so long as it conforms with the requirements of this Section. Stanford will diligently pursue the suit and will bear the entire cost of the litigation, including expenses and counsel fees incurred by ImmuMetrix. Stanford will keep ImmuMetrix reasonably apprised of all developments in the suit, and will seek ImmuMetrix's input and approval on any substantive submissions or positions taken in the litigation regarding the scope, validity and enforceability of the Licensed Patent. Stanford will not prosecute, settle or otherwise compromise any such suit in a manner that adversely affects ImmuMetrix's interests without ImmuMetrix's prior written consent.

14.2 **Recovery.** If ImmuMetrix sues under Section 14.4, then any recovery in excess of any unrecovered litigation costs and fees will be shared with Stanford as follows:

- (H) any payment for past sales will be deemed Net Sales, and ImmuMetrix will pay Stanford royalties at the rates specified in Section 7.4;
- (I) any payment for future sales will be deemed a payment under a Sublicense, and royalties will be shared as specified in Article 4.
- (J) ImmuMetrix and Stanford will negotiate in good faith appropriate compensation to Stanford for any non-cash settlement or non-cash cross-license.

14.6 **Abandonment of Suit.** If either Stanford or ImmuMetrix commences a suit and then wants to abandon the suit, it will give timely notice to the other party. The other party may continue prosecution of the suit after Stanford and ImmuMetrix agree on the sharing of expenses and any recovery in the suit.

14.7 **Cooperation.** The non-controlling party shall, at the reasonable request and expense of the party controlling any enforcement or declaratory action under this Article 14, fully cooperate with the controlling party, including making available relevant records, papers, information, samples, specimens, and the like. The party controlling the enforcement or declaratory action shall keep the non-controlling party reasonably informed of the progress of such action, and the non-controlling party shall have the right to participate in such enforcement or declaratory action with counsel of its own choice at its own expense.

15 TERMINATION

15.1 **Termination by ImmuMetrix.** ImmuMetrix may terminate this Agreement by giving Stanford written notice at least 30 days in advance of the effective date of termination selected by ImmuMetrix.

15.2 Termination by Stanford.

- (A) Stanford may also terminate this Agreement if ImmuMetrix:
- (1) is delinquent on any report or payment;
 - (2) is not diligently developing and commercializing Licensed Product;
 - (3) misses a milestone described in Appendix A;
 - (4) is in breach of any provision; or
 - (5) provides any false report.
- (B) Termination under this Section 15.2 will take effect 30 days after written notice by Stanford specifying the nature of the default or breach unless ImmuMetrix remedies the problem in that 30-day period. Notwithstanding the foregoing, if ImmuMetrix disputes any such default or breach in writing within such 30-day period, Stanford shall not have the right to terminate this Agreement unless and until the arbitrator determines in a written decision delivered to the parties under Section 17 below, that such default or breach occurred, and ImmuMetrix fails to cure such default or breach within 30 days after such determination. Each party shall use reasonable efforts to conclude such arbitration within thirty (30) days of the initiation of such arbitration.

15.3 **Surviving Provisions.** Surviving any termination or expiration are:

- (C) ImmuMetrix's obligation to pay royalties accrued or accruable;
- (D) any claim of ImmuMetrix or Stanford, accrued or to accrue, because of any breach or default by the other party;
- (E) the provisions of Articles 8, 9, 10 and 19.4 and any other provision that by its nature is intended to survive; and
- (F) any sublicense granted hereunder, provided that the sublicensee agrees in writing to be bound by the applicable terms of this Agreement.

16 ASSIGNMENT

16.1 **Permitted Assignment by ImmuMetrix.** Subject to Section 16.3, ImmuMetrix may assign this Agreement as part of a sale or change of control, regardless of whether such a sale or change of control occurs through an asset sale, stock sale, merger or other combination, or any other transfer of:

- (G) ImmuMetrix's entire business; or
- (H) that part of ImmuMetrix's business that exercises all rights granted under this Agreement.

16.2 **Any Other Assignment by ImmuMetrix.** Any other attempt to assign this Agreement by ImmuMetrix is null and void.

16.3 **Conditions of Assignment.** Prior to any assignment, the following conditions must be met:

- (I) ImmuMetrix must give Stanford 30 days prior written notice of the assignment, including the new assignee's contact information; and
- (J) the new assignee must agree in writing to Stanford to be bound by this Agreement; and
- (K) Stanford must have received a \$[***] assignment fee.

16.1 **After the Assignment.** Upon a permitted assignment of this Agreement pursuant to Article 16, ImmuMetrix will be released of liability under this Agreement and the term "ImmuMetrix" in this Agreement will mean the assignee.

- 16.2 **Bankruptcy.** In the event of a bankruptcy, assignment is permitted only to a party that can provide adequate assurance of future performance, including diligent development and sales, of Licensed Product.

17 DISPUTE RESOLUTION

- 17.1 **Dispute Resolution by Arbitration.** Apart from any controversy or claim pertaining to HHMI's rights under Article 10 or otherwise under this Agreement, any dispute between the parties regarding any payments made or due under this Agreement will be settled by arbitration in accordance with the Licensing Agreement Arbitration Rules of the American Arbitration Association. The parties are not obligated to settle any other dispute that may arise under this Agreement by arbitration.
- 17.2 **Request for Arbitration.** Either party may request such arbitration. Stanford and ImmuMetrix will mutually agree in writing on a third party arbitrator within 30 days of the arbitration request. The arbitrator's decision will be final and nonappealable and may be entered in any court having jurisdiction.
- 17.3 **Discovery.** The parties will be entitled to discovery as if the arbitration were a civil suit in the California Superior Court. The arbitrator may limit the scope, time, and issues involved in discovery.
- 17.4 **Place of Arbitration.** The arbitration will be held in Stanford, California unless the parties mutually agree in writing to another place.
- 17.5 **Patent Validity.** Any dispute regarding the validity of any Licensed Patent shall be litigated in the courts located in Santa Clara County, California, and the parties agree not to challenge personal jurisdiction in that forum.

18 NOTICES

- 18.1 **Legal Action.** ImmuMetrix will provide written notice to Stanford at least three months prior to bringing an action seeking to invalidate any Licensed Patent or a declaration of non-infringement. ImmuMetrix will include with such written notice an identification of all prior art it believes invalidates any claim of the Licensed Patent.
- 18.2 **All Notices.** All notices under this Agreement are deemed fully given when written, addressed, and sent as follows:

All general notices to ImmuMetrix are mailed to:

ImmuMetrix, Inc.
Attention: CEO/President
Address

Email:

With a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati PC
Attention: Kenneth A. Clark, Esq.
Address: 650 Page Mill Road
Palo Alto, CA 94304
Email: kclark@wsgr.com

All financial invoices to ImmuMetrix (i.e., accounting contact) are e-mailed to:

Name: Bruce Hironaka
Email:

All progress report invoices to ImmuMetrix (i.e., technical contact) are e-mailed to:

Name: Bruce Hironaka
Email:

All general notices to Stanford are e-mailed or mailed to:

Office of Technology Licensing

All payments to Stanford are mailed to:

Stanford University
Office of Technology Licensing

All progress reports to Stanford are e-mailed or mailed to:

Office of Technology Licensing

Either party may change its address with written notice to the other party.

19 MISCELLANEOUS

19.1 **Waiver.** No term of this Agreement can be waived except by the written consent of the party waiving compliance.

19.2 **Choice of Law.** This Agreement and any dispute arising under it is governed by the laws of the State of California, United States of America, applicable to agreements negotiated, executed, and performed within California.

19.3 **Exclusive Forum.** The state and federal courts having jurisdiction over Stanford, California, United States of America, provide the exclusive forum for any court action between the parties relating to this Agreement. ImmuMetrix submits to the jurisdiction of such courts, and waives any claim that such a court lacks jurisdiction over ImmuMetrix or constitutes an inconvenient or improper forum.

19.4 **Third Party Beneficiary.** HHMI is not a party to this Agreement and has no liability to any licensee or user of any technology covered by this Agreement, but HHMI is an intended third-party beneficiary of this Agreement and certain of its provisions are for the benefit of and are enforceable by HHMI in its own name.

19.5 **Headings.** No headings in this Agreement affect its interpretation.

19.6 **Electronic Copy.** The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

19.7 **Entire Agreement.** This Restated Agreement (including the exhibits attached hereto) constitutes the entire agreement between the parties relating to its subject matter and supersedes all prior and contemporaneous agreements, understandings or representations, written or oral, between Stanford and ImmuMetrix with respect to such subject matter, including without limitation, the PCR Agreement and the Sequencing Agreement.

The parties execute this Agreement in duplicate originals by their duly authorized officers or representatives.

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

Signature /s/ Katherine Ku
Name Katharine Ku
Title Director Office of Technology Licensing
Date February 3, 2014

ImmuMetrix, Inc.

Signature /s/ Bruce Hironaka
Name Bruce Hironaka
Title President
Date February 4, 2014

Appendix A

- 1. [***]
- 2. [***]
- 3. [***]
- 4. [***]
- 5. [***]
- 6. [***]
- 7. [***]
- 8. [***]

Appendix B - Sample Reporting Form

Stanford Docket No. S

This report is provided pursuant to the license agreement between Stanford University and (ImmuMetrix Name)

License Agreement Effective Date:

Name(s) of Licensed Products being reported:

Report Covering Period	
Yearly Maintenance Fee	\$
Number of Sublicenses Executed	
Gross Revenue	\$
Net Sales	\$
Royalty Calculation	
Royalty Subtotal	\$
Credit	\$
Royalty Due	\$

Comments:

Appendix C — Licensed Patents

Country	Title	Serial Number	File Date	Publication Number
Australia	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	2010315084	05-Nov-2010	2010315084
Canada	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	2,779,750	05-Nov-2010	2779750
China (People's Republic)	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	201080060469.4	05-Nov-2010	102712954
European Patent Convention	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	10829142.8	05-Nov-2010	2496720
Hong Kong	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	13102099.1	05-Nov-2010	1175268
Japan	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	2012-538027	05-Nov-2010	2013509883
Patent Cooperation Treaty	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	US2010/055604	05-Nov-2010	2011057061
United Kingdom	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	1209978.4	05-Nov-2010	2488289
United States of America	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	61/280,674	06-Nov-2009	N/A
United States of America	NON-INVASIVE DIAGNOSIS OF GRAFT REJECTION IN ORGAN TRANSPLANT PATIENTS	13/508,318	19-Jul-2012	20120295810

Appendix D- Technology

1. Algorithms and software code
2. sample preparation, per and sequencing protocols
3. raw sequencing data to date of license execution
4. patient records to date of license execution subject to IRB approval if needed
5. unpublished data and manuscripts
6. plasma, blood and tissue samples collected to date to permit ImmuMetrix to independently reproduce the results Stanford has obtained
7. any other information or technology provided by Stanford to ImmuMetrix.

**Appendix E- Stock Purchase Agreement
IMMUMETRIX, INC.**

COMMON STOCK PURCHASE AGREEMENT

This Common Stock Purchase Agreement (the “**Agreement**”) is entered into by and between ImmuMetrix, Inc. (the “**Company**”) and (the “**Purchaser**”) as of _____, 2013 (the “**Effective Date**”).

1 **Sale of Shares.** The Company will issue and sell to the Purchaser shares of the Company’s fully paid and nonassessable Common Stock (the “**Shares**”) pursuant to Section 7.16 of that certain Amended and Restated Exclusive Agreement dated by and between the Purchase and the Company (the “**License Agreement**”).

2 **Closing; Delivery.**

2.1 **Closing.** The closing of the purchase and sale of the Shares to the Purchaser hereunder shall be held at the offices of Wilson Sonsini Goodrich and Rosati, 650 Page Mill Road, Palo Alto, California 94304-1050 on the Effective Date (the “**Closing**”). The Closing shall be contingent upon the Purchaser executing and delivering the License. Within a reasonable time after the Closing, the Company will issue a stock certificate, registered in the name of the Purchaser, reflecting the Shares.

2.2 **Delivery.** At the Closing, the Company will deliver to the Purchaser a certificate representing the Shares against the execution and delivery to the company of the License Agreement by Purchaser. If the Purchaser is not in attendance at the Closing, such delivery shall be via U.S. mail to the address shown under the Purchaser’s name on the signature page to this Agreement.

3 **Company Representations.** The Company hereby represents and warrants to the Purchaser as of the date hereof as follows:

3.1 **Organization and Standing.** The Company is a corporation duly organized, validly existing, and in good standing under the laws of the State of Delaware. The Company has all requisite corporate power and authority to own and operate its properties and assets and to carry on its business as presently conducted.

3.2 **Corporate Power.** The Company has all requisite legal and corporate power to execute and deliver this Agreement, to sell and issue the Shares hereunder, and to carry out and perform its obligations under the terms of this Agreement.

3.3 **Authorization.** All corporate action on the part of the Company, its officers, directors and stockholders necessary for the authorization, execution, delivery and performance by the Company of this Agreement, the authorization, issuance, sale and delivery of the Shares, and the performance of the Company’s obligations hereunder has been taken or will be taken prior to the Closing. This Agreement, when executed and delivered by the Company, shall constitute a valid and legally binding obligation of the Company enforceable in accordance with its respective terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies. The Shares, when issued in compliance with the provisions of this Agreement, will be validly issued, fully paid and nonassessable, and the Shares will be free of any liens or encumbrances created by the Company; provided, however, that the Shares may be subject to restrictions on transfer under applicable securities laws as set forth herein.

4 **Purchaser Representations, Warranties and Covenants.** In connection with the purchase of the Shares, the Purchaser represents and warrants to the Company as follows:

4.4 The Purchaser is aware of the Company’s business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the securities. The Purchaser is purchasing these securities for investment for the Purchaser’s own account only and not with a view to, or for resale in connection with, any “**distribution**” thereof within the meaning of the Securities Act of 1933 (the “**Securities Act**”). The Purchaser is an “accredited investor” within the meaning of SEC Rule 501 of Regulation D, as presently in effect.

4.5 The Purchaser understands that the securities have not been registered under the Securities Act by reason of a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Purchaser’s investment intent as expressed herein. In this regard, the Purchaser understands that, in view of the Securities and Exchange Commission (“**Commission**”), the statutory basis for such exemption may not be present if the Purchaser’s representations meant that the Purchaser’s present intention was to hold these

securities for a minimum capital gains period under the tax statutes, for a deferred sale, for a market rise, for a sale if the market does not rise, or for a year or any other fixed period in the future.

4.6 The Purchaser further acknowledges and understands that the securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. The Purchaser further acknowledges and understands that the Company is under no obligation to register the securities. The Purchaser understands that the certificate evidencing the securities will be imprinted with a legend which prohibits the transfer of the securities unless they are registered or such registration is not required in the opinion of counsel for the Company.

4.7 The Purchaser is aware of the adoption of Rule 144 by the Commission, promulgated under the Securities Act, which permits limited public resale of securities acquired in a non-public offering subject to the satisfaction of certain conditions.

4.8 The Purchaser further acknowledges that in the event all of the requirements of Rule 144 are not met, compliance with Regulation A or some other registration exemption will be required; and that although Rule 144 is not exclusive, the staff of the Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and other than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales and that such persons and the brokers who participate in the transactions do so at their own risk.

4.9 The Purchaser understands that the share certificate evidencing the Shares issued hereunder shall be endorsed with the following legends:

(A) THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. THESE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT.

(B) THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, A RIGHT OF FIRST REFUSAL AND A LOCK-UP PERIOD IN THE EVENT OF A PUBLIC OFFERING HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE STOCK PURCHASE AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS, RIGHT OF FIRST REFUSAL AND LOCK-UP PERIOD ARE BINDING ON TRANSFEREES OF THESE SHARES.

(C) Any legend required to be placed thereon by applicable federal state securities laws, or the terms of this Agreement.

5 Market Standoff Covenant. Purchaser shall not sell or otherwise transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, of any Common Stock (or other securities) of the Company held by Purchaser (other than those included in the registration) during the period from the filing of the registration statement for the Company's Initial Public Offering filed under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act through the end of the one hundred and eighty (180) day period following the effective date of the registration statement (or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(0)(4) or NYSE Rule 472(0)(4), or any successor provisions or amendments thereto), provided that all officers and directors of the Company are bound by and have entered into similar agreements and the Company uses all reasonable efforts to have all holders of at least one percent (1%) of the Company's voting securities be bound by and enter into similar agreements. The obligations described in this Section 5 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions and may stamp each such certificate with the second legend set forth in Section 4.6 with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of such one hundred and eighty (180) day (or other) period. Purchaser agrees to execute a market standoff agreement with said underwriters in customary form consistent with the provisions of this Section 5.

6 Company's Right of First Refusal. Before any Shares acquired by the Purchaser pursuant to this Agreement (or any beneficial interest in such Shares) may be sold, gifted, transferred, encumbered or otherwise disposed of in any way (whether by operation of law or otherwise) by the Purchaser or any subsequent transferee (each a "**Holder**"), such Holder must first offer such Shares or beneficial interest to the Company and/or its assignee(s) as follows:

6.1 Notice of Proposed Transfer. The Holder shall deliver to the Company a written notice stating: (a) the Holder's bona fide intention to sell or otherwise transfer the Shares; (b) the name of each proposed transferee; (c) the number of Shares to be transferred to each proposed transferee; (d) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares; and (e) that by delivering the notice, the Holder offers all such Shares to the Company and/or its assignee(s) pursuant to this Section and on the same terms described in the notice.

6.2 Exercise of Right of First Refusal. At any time within 30 days after receipt of the Holder's notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the proposed transferees, at the purchase price determined in accordance with Section 6.3.

6.3 Purchase Price. The purchase price for the Shares purchased by the Company and/or its assignee(s) under this Section shall be the price listed in the Holder's notice. If the price listed in the Holder's notice includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in its sole discretion.

6.4 Payment. Payment of the purchase price shall be made, at the option of the Company and/or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company and/or its assignee(s), or by any combination thereof within 30 days after receipt by the Company of the Holder's notice (or at such later date as is called for by such notice).

6.5 Holder's Right to Transfer. If all of the Shares proposed in the notice to be transferred to a given proposed transferee are not purchased by the Company and/or its assignee(s) as provided in this Section, then the Holder may sell or otherwise transfer such Shares to that proposed transferee, provided that: (a) the transfer is made only on the terms provided for in the notice, with the exception of the purchase price, which may be either the price listed in the notice or any higher price; (b) such transfer is consummated within 60 days after the date the notice is delivered to the Company; (c) the transfer is effected in accordance with any applicable securities laws, and if requested by the Company, the Holder shall have delivered an opinion of counsel acceptable to the Company to that effect; and (d) the proposed transferee agrees in writing that the provisions of this Section shall continue to apply to the transferred Shares in the hands of such proposed transferee. If any Shares described in a notice are not transferred to the proposed transferee within the period provided above, then before any such Shares may be transferred, a new notice shall be given to the Company, and the Company and/or its assignees shall again be offered the right of first refusal described in this Section.

6.6 Exception for Certain Transfers. Notwithstanding anything to the contrary contained elsewhere in this Section, the transfer of any or all of the Shares by the Purchaser to his spouse, ex-spouse, domestic partner, lineal descendant or antecedent, brother or sister, the adopted child or adopted grandchild, or the spouse or domestic partner of any child, adopted child, grandchild or adopted grandchild of the Purchaser, or to one or more trusts, retirement accounts, or other estate planning vehicles for the exclusive benefit of Purchaser or those members of Purchaser's family specified in this Section, shall be exempt from the provisions of this Section; provided that, in each such case, the transferee(s) shall agree in writing to receive and hold the Shares so transferred subject to all of the provisions of this Agreement, including but not limited to this Section, and there shall be no further transfer of such Shares except in accordance with the terms of this Section.

6.7 Termination of Right of First Refusal. The right of first refusal contained in this Section shall terminate as to all Shares purchased hereunder upon the earlier of: (i) the closing date of the first sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, as amended, and (ii) the closing date of a change of control transaction pursuant to which the holders of the outstanding voting securities of the Company receive securities of a class registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended.

7 Miscellaneous.

7.13 Governing Law. This Agreement shall be governed by and construed under the laws of the State of California.

7.14 Finder's Fee. Each party represents that it neither is nor will be obligated for any finder's fee or commission in connection with this transaction. The Purchaser and the Company agree to indemnify and hold harmless the other party from any liability for any commission or compensation in the nature of a finder's fee (and the costs and expenses of defending against such liability or asserted liability) for which the Purchaser or the Company is responsible.

7.15 Successors and Assigns. Except as otherwise expressly provided, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors, and administrators of the parties.

7.16 Entire Agreement. This Agreement, any exhibits thereto and any other documents delivered pursuant to this Agreement constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and no party shall be liable or bound to any other party in any manner by any representations, warranties, covenants, or agreements except as specifically set forth herein or therein. Nothing in this Agreement, express or implied, is intended to confer upon any third party any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided herein.

7.17 Severability. In case any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be unenforceable, this Agreement shall continue in full force and effect without said provision; provided, however, that no such severability shall be effective if it materially changes the economic benefit of this Agreement to any party.

7.18 Amendment and Waiver. Any term of the Agreement may be amended and the observance of any term of the Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Purchaser. Any amendment or waiver effected in accordance with this Section shall be binding upon each holder of any Shares purchased under the Agreement at the time outstanding, each future holder of all such securities and the Company.

7.19 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to the Purchaser or any subsequent holder, of any Shares upon any breach, default or noncompliance of the Company under this Agreement shall impair any such right, power, or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of any similar breach, default or noncompliance thereafter occurring.

7.20 Notices. All notices and other communications required or permitted hereunder shall be in writing and shall be deemed effectively given upon personal delivery or upon deposit with the United States Post Office, by first class mail, postage prepaid, addressed: (a) if to the Purchaser, at the Purchaser's address as set forth on the signature page to this Agreement, or at such other address as the Purchaser shall have furnished to the Company in writing, or (b) if to the Company, at its address as set forth on the signature page to this Agreement, or at such other address as the Company shall have furnished to the Purchaser in writing.

7.21 Titles and Subtitles. The titles of the sections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

7.22 Counterparts. This Agreement may be executed in any number of counterparts, each of which is an original, and all of which together shall constitute one instrument.

The foregoing Agreement is hereby confirmed and accepted by the Company as of the date first written above.

COMPANY:

IMMUMETRIX, INC

By: _____
Print: _____
Title: _____
Address: _____

PURCHASER:

[]

By: _____
Print: _____
Title: _____
Address: _____



CONSULTING AGREEMENT

This Consulting Agreement (“Agreement”) is entered into on May 20, 2022 and is effective May 27, 2022 (“Effective Date”) and is between CareDx, Inc., with a business address at 1 Tower Place, 9th Floor, South San Francisco, CA 94080, (“CareDx”) and Ankur Dhingra, with a business address at 1382 Buckthorne Way, San Jose, CA 95129 (“Consultant”). CareDx and Consultant may be referred to individually as a (“Party”) and collectively as the (“Parties”).

1. Services

- a. Consultant will perform the services and/or participate in the event(s) described in Exhibit A (“Services”). CareDx will compensate Consultant as set forth in Exhibit A. Both Parties acknowledge that this compensation represents the fair market value of Consultant’s Services and is not dependent on the volume or value of any referrals or business.
- b. Upon prior written approval by CareDx, CareDx will reimburse Consultant for reasonable travel, lodging, and incidental expenses incurred in the performance of the Services (“Reimbursable Expenses”).
- c. CareDx must comply with legal requirements to provide compliance and regulatory training to each of its consultants. Consultant agrees to complete such training as is assigned by CareDx. Consultant acknowledges, understands and agrees that CareDx may condition and withhold payment for Services performed and Reimbursable Expenses incurred should Consultant fail to timely complete the required training until such training has been successfully completed.

2. Confidentiality

- a. Consultant understands that his or her consulting work for CareDx creates a relationship of confidence and trust with respect to any information of a confidential or secret nature that (i) relates to the business of CareDx or to the business of any parent, subsidiary, affiliate, customer or vendor of CareDx or any other party with whom CareDx agrees to hold information of such party in confidence; (ii) that is not generally known to the public or to other persons in the industry; and (iii) that CareDx has taken reasonable measures under the circumstances to protect from unauthorized use or disclosure (“Confidential Information”). Confidential Information means (a) trade secrets; (b) proprietary information that does not rise to the level of a statutorily protectable trade secret that is made the property of CareDx through positive operation of law in the form of this mutual agreement of the parties; or (c) information that is otherwise legally protectable. Such Confidential Information includes, but is not limited to, Work Product (as defined below), knowledge, data, information and know-how, such as information relating to CareDx’s products, services and methods of operation, the identities and competencies of CareDx’s employees, customers and suppliers, chemical formulae, computer software, financial information, operating and cost data, research databases, selling and pricing information, business and marketing plans, and information concerning potential acquisitions, dispositions or joint ventures, as well as all non-public intellectual property rights including unpublished or pending patent applications and all related patent rights, techniques, formulae, processes, discoveries, improvements, ideas, conceptions, compilations of data, and developments, whether or not patentable and whether or not copyrightable. The foregoing are only examples of Confidential Information.
- b. Consultant will, at all times, both during the term of this Agreement and for seven (7) years thereafter, hold all Confidential Information in the strictest confidence. Consultant will not attempt unauthorized access to Confidential Information, or use, disclose, copy, reverse-engineer or distribute any Confidential Information without the prior written consent of

CareDx, except as may be necessary to perform Consultant's Services for CareDx for the benefit of CareDx. Despite Consultant's confidentiality obligations, Consultant understands that he or she is permitted to disclose Confidential Information that is required to be disclosed pursuant to judicial order or other legal mandate, provided that Consultant has given CareDx prompt notice of the disclosure requirement, and that Consultant fully cooperates with any efforts by CareDx to obtain and comply with any protective order imposed on such disclosure.

- c. Confidential Information does not include information that Consultant can show: (i) was generally known to the relevant public at the time of disclosure, or became generally known after disclosure to Consultant; (ii) was lawfully received by Consultant from a third party without breach of any confidentiality obligation; (iii) was known to Consultant prior to receipt from CareDx; or (iv) was independently developed by Consultant or independent third parties without breach by Consultant or any third party of any obligation of confidentiality or non-use.
- d. During the term of this Agreement, Consultant will not improperly use, disclose, or induce CareDx to use any confidential information of any former or current employer or other person or entity with which Consultant has an agreement or duty to keep information in confidence.
- e. Upon termination or expiration of this Agreement, or upon CareDx's earlier request, Consultant will deliver to CareDx, and will not keep in his or her possession, recreate or deliver to anyone else, any and all CareDx property, including, but not limited to, Confidential Information, as well as all devices and equipment belonging to CareDx (including computers, handheld electronic devices, telephone equipment and other electronic devices), CareDx credit cards, records, data, notes, notebooks, reports, files, proposals, lists, correspondence, specifications, drawings, blueprints, sketches, materials, photographs, charts, any other documents and property, and reproductions of any and all of the aforementioned items that were developed by Consultant as part of Consultant's Services for CareDx, obtained by Consultant in connection with Consultant's Services for CareDx or otherwise belonging to CareDx, including, without limitation, those reports maintained pursuant to Section 4 (Reports). If, at the time of termination, Consultant has Confidential Information stored in Consultant's personal computer or any mobile, cloud or other storage medium, Consultant will so advise CareDx and not delete, cache or transfer it. Consultant will then work with CareDx to ensure that the location of all such information is fully disclosed to CareDx, retrieved by CareDx in a forensically sound manner and is permanently deleted by CareDx or its designee.

3. Intellectual Property

- a. Consultant hereby assigns and will assign all inventions, improvements, ideas, designs, original works of authorship, formulas, processes, compositions of matter, computer software programs, databases, that Consultant makes, creates, conceives or first reduces to practice that (i) are developed using equipment, supplies, facilities or trade secrets of CareDx, (ii) result from work performed by Consultant for CareDx, or (iii) relate to CareDx's business or actual or demonstrably anticipated research and development ("Work Product").
- b. Consultant recognizes and understands that this Agreement does not require assignment of any inventions that are developed entirely on Consultant's own time without using any of CareDx's equipment, supplies, facilities or Confidential Information. Original works of authorship, inventions, developments and trade secrets that were made by Consultant, or acquired by Consultant, prior to providing Services under this Agreement are not assigned to CareDx ("Prior Inventions").

- c. To the extent any future act is required, Consultant will assist CareDx, or its designee, at CareDx's expense, to secure CareDx's rights in the Work Product including copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries. Consultant will execute or cause to be executed any such instrument or papers during the term of this Agreement and after the term of this Agreement. If, at any time, a court or other tribunal rules that the assignment under this section is ineffective or unenforceable for any reason, Consultant agrees to perform all actions necessary to assign the Work Product to CareDx.
- d. If Consultant incorporates any invention, improvement, development, concept, discovery, Prior Invention or other confidential information owned by Consultant or in which Consultant has an interest, into any Work Product, Consultant hereby grants and will grant, without any further action required by either Party, a nonexclusive, royalty-free, perpetual, irrevocable, with the right to grant and authorize sublicenses, worldwide license to use, make, have made, modify, use and sell such item as part of or in connection with such Work Product.
- e. If CareDx is unable because of Consultant's unavailability, dissolution, mental or physical incapacity, or any other reason, to secure Consultant's signature to pursue any application for any United States or foreign patents or mask work or copyright registrations covering the Work Product, then Consultant hereby irrevocably designates and appoints CareDx and its duly authorized officers and agents as Consultant's agent and attorney-in-fact, to act for and on Consultant's behalf to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyright and mask work registrations thereon with the same legal force and effect as if executed by Consultant.

4. Reports

Consultant will keep detailed written records of Services, including dates, times and location of the Services provided. Consultant will provide a summary of the Services provided along with each invoice submitted to CareDx. Consultant will, as requested by CareDx, prepare written reports with respect thereto. Consultant will maintain and preserve such written record during the term of this Agreement and for two (2) years thereafter.

5. No Conflicting Obligations

Consultant warrants that entering into this Agreement does not violate any outstanding agreement, obligation or employment arrangement of Consultant. Consultant further warrants that during the term of this Agreement, he or she will not enter into (a) any such conflicting agreement, or (b) any consulting relationships with other companies engaged in business that is directly related to the business in which CareDx is now involved, becomes involved or has plans to become involved in. Further, Consultant will not perform any services for CareDx that would conflict with any agreement or obligation of Consultant, or which would cause or result in any other person or entity having any ownership interest in any CareDx intellectual property, including Work Product (as defined below).

6. Term and Termination

The term of this Agreement is for six (6) months from the Effective Date. CareDx may terminate this Agreement at any time for any reason upon written notice. Consultant may only terminate this Agreement upon written notice of termination to CareDx if CareDx breaches or is in default of any obligation under this Agreement and: (a) such breach or default is incapable of cure; or (b) such breach or default is capable of cure but has not been cured within thirty days after receipt by CareDx of written notice of such default from Consultant.

7. Independent Contractor

Consultant is an independent contractor and nothing in this Agreement or the performance of the Parties under this Agreement will constitute (or be deemed to constitute in law or in equity) a partnership, agency, distributorship, fiduciary, employment, principal/agent relationship or joint venture relationship between the Parties. The Parties are not affiliated and neither has any right or authority to bind the other in any way. As such, Consultant will not be entitled to any benefits accorded to CareDx's employees, including workers' compensation, disability insurance, vacation or sick pay. Consultant will have sole control of and will determine the manner, method, details and means of performing the obligations under this Agreement, provided, however, that CareDx retains the right to control the overall objectives regarding the Services.

8. DTSA Notification

Despite Consultant's confidentiality obligations set forth in this Agreement, Consultant understands that, pursuant to the Defend Trade Secrets Act of 2016, Consultant will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (a) is made (i) in confidence to a federal, state or local government official, either directly or indirectly or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. If Consultant files a lawsuit for retaliation by CareDx for reporting a suspected violation of law, Consultant may disclose the trade secret to Consultant's attorney and may use the trade secret information in the court proceeding, if Consultant (a) files any document containing the trade secret under seal, and (b) does not disclose the trade secret, except pursuant to court order.

9. Non-Solicitation

Consultant will not, during the term of this Agreement and for six (6) months thereafter, directly or indirectly, solicit or attempt to solicit or induce employees or consultants of CareDx to terminate their relationship with CareDx. Despite the previous sentence, Consultant may hire CareDx employees or consultants that respond to a general solicitation for employment or other engagement. Consultant will not during the term of this Agreement and for six months thereafter, directly or indirectly, solicit or induce (or attempt to solicit or induce) customers or vendors of CareDx to terminate their relationship with CareDx for Consultant's benefit or for the benefit of any other person or entity.

10. Indemnification

Consultant will indemnify, defend (with counsel reasonably acceptable to CareDx) and hold harmless CareDx and its directors, officers, employees, affiliates, shareholders, agents, representatives and successors in interest from and against any and all third party claims, demands, suits, actions, causes of actions, legal or administrative proceedings, losses, damages, liabilities, costs and expenses, including but not limited to, reasonable attorneys' fees, arising from or in connection with or relating to: (i) Consultant's actual or alleged failure to comply with applicable laws, regulations or orders, including without limitation any actual or alleged violation of any third party's confidential information or other intellectual property rights in connection with the performance of the Services; (ii) any negligent act or omission or intentional misconduct of Consultant; or (iii) the breach of any representation, warranty or covenant made by Consultant herein.

11. Limitation of Liability

Except for a breach of Section 2 (Confidentiality) or Section 3 (Intellectual Property) or as may be required by Consultant's obligation under Section 10 (Indemnification), neither Party will be liable to the other Party for consequential, indirect, exemplary, special or incidental damages arising from or relating to this Agreement

12. Compliance with Laws

Consultant warrants to CareDx that during the term of this Agreement, Consultant and Consultant's directors, officers, employees and contractors: (i) are not currently excluded, debarred, or otherwise ineligible to participate in any federal health care program as defined in 42 U.S.C. Section 1320a-7b(f) or any state healthcare program (collective, the "Healthcare Programs"); (ii) have not been convicted of a criminal offense related to the provision of health care items or services and not yet been excluded, debarred, or otherwise declared ineligible to participate in the Healthcare Programs, and (iii) are not under investigation or otherwise aware of any circumstances which may result in Consultant being excluded from participation in Healthcare Programs (collectively, the "Warranty of Non-exclusion"). Consultant will immediately notify CareDx of any change in the status of the representations and warranties set forth in this section.

13. Miscellaneous

- a. *Severability.* If any provision of this Agreement is determined to be illegal or unenforceable, that provision will be limited or eliminated to the minimum extent necessary so that this Agreement will otherwise remain enforceable and in full force and effect.
- b. *Survival.* Sections 2 (Confidentiality), 3 (Intellectual Property), 4 (Reports, last sentence only), 9 (Non-Solicitation), 10 (Indemnification), 11 (Limitation of Liability), 13 (Miscellaneous, *Governing Law* and *Equitable Remedies*) will survive such termination or expiration of this Agreement.
- c. *Governing Law.* This Agreement will be governed by and construed under the laws of the State of California without regard to the conflict of laws provisions thereof. Each Party consents to venue exclusively in San Mateo County, California, for any dispute or controversy arising out of or relating to any interpretation, construction, performance, or breach of this Agreement.
- d. *Equitable Remedies.* In the event of a breach or a threatened breach of this Agreement by Consultant, CareDx may seek judicial relief in any forum with jurisdiction over the Parties. In such case, CareDx may suffer irreparable harm and will therefore be entitled to injunctive relief to enforce this Agreement, without any requirement to obtain bonds or other security. Consultant also acknowledges that, in the event of breach of this Agreement by Consultant, CareDx may pursue any and all available legal remedies, including monetary damages.
- e. *No Assignment.* Consultant may not assign this Agreement to any third party.
- f. *Insurance.* Consultant will maintain such adequate health, automobile, workers' compensation, unemployment compensation, disability, liability, and any other type of insurance required by law or as is common practice in Consultant's business.
- g. *Waiver.* Waiver by either Party of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.
- h. *Entire Agreement.* This Agreement is the entire agreement of the Parties and supersedes any prior agreements, understandings or arrangement between them with respect to the subject matter hereof.
- i. *Modifications.* This Agreement may be modified only by a subsequent written agreement signed by both Parties.
- j. *Execution.* This Agreement may be executed via facsimile, electronic signature via recognized provider (e.g., DocuSign or Adobe) or ".pdf" file, and in two counterparts, each of which will be deemed an original, but both of which together will constitute one and the same.

instrument and will have the same legal force and effect as the exchange of original signatures.

- k. *No Further Vesting; Break in Service; Forfeiture of Unvested Equity.* Consultant acknowledges and agrees that, notwithstanding anything in Consultant's other agreements with the Company to the contrary, Consultant shall not vest, during the term of this Agreement or otherwise, in any equity previously issued by the Company to Consultant on or after the Effective Date. Consultant further acknowledges and agrees that (i) Consultant's last date of employment with the Company was May 25, 2022, (ii) Consultant had a break in service with the Company following the termination of Consultant's employment with the Company and the commencement of Consultant's service with the Company pursuant to this Agreement and (iii) any unvested equity issued by the Company to Consultant as of May 25, 2022 was irrevocably forfeited by Consultant in its entirety.

In witness hereof, this Agreement is signed in counterparts by the duly authorized representatives of the Parties as of the date first written above.

CareDx, Inc. Ankur Dhingra

By: /s/ Reginald Seeto

By: /s/ Ankur Dhingra

Name: Reginald Seeto, MB.BS Name: _____

Title: President & CEO Title: _____

Date: 5/21/2022 Date: 5/20/2022

EXHIBIT A

1. Contact

Consultant's Contact information is as follows:

Name: Ankur Dhingra

Address: [...***...]
[...***...]
United States

Phone: [...***...]

Email: [...***...]

2. Services

Consultant will render to CareDx the following Services: general financial, accounting, investor relations and related services, in each case as requested by CareDx from time to time. Consultant's performance of the Services will be subject to Consultant's other professional obligations.

3. Time Commitment & Compensation

Consultant will perform up to 20 hours of Services per month for each of the first four months commencing on the Effective Date and ending on September 27, 2022 (the "Initial Period"). Thereafter, subject to the agreement of CareDx and Consultant, Consultant will perform up to 20 hours of Services per month for each of the following two one-month periods, commencing on September 28, 2022 and ending on November 27, 2022 (with all Services terminating no later than November 27, 2022).

CareDx will pay Consultant a fixed fee of \$10,000 per month (the "Monthly Fee"). At the end of the Initial Period, CareDx will make Consultant an additional one-time payment of \$10,000 (in addition to the Monthly Fee for such month). The total amount of compensation (excluding Reimbursable Expenses) to be paid to Consultant by CareDx under this Agreement will be an amount up to and not to exceed \$70,000. Consultant will send detailed invoices to: [...***...]. CareDx will reimburse Consultant all pre-authorized Reimbursable Expenses upon presentation of an invoice, including original receipts.

4. Payment

Payment to Consultant will be made no later than net sixty (60) days after Consultant's submission of a detailed invoice. Consultant shall submit a monthly record of time charged to CareDx in electronic format and will be paid per CareDx's normal expense reimbursement policy.

5. Term

Consultant will commence the Services on May 27, 2022 and will complete all Services by November 27, 2022.



May 21, 2022

Private & Confidential
Abhishek Jain

Dear Abhishek,

It is my pleasure to confirm your appointment as **Interim Chief Financial Officer** reporting to Reg Seeto, President & CEO.

This is a full-time exempt role at the Company with an annual salary of **\$305,000.00** paid on a semi-monthly basis on our regular paydays. Deductions required by law or authorized by you will be taken from each paycheck. Your target incentive compensation will increase to **35%** of your base salary prorated for 2022, based on the effective date of this appointment, **May 26, 2022**.

Subject to the approval of the Board of Directors of the Company, you will be granted an option to purchase **10,000** shares of the Company's Common Stock. This option shall vest, subject to your continued employment with the Company, as to one fourth (1/4) of the shares on the one-year anniversary of your start date, and as to an additional one forty-eighth (1/48th) of the total number of shares subject to the option at the end of each calendar month thereafter. Details of the price of these options will be provided in your stock option grant and determined by the Board of Directors.

You are also eligible to receive equity in the organization in the form of RSUs. Subject to the approval of the Board of Directors of the Company, you will be granted restricted stock units of **15,000**. 25% of the Restricted Stock Units will vest on the 1-Year anniversary of the Vesting Commencement Date and 25% of the Restricted Stock Units will vest each year thereafter on the same date as the Vesting Commencement date, subject to Participant continuing to be a Service Provider through each such date.

I am excited about this opportunity and I'm looking forward to an exciting year of growth and execution as we are "Building for the Future"!

Sincerely,

/s/ Reginald Seeto

Reginald Seeto
 CEO & President

/s/ Abhishek Jain

Abhishek Jain
(Sign)

Date: May 21, 2022

THE TOWERS AT SIERRA POINT**LEASE**

This Lease (the “**Lease**”), dated as of the date set forth in Section 1 of the Summary of Basic Lease Information (the “**Summary**”), below, is made by and between **HCP LIFE SCIENCE REIT, INC.**, a Maryland corporation (“**Landlord**”), and **CAREDX, INC.**, a Delaware corporation (“**Tenant**”).

SUMMARY OF BASIC LEASE INFORMATION**TERMS OF LEASE****DESCRIPTION**

Date:

June 14, 2022.

Premises (Article 1).

2.1. Building:

That certain 8-story building located at 8000 Marina Boulevard, Brisbane, California 94005.

2.1. Premises:

Approximately 26,506 rentable square feet of space consisting of the entire fourth (4th) floor of the Building commonly known as Suite 400, as further set forth in Exhibit A to the Lease.Lease Term (Article 2).

3.1 Length of Term:

Six (6) years.

3.1 Lease Commencement Date:

July 1, 2022.

3.1 Lease Expiration Date:

June 30, 2028.

Base Rent (Article 3):

<u>Lease Year</u>	<u>Annual Base Rent</u>	Monthly Installment of <u>Base Rent</u>	Approximate Monthly Base Rent per Rentable <u>Square Foot</u>
1*	\$1,526,745.60	\$127,228.80	\$4.80
2	\$1,572,547.97	\$131,045.66	\$4.94
3	\$1,619,724.41	\$134,977.03	\$5.09
4	\$1,668,316.14	\$139,026.34	\$5.25
5	\$1,718,365.62	\$143,197.14	\$5.40
6	\$1,769,916.59	\$147,493.05	\$5.56

*Note: Tenant shall have no obligation to pay any Base Rent for the Premises attributable to the first four (4) full calendar months of the Lease Term (the “**Base Rent Abatement Period**”).

Tenant Improvement Allowance (**Exhibit B**): An amount equal to \$30.00 per rentable square foot of the Premises (*i.e.*, \$795,180.00 based upon 26,506 rentable square feet in the Premises).

Base Year (Article 4): Calendar Year 2022.

Tenant’s Share (Article 4): 13.13%.

Permitted Use (Article 5): The Premises shall be used only for general office uses, including, but not limited to, administrative offices and other lawful uses reasonably related to or incidental to such specified uses, all (i) consistent with office projects in Brisbane, California, and (ii) in compliance with, and subject to, applicable laws and the terms of this Lease.

Security Deposit (Article 21): \$294,986.10.

Parking (Article 28): 3 unreserved parking spaces for every 1,000 rentable square feet of the Premises, subject to the terms of Article 28 of the Lease, at no charge for the duration of the Lease Term, as the same may be extended.

Address of Tenant (Section 29.18): CareDx, Inc.
11808 Miracle Hills Drive, Ste. 200
Omaha, Nebraska, 68154

and

CareDX, Inc.
150 North Hill Drive, Suite 31
Brisbane, CA 94005

and

CareDX, Inc.
3260 Bayshore Blvd.
Brisbane, CA 94005

Attn: Legal

Address of Landlord (Section 29.18):

See Section 29.18 of the Lease.

Broker(s) (Section 29.24):

CBRE, Inc.

and

Cushman & Wakefield

1. PREMISES, BUILDING, PROJECT, AND COMMON AREAS

1.1 Premises, Building, Project and Common Areas.

1.1.1 **The Premises; Tender of Possession.** Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises set forth in Section 2.2 of the Summary (the “**Premises**”). The outline of the Premises is set forth in Exhibit A attached hereto. The parties hereto agree that the lease of the Premises is upon and subject to the terms, covenants and conditions herein set forth, and Tenant covenants as a material part of the consideration for this Lease to keep and perform each and all of such terms, covenants and conditions by it to be kept and performed and that this Lease is made upon the condition of such performance. The parties hereto hereby acknowledge that the purpose of Exhibit A is to show the approximate location of the Premises only, and such Exhibit is not meant to constitute an agreement, representation or warranty as to the construction of the Premises, the precise area thereof or the specific location of the “Common Areas,” as that term is defined in Section 1.1.3, below, or the elements thereof or of the accessways to the Premises or the “Project,” as that term is defined in Section 1.1.2, below. Except as specifically set forth in this Lease and in the Tenant Work Letter attached hereto as Exhibit B (the “**Tenant Work Letter**”), Landlord shall tender possession of the Premises to Tenant in its existing, “as is” condition, and Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises. Landlord shall be deemed to have tendered possession of the Premises to Tenant upon the date that Landlord provides Tenant with a key or access card to the Premises (the “**Possession Date**”), and no action by Tenant shall be required therefor. If for any reason, Landlord is delayed in tendering possession of the Premises to Tenant by any particular date, Landlord shall not be subject to any liability for such failure, and the validity of this Lease shall not be impaired. Neither Landlord nor any agent of Landlord has made any representation or warranty regarding the condition of the Premises, the Building or the Project or with respect to the suitability of any of the foregoing for the conduct of Tenant’s business, except as specifically set forth in this Lease and the Tenant Work Letter. Any process utilities shall be provided without warranty, in their currently existing, “as-is” condition.

1.1.2 **The Building and The Project.** The Premises constitutes a portion of the building set forth in Section 2.1 of the Summary (the “**Building**”). The Building is part of an office/laboratory project currently known as “The Towers at Sierra Point.” The term “**Project**,” as used in this Lease, shall mean (i) the Building and the Common Areas, (ii) the land (which is improved with landscaping, parking facilities and other improvements) upon which the Building and the Common Areas are located, (iii) the other office/laboratory buildings located at the Project, and the land upon which such adjacent office/laboratory buildings are located, and (iv) at Landlord’s discretion, any additional real property, areas, land, buildings or other improvements added thereto outside of the Project.

1.1.3 **Common Areas.** Tenant shall have the non-exclusive right to use in common with other tenants in the Project, and subject to the rules and regulations referred to in Article 5 of this Lease, those portions of the Project which are provided, from time to time, for use in common by Landlord, Tenant and any other tenants of the Project (such areas, together with such other portions of the Project designated by Landlord, in its discretion, are collectively referred to herein as the “**Common Areas**”). The manner in which the Common Areas are maintained and operated shall be at the sole discretion of Landlord (but shall at least be consistent with the manner in which the common areas of the “Comparable Buildings,” as that term is defined in Section 2.2.2 below, are maintained and operated), and the use thereof shall be subject to such reasonable rules, regulations and restrictions as Landlord may make from time to time and notify Tenant of in writing. Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Project and the Common Areas, provided that, in connection therewith, Landlord shall perform such closures, alterations, additions or changes in a commercially reasonable manner and, in connection therewith, shall use commercially reasonable efforts to minimize any material interference with Tenant’s use of and access to the Premises.

1.2 **Rentable Square Feet of Premises.** The rentable square footage of the Premises is hereby deemed to be as set forth in Section 2.2 of the Summary, and shall not be subject to measurement or adjustment during the Lease Term.

1.3 **Delivery of the Premises.** In the event that Landlord shall fail to cause the Possession Date to occur on or before July 1, 2022 (the “**Deadline Date**”), then, as Tenant’s sole remedy for such delay, Tenant shall be entitled to a credit against the first Base Rent due under this Lease following the Base Rent Abatement Period, in an amount equal to the product of (i) the number of days following the Deadline Date that occur until the Possession Date, and (ii) \$4,182.86. Notwithstanding anything above to the contrary, the Deadline Date shall be extended on day-for-day basis to the extent that Landlord is delayed in causing the Possession Date to occur due to any acts or omissions of Tenant and/or due to any delays beyond Landlord’s reasonable control (including without limitation, events of “Force Majeure,” as that term is defined in Section 29.16 of this Lease). The remedy provided for in this Section 2.3.2 shall be Tenant’s sole and exclusive remedy for a delay in the Possession Date.

2. LEASE TERM; OPTION TERM

1.4 **Lease Term.** The terms and provisions of this Lease shall be effective as of the date of this Lease. The term of this Lease (the “**Lease Term**”) shall be as set forth in Section 3.1 of the Summary, shall commence on the date set forth in Section 3.2 of the Summary (the “**Lease Commencement Date**”), and shall terminate on the date set forth in Section 3.3 of the Summary (the “**Lease Expiration Date**”) unless this Lease is sooner terminated as hereinafter provided. For purposes of this Lease, the term “**Lease Year**” shall mean each consecutive twelve (12) month period during the Lease Term. At any time during the Lease Term, Landlord may deliver to Tenant a notice in the form as set forth in Exhibit C, attached hereto, as a confirmation only of the information set forth therein, which Tenant shall execute and return to Landlord within five (5) days of receipt thereof.

1.5 **Option Term.**

1.2.1 **Option Right.** Landlord hereby grants the Tenant originally named in this Lease (the “**Original Tenant**”), and any assignee of Original Tenant’s entire interest in the Lease that has been approved in accordance with the terms of Article 14, below (a “**Permitted Assignee**”), one (1) option to extend the Lease Term for a period of five (5) years (the “**Option Term**”). Such option to extend shall be exercisable only by written notice delivered by Tenant to Landlord not more than twelve (12) months nor less than nine (9) months prior to the expiration of the initial Lease Term, stating that Tenant is thereby irrevocably exercising its option to lease the Premises during the Option Term. Upon the proper exercise of the option to extend, and provided that, at Landlord’s option, as of the date of delivery of such notice, Tenant is not in default under this Lease (beyond the applicable notice and cure period) and has not previously been in monetary or material non-monetary default under this Lease (beyond the applicable notice and cure period) more than twice, and as of the end of the initial Lease Term Tenant is not in default under this Lease (beyond the applicable notice and cure period), the Lease Term shall be extended for a period of five (5) years. The rights contained in this Section 2.2 shall be personal to Original Tenant and any Permitted Assignee (and not any other assignee, sublessee or “Transferee,” as that term is defined in Section 14.1, below, of Tenant’s interest in this Lease). In the event that Tenant fails to timely and appropriately exercise its option to extend the Lease Term in accordance with the terms of this Section 2.2, then such option shall automatically terminate and shall be of no further force or effect.

1.2.2 **Option Rent.** The annual Base Rent payable by Tenant during the Option Term (the “**Option Rent**”) shall be equal to the “Fair Rental Value,” as that term is defined below, for the Premises as of the commencement date of the Option Term. The “**Fair Rental Value**,” as used in this Lease, shall be equal to the annual rent per rentable square foot (including additional rent and considering any “base year” or “expense stop” applicable thereto), including all escalations, at which tenants (pursuant to leases consummated within the twelve (12) month period preceding the first day of the Option Term), are leasing non-sublease, non-encumbered, non-equity space which is not significantly greater or smaller in size than the subject space, for a comparable lease term, in an arm’s length transaction, which comparable space is located in the Building or in “Comparable Buildings,” as that term is defined in this Section 2.2.2, below (transactions satisfying the foregoing criteria shall be known as the “**Comparable Transactions**”), taking into consideration the following concessions (the “**Concessions**”): (a) rental abatement concessions, if any, being granted such tenants in connection with such comparable space; (b) tenant improvements or allowances provided or to be provided for such comparable space, and taking into account the value, if any, of the existing improvements in the subject space, such value to be based upon the age, condition, design, quality of finishes and layout of the improvements; and (c) other reasonable monetary concessions being granted such tenants in connection with such comparable space; provided, however, that in calculating the Fair Rental Value, no consideration shall be given to (i) the fact that Landlord is or is not required to pay a real estate brokerage commission in connection with Tenant’s exercise of its right to extend the Lease Term, or the fact that landlords are or are not paying real estate brokerage commissions in connection with such comparable space, and (ii) any construction period, if any, granted to tenants in Comparable Transactions in connection with the design, permitting and construction of tenant improvements in such comparable spaces. The Fair Rental Value shall additionally include a determination as to whether, and if so to what extent, Tenant must provide Landlord with financial security, such as a letter of credit or guaranty, for Tenant’s Rent obligations in connection with Tenant’s lease of the Premises during the Option Term. Such determination shall be made by reviewing the extent of financial security then generally being imposed in Comparable Transactions from tenants of comparable financial condition and credit history to the then existing financial condition and credit history of Tenant (with appropriate adjustments to account for differences in the then- existing financial condition of Tenant and such other tenants). The Concessions (A) shall be reflected in the effective rental rate (which effective rental rate shall take into consideration the total dollar value of such Concessions as amortized on a straight-line basis over the applicable term of the Comparable Transaction (in which case such Concessions evidenced in the effective rental rate shall not be granted to Tenant)) payable by Tenant, or (B) at Landlord’s election, all such Concessions shall be granted to Tenant in kind. The term “**Comparable Buildings**” shall mean the Building and those other buildings which are comparable to the Building in terms of age (based upon the date of completion of construction or major renovation of the building), quality of construction, level of services and amenities, size and appearance, and located in Brisbane, California and the surrounding commercial area.

1.2.3 **Determination of Option Rent.** In the event Tenant timely and appropriately exercises its option to extend the Lease Term, Landlord shall notify Tenant of Landlord's determination of the Option Rent on or before the date that is thirty (30) days following Landlord's receipt of the Option Exercise Notice. If Tenant, on or before the date which is thirty (30) days following the date upon which Tenant receives Landlord's determination of the Option Rent, in good faith objects to Landlord's determination of the Option Rent, then Landlord and Tenant shall attempt to agree upon the Option Rent using their good-faith efforts. If Landlord and Tenant fail to reach agreement within thirty (30) days following Tenant's objection to the Option Rent (the "**Outside Agreement Date**"), then each party shall thereafter make a separate determination of the Option Rent, within five (5) business days of the Outside Agreement Date, and such determinations shall be submitted to arbitration in accordance with Sections 2.2.3.1 through 2.2.3.8, below. If Tenant fails to object to Landlord's determination of the Option Rent within the time period set forth herein, then Tenant shall be deemed to have rejected Landlord's determination of the Option Rent, and the matter shall be submitted to arbitration in accordance with the terms hereof.

1.2.3.1 Landlord and Tenant shall each appoint one arbitrator who shall be, at the option of the appointing party, a MAI appraiser, a real estate broker, or real estate attorney, who shall have been active over the five (5) year period ending on the date of such appointment in the leasing or appraisal, as the case may be, of properties in Brisbane, California. Each such arbitrator shall be appointed within twenty (20) days after the Outside Agreement Date. Landlord and Tenant may consult with their selected arbitrators prior to appointment and may select an arbitrator who is favorable to their respective positions. The arbitrators so selected by Landlord and Tenant shall be deemed "**Advocate Arbitrators**."

1.2.3.2 The two (2) Advocate Arbitrators so appointed shall be specifically required pursuant to an engagement letter within ten (10) days of the date of the appointment of the last appointed Advocate Arbitrator to agree upon and appoint a third arbitrator ("**Neutral Arbitrator**") who shall be qualified under the same criteria set forth hereinabove for qualification of the two Advocate Arbitrators, except that neither the Landlord or Tenant or either parties' Advocate Arbitrator may, directly or indirectly, consult with the Neutral Arbitrator prior or subsequent to his or her appointment. The Neutral Arbitrator shall be retained via an engagement letter jointly prepared by Landlord's counsel and Tenant's counsel.

1.2.3.3 The three arbitrators shall, within thirty (30) days of the appointment of the Neutral Arbitrator, reach a decision as to whether the parties shall use Landlord's or Tenant's submitted Option Rent, and shall notify Landlord and Tenant thereof. The determination of the arbitrators shall be limited solely to the issue of whether Landlord's or Tenant's submitted Option Rent is the closest to the actual Option Rent, taking into account the requirements of Section 2.2.2 of this Lease, as determined by the arbitrators.

1.2.3.4 The decision of the majority of the three arbitrators shall be binding upon Landlord and Tenant.

1.2.3.5 If either Landlord or Tenant fails to appoint an Advocate Arbitrator within twenty (20) days after the Outside Agreement Date, then either party may petition the presiding judge of the Superior Court of San Mateo County to appoint such Advocate Arbitrator subject to the criteria in Section 2.2.3.1 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such Advocate Arbitrator.

1.2.3.6 If the two (2) Advocate Arbitrators fail to agree upon and appoint the Neutral Arbitrator within ten (10) business days after the appointment of the last appointed Advocate Arbitrator, then either party may petition the presiding judge of the Superior Court of San Mateo County to appoint the Neutral Arbitrator, subject to criteria in Section 2.2.3.2 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such arbitrator.

1.2.3.7 The cost of the arbitration shall be paid by Landlord and Tenant equally.

1.2.3.8 In the event that the Option Rent shall not have been determined pursuant to the terms hereof prior to the commencement of the Option Term, Tenant shall be required to pay as Option Rent, an amount equal to 103% of the Base Rent payable by Tenant as of the expiration of the initial Lease Term, and upon the final determination of the Option Rent, the payments made by Tenant shall be reconciled with the actual amounts of Option Rent due, and the appropriate party shall make any corresponding payment to the other party.

3. BASE RENT Tenant shall pay, without prior notice or demand, to Landlord or Landlord's agent at the management office of the Project, or, at Landlord's option, at such other place as Landlord may from time to time designate in writing, by a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America, base rent ("**Base Rent**") as set forth in Section 4 of the Summary, payable in equal monthly installments as set forth in Section 4 of the Summary in advance on or before the first day of each and every

calendar month during the Lease Term, without any setoff or deduction whatsoever. The Base Rent for the fifth (5th) full month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any Rent payment date (including the Lease Commencement Date) falls on a day of the month other than the first day of such month or if any payment of Rent is for a period which is shorter than one month, the Rent for any fractional month shall accrue on a daily basis for the period from the date such payment is due to the end of such calendar month or to the end of the Lease Term at a rate per day which is equal to 1/365 of the applicable annual Rent. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis.

4. ADDITIONAL RENT

1.6 General Terms.

1.1.4 **Direct Expenses; Additional Rent.** In addition to paying the Base Rent specified in Article 3 of this Lease, Tenant shall pay "Tenant's Share" of the annual "Direct Expenses," as those terms are defined in Sections 4.2.6 and 4.2.2 of this Lease, respectively, which are in excess of the amount of Direct Expenses applicable to the "Base Year," as that term is defined in Section 4.2.1 of this Lease; provided, however, that in no event shall any decrease in Building Direct Expenses for any "Expense Year," as that term is defined in Section 4.2.3 of this Lease, below Building Direct Expenses for the Base Year entitle Tenant to any decrease in Base Rent or any credit against sums due under this Lease. Such payments by Tenant, together with any and all other amounts payable by Tenant to Landlord pursuant to the terms of this Lease, are hereinafter collectively referred to as the "Additional Rent", and the Base Rent and the Additional Rent are herein collectively referred to as "Rent." All amounts due under this Article 4 as Additional Rent shall be payable for the same periods and in the same manner as the Base Rent. Without limitation on other obligations of Tenant which survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term.

1.7 **Definitions of Key Terms Relating to Additional Rent.** As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

1.2.4 "Base Year" shall mean the period set forth in Section 6 of the Summary.

1.2.5 "Direct Expenses" shall mean "Operating Expenses" and "Tax Expenses."

1.2.6 "Expense Year" shall mean each calendar year, including the Base Year, in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires, provided that Landlord, upon notice to Tenant, may change the Expense Year from time to time to any other twelve (12) consecutive month period, and, in the event of any such change, Tenant's Share of Direct Expenses shall be equitably adjusted for any Expense Year involved in any such change.

1.2.7 "Operating Expenses" shall mean all expenses, costs and amounts of every kind and nature which Landlord pays or accrues during any Expense Year because of or in connection with the ownership, management, maintenance, security, repair, replacement, restoration or operation of the Project, or any portion thereof (subject to the express exclusions set forth in this Section 4.2.4 below). Without limiting the generality of the foregoing, Operating Expenses shall specifically include any and all of the following: (i) the cost of supplying all utilities, the cost of operating, repairing, maintaining, and renovating the utility, telephone, mechanical, sanitary, storm drainage, and elevator systems, and the cost of maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting any governmental enactments which may affect Operating Expenses, and the costs incurred in connection with a governmentally mandated transportation system management program or similar program; (iii) the cost of all insurance carried by Landlord in connection with the Project and Premises as reasonably determined by Landlord; (iv) the cost of landscaping, relamping, and all supplies, tools, equipment and materials used in the operation, repair and maintenance of the Project, or any portion thereof; (v) the cost of parking area operation, repair, restoration, and maintenance; (vi) fees and other costs, including management and/or incentive fees, consulting fees, legal fees and accounting fees, of all contractors and consultants in connection with the management, operation, maintenance and repair of the Project; (vii) payments under any equipment rental agreements and the fair rental value of any management office space; (viii) subject to item (f), below, wages, salaries and other compensation and benefits, including taxes levied thereon, of all persons engaged in the operation, maintenance and security of the Project; (ix) costs under any instrument pertaining to the sharing of costs by the Project; (x) operation, repair, maintenance and replacement of all systems and equipment and components thereof of the Project; (xi) the cost of janitorial, alarm, security and other services, replacement of wall and floor coverings, ceiling tiles and fixtures in common areas, maintenance and replacement of curbs and walkways, repair to roofs and re-roofing; (xii) amortization (including commercially reasonable interest on the unamortized cost) over such period of time as Landlord shall reasonably determine in accordance with sound

real estate management and accounting practices, consistently applied, of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project, or any portion thereof; (xiii) the cost of capital improvements or other costs incurred in connection with the Project (A) which are intended to effect economies in the operation or maintenance of the Project, or any portion thereof, or to reduce current or future Operating Expenses or to enhance the safety or security of the Project or its occupants, (B) that are required to comply with present or mandatory conservation programs, (C) which are replacements or modifications of nonstructural items located in the Common Areas required to keep the Common Areas in good order or condition, (D) that are required under any governmental law or regulation, or (E) which are repairs, replacements or modifications to the Building Systems (as defined in Section 7.1, below); provided, however, that any capital expenditure shall be amortized (including commercially reasonable interest on the amortized cost) over the reasonable useful life of such item as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices, consistently applied; and (xiv) costs, fees, charges or assessments imposed by, or resulting from any mandate imposed on Landlord by, any federal, state or local government for fire and police protection, trash removal, community services, or other services which do not constitute "Tax Expenses" as that term is defined in Section 4.2.5, below, (xv) cost of tenant relation programs reasonably established by Landlord, and (xvi) payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Building, including, without limitation, any covenants, conditions and restrictions affecting the property, and reciprocal easement agreements affecting the property, any parking licenses, and any agreements with transit agencies affecting the Property (collectively, "**Underlying Documents**"). Notwithstanding the foregoing, for purposes of this Lease, Operating Expenses shall not, however, include:

(a) costs, including legal fees, space planners' fees, advertising and promotional expenses (except as otherwise set forth above), and brokerage fees incurred in connection with the original construction or development, or original or future leasing of the Project, and costs, including permit, license and inspection costs, incurred with respect to the installation of tenant improvements made for new tenants initially occupying space in the Project after the Lease Commencement Date or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants or other occupants of the Project (excluding, however, such costs relating to any common areas of the Project or parking facilities);

(b) except as set forth in items (xii), (xiii), and (xiv) above, capital expenses, depreciation, interest and principal payments on mortgages and other debt costs, if any, penalties and interest;

(c) costs for which the Landlord is reimbursed by any tenant or occupant of the Project or by insurance by its carrier or any tenant's carrier or by anyone else, and electric power costs for which any tenant directly contracts with the local public service company;

(d) any bad debt loss, rent loss, or reserves for bad debts or rent loss;

(e) costs associated with the operation of the business of the partnership or entity which constitutes the Landlord, as the same are distinguished from the costs of operation of the Project (which shall specifically include, but not be limited to, accounting costs associated with the operation of the Project). Costs associated with the operation of the business of the partnership or entity which constitutes the Landlord include costs of partnership accounting and legal matters, costs of defending any lawsuits with any mortgagee (except as the actions of the Tenant may be in issue), costs of selling, syndicating, financing, mortgaging or hypothecating any of the Landlord's interest in the Project, and costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Project management, or between Landlord and other tenants or occupants;

(f) the wages and benefits of any employee who does not devote substantially all of his or her employed time to the Project unless such wages and benefits are prorated to reflect time spent on operating and managing the Project vis-a-vis time spent on matters unrelated to operating and managing the Project; provided, that in no event shall Operating Expenses for purposes of this Lease include wages and/or benefits attributable to personnel above the level of Project manager;

(g) amount paid as ground rental for the Project by the Landlord;

(h) except for a Project management fee to the extent allowed pursuant to item (l) below, overhead and profit increment paid to the Landlord or to subsidiaries or affiliates of the Landlord for services in the Project to the extent the same exceeds the costs of such services rendered by qualified, first- class unaffiliated third parties on a competitive basis;

- (i) any compensation paid to clerks, attendants or other persons in commercial concessions operated by the Landlord, provided that any compensation paid to any concierge at the Project shall be includable as an Operating Expense;
- (j) rentals and other related expenses incurred in leasing air conditioning systems, elevators or other equipment which if purchased the cost of which would be excluded from Operating Expenses as a capital cost, except equipment not affixed to the Project which is used in providing engineering, janitorial or similar services and, further excepting from this exclusion such equipment rented or leased to remedy or ameliorate an emergency condition in the Project;
- (k) all items and services for which Tenant or any other tenant in the Project reimburses Landlord or which Landlord provides selectively to one or more tenants (other than Tenant) without reimbursement;
- (l) any costs expressly excluded from Operating Expenses elsewhere in this Lease;
- (m) rent for any office space occupied by Project management personnel to the extent the size or rental rate of such office space exceeds the size or fair market rental value of office space occupied by management personnel of the comparable buildings in the vicinity of the Building, with adjustment where appropriate for the size of the applicable project;
- (n) costs arising from the gross negligence or willful misconduct of Landlord in connection with this Lease; and
- (o) costs incurred to comply with laws relating to the removal of hazardous material (as defined under Applicable Law) which was in existence in the Building or on the Project prior to the Lease Commencement Date, and was of such a nature that a federal, State or municipal governmental authority, if it had then had knowledge of the presence of such hazardous material, in the state, and under the conditions that it then existed in the Building or on the Project, would have then required the removal of such hazardous material or other remedial or containment action with respect thereto; and costs incurred to remove, remedy, contain, or treat hazardous material, which hazardous material is brought into the Building or onto the Project after the date hereof by Landlord or any other tenant of the Project and is of such a nature, at that time, that a federal, State or municipal governmental authority, if it had then had knowledge of the presence of such hazardous material, in the state, and under the conditions, that it then exists in the Building or on the Project, would have then required the removal of such hazardous material or other remedial or containment action with respect thereto;
- (p) the cost and expense of correcting structural defects in the original construction of the Project;
- (q) advertising and promotional expenditures;
- (r) fines, penalties, late fees and other costs incurred as a result of Landlord's failure to comply with Applicable Laws, which compliance is Landlord's obligation pursuant to the terms of Article 24 of this Lease;
- (s) legal fees and costs concerning the negotiation and preparation of this Lease or any litigation between Landlord and Tenant;
- (t) legal fees and costs, settlements, judgments or awards paid or incurred because of disputes between Landlord and its employees or contractors, Landlord and Tenant, or Landlord and other tenants or prospective occupants or prospective tenants/occupants or providers of goods and services to the Project;
- (u) reserves of any kind; and
- (v) fees payable by Landlord for management of the Project in excess of four percent (4%) (the "**Management Fee Cap**") of Landlord's gross rental revenues.

If Landlord is not furnishing any particular work or service (the cost of which, if performed by Landlord, would be included in Operating Expenses) to a tenant who has undertaken to perform such work or service in lieu of the performance thereof by Landlord, Operating Expenses shall be deemed to be increased by an amount equal to

the additional Operating Expenses which would reasonably have been incurred during such period by Landlord if it had at its own expense furnished such work or service to such tenant. If the Project is not one hundred percent (100%) occupied during all or a portion of any Expense Year, Landlord may elect to make an appropriate adjustment to the components of Operating Expenses for such Expense Year to determine the amount of Operating Expenses that would have been incurred had the Project been one hundred percent (100%) occupied; and the amount so determined shall be deemed to have been the amount of Operating Expenses for such Expense Year. For purposes hereof, cost savings in components of Operating Expenses arising by reason of the cessation of use by tenants at the Project due to Casualty (as that term is defined in Section 11.1 below), Force Majeure (as that term is defined in Section 29.16 below), or other extraordinary circumstances are considered variable Operating Expenses that may be grossed up in Operating Expenses. If Operating Expenses for the Base Year include amortized costs, or costs (including, but not limited to, costs of insurance, personnel, and increased or new services) relating to extraordinary circumstances, including, but not limited to, Casualty, Force Majeure, boycotts, strikes, conservation surcharges, embargoes or shortages, then at such time as such costs are no longer applicable, the increased Operating Expenses attributable thereto shall be excluded from the Base Year Operating Expenses. Landlord shall not (i) make a profit by charging items to Operating Expenses that are otherwise also charged separately to others and (ii) subject to Landlord's right to adjust the components of Operating Expenses described above in this paragraph, collect Operating Expenses from Tenant and all other tenants in the Building in an amount in excess of what Landlord incurs for the items included in Operating Expenses.

1.2.1 **Taxes.**

1.2.5.1 "**Tax Expenses**" shall mean all federal, state, county, or local governmental or municipal taxes, fees, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit taxes, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent, unless required to be paid by Tenant, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used in connection with the Project, or any portion thereof), which shall be paid or accrued during any Expense Year (without regard to any different fiscal year used by such governmental or municipal authority) because of or in connection with the ownership, leasing and operation of the Project, or any portion thereof.

1.2.5.2 Tax Expenses shall include, without limitation: (i) Any tax on the rent, right to rent or other income from the Project, or any portion thereof, or as against the business of leasing the Project, or any portion thereof; (ii) Any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax; (iii) Any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any business or gross income tax or excise tax with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof; and (iv) Any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises or the improvements thereon.

1.2.5.3 If Tax Expenses for any period during the Lease Term or any extension thereof are increased after payment thereof for any reason, including, without limitation, error or reassessment by applicable governmental or municipal authorities, Tenant shall pay Landlord upon demand Tenant's Share of any such increased Tax Expenses included by Landlord as Building Tax Expenses pursuant to the terms of this Lease. Notwithstanding anything to the contrary contained in this Section 4.2.5 (except as set forth in Section 4.2.5.1, above), there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, estate taxes, federal and state income taxes, and other taxes to the extent applicable to Landlord's general or net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items included as Operating Expenses, and (iii) any items paid by Tenant under Section 4.5 of this Lease.

1.2.5.4 Notwithstanding anything to the contrary set forth in this Lease, the amount of Tax Expenses for the Base Year and any Expense Year shall be calculated without taking into account any decreases in real estate taxes obtained in connection with Proposition 8, and, therefore, the Tax Expenses in the Base Year and/or an Expense Year may be greater than those actually incurred by Landlord, but shall, nonetheless, be the Tax Expenses due under this Lease; provided that (i) any costs and expenses incurred by Landlord in securing any Proposition 8 reduction shall not be deducted from Tax Expenses nor included in Direct Expenses for purposes of this Lease, and (ii) tax refunds under Proposition 8 shall not be deducted from Tax Expenses nor refunded to Tenant, but rather shall be the sole property of Landlord. Landlord and Tenant acknowledge that the preceding sentence is not intended to in any way affect (A) the inclusion in Tax Expenses of the statutory two percent (2.0%) annual increase in Tax Expenses (as such statutory increase may be modified by subsequent legislation), or (B) the

inclusion or exclusion of Tax Expenses pursuant to the terms of Proposition 13. Notwithstanding the foregoing, upon a reassessment of the Building and/or the Project pursuant to the terms of Proposition 13 (a “**Reassessment**”) occurring after the Base Year which results in a decrease in Tax Expenses, the component of Tax Expenses for the Base Year which is attributable to the assessed value of the Building and/or the Project under Proposition 13 prior to the Reassessment (without taking into account any Proposition 8 reductions) (the “**Base Year Prop 13 Taxes**”) shall be reduced, if at all, for the purposes of comparison to all subsequent Expense Years (commencing with the Expense Year in which the Reassessment takes place) to an amount equal to the real estate taxes based upon such Reassessment, and if thereafter, in connection with a subsequent Reassessment, the assessed value of the Building and/or the Project under Proposition 13 shall increase, the current Base Year Prop 13 Taxes shall be increased for purposes of comparison to all subsequent Expense Years (commencing with the Expense Year in which the Reassessment takes place) to an amount equal to the lesser of the original Base Year Prop 13 Taxes and an amount equal to the real estate taxes based upon such Reassessment.

1.2.1 “**Tenant’s Share**” shall mean the percentage set forth in Section 6 of the Summary.

1.1 **Allocation of Direct Expenses.**

1.3.1 **Method of Allocation.** The parties acknowledge that the Building is a part of a multi- building project and that the costs and expenses incurred in connection with the Project (i.e., the Direct Expenses) should be shared between the Building and the other buildings in the Project. Accordingly, as set forth in Section 4.2 above, Direct Expenses (which consist of Operating Expenses and tax Expenses) are determined annually for the Project as a whole, and a portion of the Direct Expenses, which portion shall be determined by Landlord on an equitable basis, shall be allocated to the Building (as opposed to other buildings in the Project). Such portion of Direct Expenses allocated to the Building shall include all Direct Expenses attributable solely to the Building and an equitable portion of the Direct Expenses attributable to the Project as a whole, and shall not include Direct Expenses attributable solely to other buildings in the Project.

1.3.2 **Cost Pools.** Landlord shall have the right, from time to time, to equitably allocate some or all of the Direct Expenses for the Project among different portions or occupants of the Project (the “**Cost Pools**”), in Landlord’s reasonable discretion. Such Cost Pools may include, but shall not be limited to, the office space tenants of a building of the Project or of the Project, and the retail space tenants of a building of the Project or of the Project. The Direct Expenses within each such Cost Pool shall be allocated and charged to the tenants within such Cost Pool in an equitable manner.

1.8 **Calculation and Payment of Additional Rent.** If for any Expense Year ending or commencing within the Lease Term, Tenant’s Share of Building Direct Expenses for such Expense Year exceeds Tenant’s Share of Building Direct Expenses applicable to the Base Year, then Tenant shall pay to Landlord, in the manner set forth in Section 4.4.1, below, and as Additional Rent, an amount equal to the excess (the “**Excess**”).

1.4.1 **Statement of Actual Direct Expenses and Payment by Tenant.** Landlord shall give to Tenant following the end of each Expense Year, a statement (the “**Statement**”) which shall state the Building Direct Expenses incurred or accrued for such preceding Expense Year, and which shall indicate the amount of the Excess. Upon receipt of the Statement for each Expense Year commencing or ending during the Lease Term, if an Excess is present, Tenant shall pay, within thirty (30) days, the full amount of the Excess for such Expense Year, less the amounts, if any, paid during such Expense Year as “Estimated Excess,” as that term is defined in Section 4.4.2, below. If the amounts paid by Tenant during an Expense Year as Estimated Excess exceed the Excess for such Expense Year, then such difference shall be reimbursed by Landlord to Tenant, provided that any such reimbursement, at Landlord’s option, may be credited against the Additional Rent next coming due under this Lease unless the Lease Term has expired, in which event Landlord shall refund the appropriate amount to Tenant within thirty (30) days. The failure of Landlord to timely furnish the Statement for any Expense Year shall not prejudice Landlord or Tenant from enforcing its rights under this Article 4. Even though the Lease Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant’s Share of Building Direct Expenses for the Expense Year in which this Lease terminates, if an Excess is present, Tenant shall immediately pay to Landlord such amount. The provisions of this Section 4.4.1 shall survive the expiration or earlier termination of the Lease Term, provided that, other than Tax Expenses and costs incurred for utilities, Tenant shall not be responsible for Tenant’s Share of any Operating Expenses which are first billed to Tenant more than two (2) calendar years after the end of the Expense Year to which such Operating Expenses relate.

1.4.2 **Statement of Estimated Direct Expenses.** In addition, Landlord shall give Tenant a yearly expense estimate statement (the “**Estimate Statement**”) which shall set forth Landlord’s reasonable estimate (the “**Estimate**”) of what the total amount of Building Direct Expenses for the then-current Expense Year shall be and the estimated excess (the “**Estimated Excess**”) as calculated by comparing the Building Direct Expenses for such Expense Year, which shall be based upon the Estimate, to the amount of Building Direct Expenses for the Base

Year. The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Excess under this Article 4, nor shall Landlord be prohibited from revising any Estimate Statement or Estimated Excess theretofore delivered to the extent necessary. Thereafter, Tenant shall pay, with its next installment of Base Rent due, a fraction of the Estimated Excess for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.4.2). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year, including the month of such payment, and twelve (12) as its denominator. Until a new Estimate Statement is furnished (which Landlord shall have the right to deliver to Tenant at any time), Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Excess set forth in the previous Estimate Statement delivered by Landlord to Tenant.

1.9 Taxes and Other Charges for Which Tenant Is Directly Responsible.

1.5.1 Tenant shall be liable for and shall pay before delinquency, taxes levied against Tenant's equipment, furniture, fixtures and any other personal property located in or about the Premises. If any such taxes on Tenant's equipment, furniture, fixtures and any other personal property are levied against Landlord or Landlord's property or if the assessed value of Landlord's property is increased by the inclusion therein of a value placed upon such equipment, furniture, fixtures or any other personal property and if Landlord pays the taxes based upon such increased assessment, which Landlord shall have the right to do regardless of the validity thereof but only under proper protest if requested by Tenant, Tenant shall within thirty (30) days following demand repay to Landlord the taxes so levied against Landlord or the proportion of such taxes resulting from such increase in the assessment, as the case may be.

1.5.2 If the tenant improvements in the Premises, whether installed and/or paid for by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, are assessed for real property tax purposes at a valuation higher than the valuation at which tenant improvements conforming to Landlord's "building standard" in other space in the Building are assessed, then the Tax Expenses levied against Landlord or the property by reason of such excess assessed valuation shall be deemed to be taxes levied against personal property of Tenant and shall be governed by the provisions of Section 4.5.1, above.

1.5.3 Notwithstanding any contrary provision herein, Tenant shall pay prior to delinquency any (i) rent tax or sales tax, service tax, transfer tax or value added tax, business tax or any other applicable tax on the rent or services herein or otherwise respecting this Lease, (ii) taxes assessed upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion of the Project, including the Project parking facility; or (iii) taxes assessed upon this transaction or any document to which Tenant is a party creating or transferring an interest or an estate in the Premises.

1.10 **Landlord's Books and Records.** Within one hundred twenty (120) days after receipt by Tenant of a Statement, if Tenant disputes the amount of Additional Rent set forth in the Statement, a member of Tenant's finance department, or an independent certified public accountant (which accountant is a member of a nationally recognized accounting firm and is not working on a contingency fee basis) ("**Tenant's Accountant**"), designated and paid for by Tenant, may, after reasonable notice to Landlord and at reasonable times, inspect Landlord's records with respect to the Statement at Landlord's offices, provided that there is no existing Event of Default and Tenant has paid all amounts required to be paid under the applicable Estimate Statement and Statement, as the case may be. In connection with such inspection, Tenant and Tenant's agents must agree in advance to follow Landlord's reasonable rules and procedures regarding inspections of Landlord's records, and shall execute a commercially reasonable confidentiality agreement regarding such inspection. Tenant's failure to dispute the amount of Additional Rent set forth in any Statement within one hundred twenty (120) days of Tenant's receipt of such Statement shall be deemed to be Tenant's approval of such Statement and Tenant, thereafter, waives the right or ability to dispute the amounts set forth in such Statement. If after such inspection, Tenant still disputes such Additional Rent, a determination as to the proper amount shall be made, at Tenant's expense, by an independent certified public accountant (the "**Accountant**") selected by Landlord and subject to Tenant's reasonable approval; provided that if such Accountant determines that Direct Expenses were overstated by more than five percent (5%), then the cost of the Accountant and the cost of such determination shall be paid for by Landlord, and Landlord shall reimburse Tenant for the cost of the Tenant's Accountant (provided that such cost shall be a reasonable market cost for such services). Tenant hereby acknowledges that Tenant's sole right to inspect Landlord's books and records and to contest the amount of Direct Expenses payable by Tenant shall be as set forth in this Section 4.6, and Tenant hereby waives any and all other rights pursuant to applicable law to inspect such books and records and/or to contest the amount of Direct Expenses payable by Tenant.

5. USE OF PREMISES

1.11 **Permitted Use.** Tenant shall use the Premises solely for the Permitted Use set forth in Section 7 of the Summary and Tenant shall not use or permit the Premises or the Project to be used for any other purpose or purposes whatsoever without the prior written consent of Landlord, which may be withheld in Landlord's sole discretion.

1.12 **Prohibited Uses.** Tenant further covenants and agrees that Tenant shall not use, or suffer or permit any person or persons to use, the Premises or any part thereof for any use or purpose in violation of the laws of the United States of America, the State of California, or the ordinances, regulations or requirements of the local municipal or county governing body or other lawful authorities having jurisdiction over the Project) including, without limitation, any such laws, ordinances, regulations or requirements relating to hazardous materials or substances, as those terms are defined by Applicable Laws now or hereafter in effect, or any Underlying Documents. Landlord shall have the right to impose reasonable and customary rule and regulations regarding the use of the Project, as reasonably deemed necessary by Landlord with respect to the orderly operation of the Project, and Tenant shall comply with such reasonable rules and regulations which Tenant receives in writing; provided, however, that in the event of any conflict between any rules and regulations and this Lease, the terms of this Lease shall control. Tenant shall not do or permit anything to be done in or about the Premises which will materially damage the reputation of the Project or materially obstruct or interfere with the rights of other tenants or occupants of the Building, or materially injure or annoy them or use or allow the Premises to be used for any unlawful purpose, nor shall Tenant cause, maintain or permit any nuisance in, on or about the Premises. Tenant shall comply with, and Tenant's rights and obligations under the Lease and Tenant's use of the Premises shall be subject and subordinate to, all recorded easements, covenants, conditions, and restrictions now or hereafter affecting the Project.

1.13 **Hazardous Materials.**

1.3.3 **Tenant's Obligations.**

1.3.1.1 **Prohibitions.** As a material inducement to Landlord to enter into this Lease with Tenant, Tenant has fully and accurately completed Landlord's Pre-Leasing Environmental Exposure Questionnaire (the "**Environmental Questionnaire**"), which is attached as **Exhibit F**. Tenant agrees that except for those chemicals or materials, and their respective quantities, specifically listed on the Environmental Questionnaire, neither Tenant nor Tenant's employees, contractors and subcontractors of any tier, entities with a contractual relationship with Tenant (other than Landlord), or any entity acting as an agent or sub-agent of Tenant (collectively, "**Tenant's Agents**") will produce, use, store or generate any "Hazardous Materials," as that term is defined below, on, under or about the Premises, nor cause or permit any Hazardous Material to be brought upon, placed, stored, manufactured, generated, blended, handled, recycled, used or "Released," as that term is defined below, on, in, under or about the Premises. If any information provided to Landlord by Tenant on the Environmental Questionnaire, or otherwise relating to information concerning Hazardous Materials is false, incomplete, or misleading in any material respect, the same shall be deemed an Event of Default by Tenant under this Lease. Landlord's prior written consent shall be required to any Hazardous Materials use for the Premises not described on the initial Environmental Questionnaire, such consent to be withheld in Landlord's sole discretion. Tenant shall not install or permit any underground storage tank on the Premises. For purposes of this Lease, "**Hazardous Materials**" means all flammable explosives, petroleum and petroleum products, waste oil, radon, radioactive materials, toxic pollutants, asbestos, polychlorinated biphenyls ("**PCBs**"), medical waste, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including without limitation any chemical, element, compound, mixture, solution, substance, object, waste or any combination thereof, which is or may be hazardous to human health, safety or to the environment due to its radioactivity, ignitability, corrosiveness, reactivity, explosiveness, toxicity, carcinogenicity, infectiousness or other harmful or potentially harmful properties or effects, or defined as, regulated as or included in, the definition of "hazardous substances," "hazardous wastes," "hazardous materials," or "toxic substances" under any Environmental Laws. The term "Hazardous Materials" for purposes of this Lease shall also include any mold, fungus or spores, whether or not the same is defined, listed, or otherwise classified as a "hazardous material" under any Environmental Laws, if such mold, fungus or spores may pose a risk to human health or the environment or negatively impact the value of the Premises. For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Materials into the environment.

1.3.1.2 **Notices to Landlord.** Tenant shall notify Landlord in writing as soon as possible but in no event later than five (5) days after (i) the occurrence of any actual, alleged or threatened Release of any Hazardous Material in, on, under, from, about or in the vicinity of the Premises (whether past or present), regardless of the source or quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to or potentially affecting the Premises, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Hazardous Materials

in, on, under, from, about or in the vicinity of the Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as “**Hazardous Materials Claims**”. Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other communications and reports in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant’s discovery of any occurrence or condition on, in, under or about the Premises that could subject Tenant or Landlord to any liability, or restrictions on ownership, occupancy, transferability or use of the Premises under any “Environmental Laws,” as that term is defined below. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant’s intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord or the Premises without Landlord’s prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim. For purposes of this Lease, “**Environmental Laws**” means all applicable present and future laws relating to the protection of human health, safety, wildlife or the environment, including, without limitation, (i) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Materials, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Materials; and (ii) all requirements pertaining to the health and safety of employees or the public. Environmental Laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC § 9601, et seq., the Hazardous Materials Transportation Authorization Act of 1994, 49 USC § 5101, et seq., the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and Hazardous and Solid Waste Amendments of 1984, 42 USC § 6901, et seq., the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 USC § 1251, et seq., the Clean Air Act of 1966, 42 USC § 7401, et seq., the Toxic Substances Control Act of 1976, 15 USC § 2601, et seq., the Safe Drinking Water Act of 1974, 42 USC §§ 300f through 300j, the Occupational Safety and Health Act of 1970, as amended, 29 USC § 651 et seq., the Oil Pollution Act of 1990, 33 USC § 2701 et seq., the Emergency Planning and Community Right-To-Know Act of 1986, 42 USC § 11001 et seq., the National Environmental Policy Act of 1969, 42 USC § 4321 et seq., the Federal Insecticide, Fungicide and Rodenticide Act of 1947, 7 USC § 136 et seq., California Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health & Safety Code §§ 25300 et seq., Hazardous Materials Release Response Plans and Inventory Act, California Health & Safety Code, §§ 25500 et seq., Underground Storage of Hazardous Substances provisions, California Health & Safety Code, §§ 25280 et seq., California Hazardous Waste Control Law, California Health & Safety Code, §§ 25100 et seq., and any other state or local law counterparts, as amended, as such Applicable Laws, are in effect as of the Lease Commencement Date, or thereafter adopted, published, or promulgated.

1.3.1.3 Releases of Hazardous Materials. If any Release of any Hazardous Material in, on, under, from or about the Premises shall occur at any time during the Lease and/or if any other Hazardous Material condition exists at the Premises that requires response actions of any kind, in addition to notifying Landlord as specified above, Tenant, at its own sole cost and expense, shall (i) immediately comply with any and all reporting requirements imposed pursuant to any and all Environmental Laws, (ii) provide a written certification to Landlord indicating that Tenant has complied with all applicable reporting requirements, (iii) take any and all necessary investigation, corrective and remedial action in accordance with any and all applicable Environmental Laws, utilizing an environmental consultant approved by Landlord, all in accordance with the provisions and requirements of this Section 5.3, including, without limitation, Section 5.3.4, and (iv) take any such additional investigative, remedial and corrective actions as Landlord shall in its reasonable discretion deem necessary such that the Premises are remediated to the condition existing prior to such Release.

1.3.1.4 Indemnification.

1.3.1.4.1 In General. Without limiting in any way Tenant’s obligations under any other provision of this Lease, Tenant shall be solely responsible for and shall protect, defend, indemnify and hold the Landlord Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, actual attorneys’ fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) including, without limitation, consequential damages and sums paid in settlement of claims, which arise during or after the Lease Term, whether foreseeable or unforeseeable, that arise during or after the Lease Term in whole or in part, foreseeable or unforeseeable, directly or indirectly arising out of or attributable to the presence, use, generation, manufacture, treatment, handling, refining, production, processing, storage, Release or presence of Hazardous Materials in, on, under or about the Premises by Tenant or Tenant’s Agents.

1.3.1.4.2 Limitations. Notwithstanding anything in Section 5.3.1.4, above, to the contrary, Tenant’s indemnity of Landlord as set forth in Section 5.3.1.4, above, shall not be applicable

to claims based upon Hazardous Materials which may exist in, on or about the Premises as of the date of this Lease (“**Existing Hazardous Materials**”), except to the extent that Tenant’s construction activities and/or Tenant’s other acts or omissions (including Tenant’s failure to remove, remediate or otherwise treat or “Clean- up,” as that term is defined in Section 5.3.4, below, the subject Existing Hazardous Materials during the tenancy of the Premises) caused or exacerbated the subject claim.

1.3.1.1 **Compliance with Environmental Laws.** Without limiting the generality of Tenant’s obligation to comply with Applicable Laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Materials used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Materials management plans and programs, any and all Hazardous Materials risk management and pollution prevention programs, and any and all Hazardous Materials emergency response and employee training programs respecting Tenant’s use of Hazardous Materials. Upon request of Landlord, Tenant shall deliver to Landlord a narrative description explaining the nature and scope of Tenant’s activities involving Hazardous Materials and showing to Landlord’s satisfaction compliance with all Environmental Laws and the terms of this Lease.

1.3.1 **Assurance of Performance.**

1.3.2.1 **Environmental Assessments In General.** Landlord may, but shall not be required to, engage from time to time such contractors as Landlord determines to be appropriate to perform environmental assessments of a scope reasonably determined by Landlord (an “**Environmental Assessment**”) to ensure Tenant’s compliance with the requirements of this Lease with respect to Hazardous Materials.

1.3.2.2 **Costs of Environmental Assessments.** All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment shows that Tenant has failed to comply with the provisions of this Section 5.3, then all of the costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after receipt of written demand therefor.

1.3.2 **Tenant’s Obligations upon Surrender.** At the expiration or earlier termination of the Lease Term, Tenant, at Tenant’s sole cost and expense, shall: (i) cause all Hazardous Materials to be removed from the Premises and disposed of in accordance with all Environmental Laws and as necessary to allow the Premises to be used for any purpose; and (ii) cause to be removed all containers installed or used by Tenant or Tenant’s Agents to store any Hazardous Materials on the Premises, and cause to be repaired any damage to the Premises caused by such removal.

1.3.3 **Clean-up.**

1.3.4.1 **Environmental Reports; Clean-Up.** If any written report, including any report containing results of any Environmental Assessment (an “**Environmental Report**”) shall indicate (i) the presence of any Hazardous Materials as to which Tenant has a removal or remediation obligation under this Section 5.3, and (ii) that as a result of same, the investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up (the “**Clean-up**”) of any Hazardous Materials is required, Tenant shall immediately prepare and submit to Landlord within thirty (30) days after receipt of the Environmental Report a comprehensive plan, subject to Landlord’s written approval, specifying the actions to be taken by Tenant to perform the Clean-up so that the Premises are restored to the conditions required by this Lease. Upon Landlord’s approval of the Clean-up plan, Tenant shall, at Tenant’s sole cost and expense, without limitation on any rights and remedies of Landlord under this Lease, immediately implement such plan with a consultant reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Materials in accordance with all Applicable Laws and as required by such plan and this Lease. If, within thirty (30) days after receiving a copy of such Environmental Report, Tenant fails either (a) to complete such Clean- up, or (b) with respect to any Clean-up that cannot be completed within such thirty-day period, fails to proceed with diligence to prepare the Clean-up plan and complete the Clean-up as promptly as practicable, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, to carry out any Clean-up recommended by the Environmental Report or required by any governmental authority having jurisdiction over the Premises, and recover all of the costs and expenses thereof from Tenant as Additional Rent, payable within thirty (30) days after receipt of written demand therefor.

1.3.4.2 **No Rent Abatement.** Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Base Rent or Additional Rent due or accruing under this Lease during any such Clean-up.

1.3.4.3 **Surrender of Premises.** Tenant shall complete any Clean-up prior to surrender of the Premises upon the expiration or earlier termination of this Lease. Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming that the Clean-up has been completed in accordance with all requirements of such governmental authority and that no further response action of any kind is required for the unrestricted use of the Premises ("**Closure Letter**"). Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Materials in accordance with Applicable Laws.

1.3.4.4 **Failure to Timely Clean-Up.** Should any Clean-up for which Tenant is responsible not be completed, or should Tenant not receive the Closure Letter and any governmental approvals required under Environmental Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, then Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in Article 16) until Tenant has fully complied with its obligations under this Section 5.3.

1.3.4 **Confidentiality.** Unless compelled to do so by Applicable Law, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises to any Person (other than Tenant's consultants, attorneys, property managers and employees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord. In the event Tenant reasonably believes that disclosure is compelled by Applicable Law, it shall provide Landlord ten (10) days' advance notice of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers or lenders, subject to any such parties' written agreement to be bound by the terms of this Section 5.3.

1.3.5 **Copies of Environmental Reports.** Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports regarding Tenant's activities with respect to the Premises, or ground water beneath the Land, or the environmental condition or Clean-up thereof. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials.

1.3.6 **Intentionally Omitted.**

1.3.7 **Signs, Response Plans, Etc.** Tenant shall be responsible for posting on the Premises any signs required under applicable Environmental Laws. Tenant shall also complete and file any business response plans or inventories required by any Applicable Laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

1.3.8 **Survival.** Each covenant, agreement, representation, warranty and indemnification made by Tenant set forth in this Section 5.3 shall survive the expiration or earlier termination of this Lease and shall remain effective until all of Tenant's obligations under this Section 5.3 have been completely performed and satisfied.

6. SERVICES AND UTILITIES

1.14 **In General.** Landlord shall provide the following services on all days (unless otherwise stated below) during the Lease Term.

1.1.5 Subject to limitations imposed by all governmental rules, regulations and guidelines applicable thereto, Landlord shall provide heating and air conditioning ("**HVAC**") when necessary for normal comfort for normal office use in the Premises from 7:00 A.M. to 6:00 P.M. Monday through Friday, (collectively, the "**Building Hours**"), except for the date of observation of New Year's Day, Independence Day, Labor Day, Memorial Day, Thanksgiving Day, Christmas Day and, at Landlord's discretion, other locally or nationally recognized holidays which are observed by other buildings comparable to and in the vicinity of the Building (collectively, the "**Holidays**").

1.1.6 Subject to the other terms of this Lease, Landlord shall provide adequate electrical wiring and facilities and power for normal general office use as determined by Landlord. Tenant will design Tenant's

electrical system serving any equipment producing nonlinear electrical loads to accommodate such nonlinear electrical loads, including, but not limited to, oversizing neutral conductors, derating transformers and/or providing power-line filters. Engineering plans shall include a calculation of Tenant's fully connected electrical design load with and without demand factors and shall indicate the number of watts of unmetered and submetered loads, which electrical usage shall be subject to applicable laws and regulations, including Title 24. Landlord shall designate the electricity utility provider from time to time. Tenant shall bear the cost of replacement of lamps, starters and ballasts for non- Building standard lighting fixtures within the Premises.

1.1.7 Landlord shall provide city water from the regular Building outlets for drinking, kitchen, lavatory and toilet purposes in the Building Common Areas and the Premises.

1.1.8 Landlord shall provide nonexclusive, non-attended automatic passenger elevator service during the Building Hours, shall have one elevator available at all other times, including on the Holidays, except in the event of emergency.

1.1.9 Landlord shall provide customary weekday janitorial services to the Premises, except the date of observation of the Holidays, in and about the Premises and customary occasional window washing services, each in a manner consistent with other office buildings located in the vicinity of the Project.

Tenant shall cooperate fully with Landlord at all times and abide by all regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the HVAC, electrical, mechanical and plumbing systems.

1.15 **Overstandard Tenant Use.** Tenant shall not, without Landlord's prior written consent, use heat- generating machines, machines other than normal fractional horsepower office machines, or equipment or lighting other than Building standard lights in the Premises, which may affect the temperature otherwise maintained by the air conditioning system or increase the water normally furnished for the Premises by Landlord pursuant to the terms of Section 6.1 of this Lease. If Tenant uses water, electricity, heat or air conditioning in excess of that supplied by Landlord pursuant to Section 6.1 of this Lease, Tenant shall pay to Landlord, upon billing, the cost of such excess consumption, the cost of the installation, operation, and maintenance of equipment which is installed in order to supply such excess consumption, and the cost of the increased wear and tear on existing equipment caused by such excess consumption; and Landlord may install devices to separately meter (or sub-meter) any increased use and in such event Tenant shall pay the increased cost directly to Landlord, on demand, at the rates charged by the public utility company furnishing the same, including the cost of such additional metering (or sub-metering) devices. Tenant's use of electricity shall never exceed the capacity of the feeders to the Project or the risers or wiring installation, and Tenant shall not install or use or permit the installation or use of any computer or electronic data processing equipment in the Premises, without the prior written consent of Landlord. If Tenant desires to use heat, ventilation or air conditioning during hours other than those for which Landlord is obligated to supply such utilities pursuant to the terms of Section 6.1 of this Lease, Tenant shall give Landlord such prior notice, if any, as Landlord shall from time to time establish as appropriate, of Tenant's desired use in order to supply such utilities, and Landlord shall supply such utilities to Tenant at such hourly cost to Tenant (which shall be treated as Additional Rent) as Landlord shall from time to time establish, which cost as of the date of this Lease is \$75.00 per hour. Landlord shall have the exclusive right, but not the obligation, to provide any additional services which may be required by Tenant, including, without limitation, locksmithing, lamp replacement, additional janitorial service, and additional repairs and maintenance. If Tenant requests any such additional services, then Tenant shall pay to Landlord the cost of such additional services, including Landlord's standard fee for its involvement with such additional services, promptly upon being billed for same.

1.16 **Interruption of Use.** Tenant agrees that Landlord shall not be liable for damages, by abatement of Rent or otherwise, for failure to furnish or delay in furnishing any service (including telephone and telecommunication services), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by breakage, repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Building or Project after reasonable effort to do so, by any riot or other dangerous condition, emergency, accident or Casualty (as that term is defined in Section 11.1 below) whatsoever, by act or default of Tenant or other parties, or by any other cause; and such failures or delays or diminution shall never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent or performing any of its obligations under this Lease. Furthermore, Landlord shall not be liable under any circumstances for a loss of, or injury to, property or for injury to, or interference with, Tenant's business, including, without limitation, loss of profits, however occurring, through or in connection with or incidental to a failure to furnish any of the services or utilities as set forth in this Article 6.

1.17 **Energy Performance Disclosure Information.** Tenant hereby acknowledges that Landlord may be required to disclose certain information concerning the energy performance of the Building pursuant to California Public Resources Code Section 25402.10 and the regulations adopted pursuant thereto (collectively the “**Energy Disclosure Requirements**”). Tenant hereby acknowledges prior receipt of the Data Verification Checklist, as defined in the Energy Disclosure Requirements (the “**Energy Disclosure Information**”), and agrees that Landlord has timely complied in full with Landlord’s obligations under the Energy Disclosure Requirements. Tenant acknowledges and agrees that (i) Landlord makes no representation or warranty regarding the energy performance of the Building or the accuracy or completeness of the Energy Disclosure Information, (ii) the Energy Disclosure Information is for the current occupancy and use of the Building and that the energy performance of the Building may vary depending on future occupancy and/or use of the Building, and (iii) Landlord shall have no liability to Tenant for any errors or omissions in the Energy Disclosure Information. If and to the extent not prohibited by Applicable Laws, Tenant hereby waives any right Tenant may have to receive the Energy Disclosure Information, including, without limitation, any right Tenant may have to terminate this Lease as a result of Landlord’s failure to disclose such information. Further, Tenant hereby releases Landlord from any and all losses, costs, damages, expenses and/or liabilities relating to, arising out of and/or resulting from the Energy Disclosure Requirements, including, without limitation, any liabilities arising as a result of Landlord’s failure to disclose the Energy Disclosure Information to Tenant prior to the execution of this Lease. Tenant’s acknowledgment of the AS-IS condition of the Premises pursuant to the terms of this Lease shall be deemed to include the energy performance of the Building. Tenant further acknowledges that pursuant to the Energy Disclosure Requirements, Landlord may be required in the future to disclose information concerning Tenant’s energy usage to certain third parties, including, without limitation, prospective purchasers, lenders and tenants of the Building (the “**Tenant Energy Use Disclosure**”). Tenant hereby (A) consents to all such Tenant Energy Use Disclosures, and (B) acknowledges that Landlord shall not be required to notify Tenant of any Tenant Energy Use Disclosure. Further, Tenant hereby releases Landlord from any and all losses, costs, damages, expenses and liabilities relating to, arising out of and/or resulting from any Tenant Energy Use Disclosure. The terms of this Section 6.3 shall survive the expiration or earlier termination of this Lease.

1.18 **Rent Abatement.** If (i) Landlord fails to provide services required of Landlord under Section 6.1 above, and (ii) such failure causes all or a material portion of the Premises to be untenantable by Tenant and Tenant actually ceases to use all or a material portion of the Premises, (iii) such failure is reasonably within Landlord’s ability to cure, and (iv) such failure is not the result of the acts and/or omissions of Tenant and/or other Tenant Parties, then in order to be entitled to receive the benefits of this Section 6.4, Tenant must give Landlord notice (the “**Initial Notice**”), specifying such failure to perform by Landlord (the “**Abatement Event**”). If Landlord has not commenced to cure such Abatement Event within five (5) business days after the receipt of the Initial Notice and is not otherwise excused from such performance by this Lease, then prior to any abatement, Tenant must deliver an additional notice to Landlord (the “**Additional Notice**”), specifying such Abatement Event and Tenant’s intention to abate the payment of Rent under this Lease. If Landlord does not commence to cure such Abatement Event within five (5) business days of receipt of the Additional Notice and thereafter diligently pursue the cure to completion, Tenant may, upon written notice to Landlord, immediately abate Base Rent and Tenant’s Share of Direct Expenses payable under this Lease for that portion of the Premises rendered untenantable and not actually used by Tenant, for the period beginning on the date five (5) business days after the Initial Notice to the earlier of the date Landlord cures such Abatement Event or the date Tenant recommences the use of such portion of the Premises. If Tenant fails to immediately provide the Additional Notice and commence applying any abatement of Base Rent and Tenant’s Share of Direct Expenses payable under this Lease for that portion of the Premises rendered untenantable and not actually used by Tenant, then Tenant’s right to abate Base Rent and Tenant’s Share of Direct Expenses shall be of no further force or effect with respect to the applicable Abatement Event. Such right to abate Rent shall be Tenant’s sole and exclusive remedy at law or in equity for an Abatement Event. Except as provided in this Section 6.4, nothing contained herein shall be interpreted to mean that Tenant is excused from paying Rent due hereunder.

7. **REPAIRS** Tenant shall, at Tenant’s own expense, keep the Premises, including all improvements, fixtures and furnishings therein, and the floor or floors of the Building on which the Premises are located, in good order, repair and condition at all times during the Lease Term. In addition, subject to Section 10.5 below, Tenant shall, at Tenant’s own expense, but under the supervision and subject to the prior approval of Landlord, and within any reasonable period of time specified by Landlord, promptly and adequately repair all damage to the Premises and replace or repair all damaged, broken, or worn fixtures and appurtenances, except for damage caused by ordinary wear and tear or beyond the reasonable control of Tenant or Casualty or condemnation; provided however, that, Landlord shall have the exclusive right, at Landlord’s option, but not the obligation, to make such repairs and replacements, and Tenant shall pay to Landlord the cost thereof, including Landlord’s standard fee for its involvement with such repairs and replacements, promptly upon being billed for same. Landlord may, but shall not be required to, enter the Premises at all reasonable times (in compliance with the terms of Article 27 below) to make such repairs, alterations, improvements or additions to the Premises or to the Project or to any equipment located in the Project as Landlord shall desire or deem necessary or as Landlord may be required to do by governmental or quasi-governmental authority or court order or decree. Tenant hereby waives any and all rights under and benefits

of subsection 1 of Section 1932 and Sections 1941 and 1942 of the California Civil Code or under any similar law, statute, or ordinance now or hereafter in effect.

8. ADDITIONS AND ALTERATIONS

1.19 **Landlord's Consent to Alterations.** Tenant may not make any improvements, alterations, additions or changes to the Premises or any mechanical, plumbing or HVAC facilities or systems pertaining to the Premises (collectively, the "**Alterations**") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than thirty (30) days prior to the commencement thereof, and which consent shall not be unreasonably withheld by Landlord, provided it shall be deemed reasonable for Landlord to withhold its consent to any Alteration which adversely affects the structural portions or the systems or equipment of the Building or is visible from the exterior of the Building. Notwithstanding the foregoing, Tenant shall be permitted to make Alterations following ten (10) business days' notice to Landlord, but without Landlord's prior consent, to the extent that such Alterations (i) do not affect the building systems or equipment, (ii) are not visible from the exterior of the Building, and (iii) cost less than \$50,000.00 for a particular job of work. The construction of the initial improvements to the Premises shall be governed by the terms of the Tenant Work Letter and not the terms of this Article 8.

1.20 **Manner of Construction.** Landlord may impose, as a condition of its consent to any and all Alterations or repairs of the Premises or about the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that upon Landlord's request, Tenant shall, at Tenant's expense, remove such Alterations upon the expiration or any early termination of the Lease Term. Tenant shall construct such Alterations and perform such repairs in a good and workmanlike manner, in conformance with any and all applicable federal, state, county or municipal laws, rules and regulations and pursuant to a valid building permit, issued by the city in which the Building is located (or other applicable governmental authority). Tenant shall not use (and upon notice from Landlord shall cease using) contractors, services, workmen, labor, materials or equipment that, in Landlord's reasonable judgment, would disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Building or the Common Areas. Upon completion of any Alterations (or repairs), Tenant shall deliver to Landlord final lien waivers from all contractors, subcontractors and materialmen who performed such work. In addition to Tenant's obligations under Article 9 of this Lease, upon completion of any Alterations, Tenant agrees to cause a Notice of Completion to be recorded in the office of the Recorder of the County of San Mateo in accordance with Section 3093 of the Civil Code of the State of California or any successor statute, and Tenant shall deliver to the Project construction manager a reproducible copy of the "**as built**" drawings of the Alterations as well as all permits, approvals and other documents issued by any governmental agency in connection with the Alterations.

1.21 **Payment for Improvements.** If Tenant orders any work directly from Landlord, Tenant shall pay to Landlord an amount not to exceed four percent (4%) of the cost of such work to compensate Landlord for all overhead, general conditions, fees and other costs and expenses arising from Landlord's involvement with such work. If Tenant does not order any work directly from Landlord, Tenant shall reimburse Landlord for Landlord's reasonable, actual, out-of-pocket costs and expenses actually incurred in connection with Landlord's review of such work.

1.22 **Construction Insurance.** In addition to the requirements of Article 10 of this Lease, in the event that Tenant makes any Alterations, prior to the commencement of such Alterations, Tenant shall provide Landlord with evidence that Tenant carries "**Builder's All Risk**" insurance in an amount approved by Landlord covering the construction of such Alterations, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such Alterations shall be insured by Tenant pursuant to Article 10 of this Lease immediately upon completion thereof. In addition, Tenant's contractors and subcontractors shall be required to carry (i) Commercial General Liability Insurance in an amount approved by Landlord, with Landlord, and, at Landlord's option, Landlord's property manager and project manager, as additional insureds in an amount approved by Landlord, and otherwise in accordance with the requirements of Article 10 of this Lease, and (ii) workers compensation insurance with a waiver of subrogation in favor of Landlord. If Tenant is in monetary default under this Lease (beyond the applicable notice and cure period) or has previously been in monetary default under this Lease (beyond the applicable notice and cure period) more than twice during the Lease Term prior to the date of proposed Alterations, Landlord may, in its discretion in connection with a concurrent set of Alterations reasonably anticipated to exceed \$300,000.00, require Tenant to obtain a lien and completion bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of such Alterations and naming Landlord as a co-obligee.

1.23 **Landlord's Property.** All Alterations, improvements, fixtures, equipment and/or appurtenances which may be installed or placed in or about the Premises, from time to time, shall be at the sole cost of Tenant and shall be and become the property of Landlord and remain in place at the Premises following the expiration or earlier

termination of this Lease. Notwithstanding the foregoing, Landlord may, by written notice to Tenant given at the time Landlord reviews the plans for any particular Alterations, require Tenant, at Tenant's expense, to remove any Alterations and/or improvements and/or systems and equipment within the Premises and to repair any damage to the Premises and Building caused by such removal and return the affected portion of the Premises to a building standard tenant improved condition as determined by Landlord. If Tenant fails to complete such removal and/or to repair any damage caused by the removal of any Alterations and/or improvements and/or systems and equipment in the Premises and return the affected portion of the Premises to a building standard tenant improved condition as reasonably determined by Landlord, Landlord may do so and may charge the cost thereof to Tenant. Tenant hereby protects, defends, indemnifies and holds Landlord harmless from any liability, cost, obligation, expense or claim of lien in any manner relating to the installation, placement, removal or financing of any such Alterations, improvements, fixtures and/or equipment in, on or about the Premises, which obligations of Tenant shall survive the expiration or earlier termination of this Lease.

9. COVENANT AGAINST LIENS Tenant shall keep the Project and Premises free from any liens or encumbrances arising out of the work performed, materials furnished or obligations incurred by or on behalf of Tenant, and shall protect, defend, indemnify and hold Landlord harmless from and against any claims, liabilities, judgments or costs (including, without limitation, reasonable attorneys' fees and costs) arising out of same or in connection therewith. Tenant shall give Landlord notice at least twenty (20) days prior to the commencement of any such work on the Premises (or such additional time as may be necessary under Applicable Laws) to afford Landlord the opportunity of posting and recording appropriate notices of non-responsibility (to the extent applicable pursuant to then Applicable Laws). Tenant shall remove any such lien or encumbrance by bond or otherwise within ten (10) business days after notice by Landlord, and if Tenant shall fail to do so, Landlord may pay the amount necessary to remove such lien or encumbrance, without being responsible for investigating the validity thereof.

10. INSURANCE

1.24 Indemnification and Waiver. Except to the extent arising from the gross negligence or willful misconduct of Landlord or the Landlord Parties, Tenant hereby assumes all risk of damage to property or injury to persons in, upon or about the Premises from any cause whatsoever and agrees that Landlord, its partners, subpartners and their respective officers, agents, servants, employees, lenders, any property manager and independent contractors (collectively, "**Landlord Parties**") shall not be liable for, and are hereby released from any responsibility for, any damage either to person or property or resulting from the loss of use thereof, which damage is sustained by Tenant or by other persons claiming through Tenant. Tenant shall indemnify, defend, protect, and hold harmless the Landlord Parties from any and all claims, loss, cost, damage, injury, expense and liability (including without limitation court costs and reasonable attorneys' fees) incurred in connection with or arising from any cause in, on or about the Premises, any acts, omissions or negligence of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, servants, employees, invitees, guests or licensees of Tenant or any such person, in, on or about the Project or any breach of the terms of this Lease, either prior to, during, or after the expiration of the Lease Term, provided that the terms of the foregoing indemnity shall not apply if and from the time that a final adjudication has resulted in a finding of gross negligence or willful misconduct of Landlord. Should Landlord be named as a defendant in any suit brought against Tenant in connection with or arising out of Tenant's occupancy of the Premises, Tenant shall pay to Landlord its costs and expenses incurred in such suit, including without limitation, its actual professional fees such as reasonable appraisers', accountants' and attorneys' fees. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any claims or liability arising in connection with any event occurring prior to such expiration or termination.

1.25 Tenant's Compliance With Landlord's Property Insurance. Landlord shall insure the Building during the Lease Term against loss or damage under an "all risk" property insurance policy. Such coverage shall be in such amounts, from such companies, and on such other terms and conditions, as Landlord may from time to time reasonably determine. Additionally, at the option of Landlord, such insurance coverage may include the risks of earthquakes and/or flood damage and additional hazards, a rental loss endorsement and one or more loss payee endorsements in favor of the holders of any mortgages or deeds of trust encumbering the interest of Landlord in the Building or the ground or underlying lessors of the Building, or any portion thereof. Tenant shall, at Tenant's expense, comply with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises causes any increase in the premium for such insurance policies then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body. Tenant shall also provide Landlord and Landlord's insurer(s) with such information regarding the use of the Premises and any damage to the Premises as they may require in connection with the placement of insurance for the Premises or the adjusting of any losses to the Premises.

1.26 Tenant's Insurance. Tenant shall maintain the following coverages in the following amounts.

1.3.1 Commercial General Liability Insurance on an occurrence form covering the insured against claims of bodily injury, personal injury and property damage (including loss of use thereof) arising out of Tenant's operations, and contractual liabilities including a contractual coverage, and including products and completed operations coverage, for limits of liability on a per location basis of not less than:

Bodily Injury and Property Damage Liability	\$5,000,000 each occurrence \$5,000,000 annual aggregate
Personal Injury Liability	\$3,000,000 each occurrence \$3,000,000 annual aggregate

1.3.2 Property Insurance covering (i) all office furniture, business and trade fixtures, office equipment, free-standing cabinet work, movable partitions, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant, (ii) the "**Tenant Improvements**," as that term is defined in the Tenant Work Letter, and any other improvements which exist in the Premises as of the Lease Commencement Date (excluding the Base Building) (the "**Original Improvements**"), and (iii) all other improvements, alterations and additions to the Premises. Such insurance shall be written on an "**all risks**" of physical loss or damage basis, for the full replacement cost value (subject to reasonable deductible amounts) new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for damage or other loss caused by fire or other peril including, but not limited to, vandalism and malicious mischief, theft, water damage of any type, including sprinkler leakage, bursting or stoppage of pipes, and explosion.

1.3.3 Business Income Interruption for one (1) year plus Extra Expense insurance in such amounts as will reimburse Tenant for actual direct or indirect loss of earnings attributable to the risks outlined in Section 10.3.2 above.

1.3.4 Worker's Compensation and Employer's Liability or other similar insurance pursuant to all applicable state and local statutes and regulations. The policy shall include a waiver of subrogation in favor of Landlord, its employees, Lenders and any property manager or partners.

1.27 **Form of Policies.** The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Such insurance shall (i) name Landlord, its subsidiaries and affiliates, its property manager (if any) and any other party the Landlord so specifies, as an additional insured or loss payee, as applicable, including Landlord's managing agent, if any; (ii) be issued by an insurance company having a rating of not less than A:VIII in Best's Insurance Guide or which is otherwise acceptable to Landlord and licensed to do business in the State of California; (iv) be primary insurance as to all claims thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance required of Tenant; (v) be in form and content reasonably acceptable to Landlord; and (vi) provide that said insurance shall not be canceled or coverage changed unless thirty (30) days' prior written notice shall have been given to Landlord and any mortgagee of Landlord (unless such cancellation is the result of non-payment of premiums). Tenant shall deliver said policy or policies or certificates thereof to Landlord on or before the Lease Commencement Date and before the expiration dates thereof. In the event Tenant shall fail to procure such insurance, or to deliver such policies or certificate, Landlord may, at its option, procure such policies for the account of Tenant, and the cost thereof shall be paid to Landlord within five (5) days after delivery to Tenant of bills therefor.

1.28 **Subrogation.** Landlord and Tenant hereby agree to look solely to, and seek recovery only from, their respective insurance carriers in the event of a property or business interruption loss to the extent that such coverage is agreed to be provided hereunder. The parties each hereby waive all rights and claims against each other for such losses, and waive all rights of subrogation of their respective insurers, provided such waiver of subrogation shall not affect the right to the insured to recover thereunder. The parties agree that their respective insurance policies do now, or shall, contain the waiver of subrogation.

1.29 **Additional Insurance Obligations.** From and after the first three (3) years of the Lease Term, Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of the insurance required to be carried by Tenant pursuant to this Article 10 and such other reasonable types of insurance coverage and in such reasonable amounts covering the Premises and Tenant's operations therein, as may be reasonably requested by Landlord or Landlord's lender, but in no event in excess of the amounts and types of insurance then being required by landlords of buildings comparable to and in the vicinity of the Building.

11. DAMAGE AND DESTRUCTION

1.30 **Repair of Damage.** Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty (“Casualty”). If the Premises or any Common Areas serving or providing access to the Premises shall be damaged by Casualty, Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord’s reasonable control, and subject to all other terms of this Article 11, restore the Base Building and such Common Areas. Such restoration shall be to substantially the same condition of the Base Building and the Common Areas prior to the Casualty, except for modifications required by zoning and building codes and other laws or by the holder of a mortgage on the Building or Project or any other modifications to the Common Areas deemed desirable by Landlord, which are consistent with the character of the Project, provided that access to the Premises shall not be materially impaired. Subject to the terms of Section 11.2, below, Tenant shall, at its sole cost and expense, repair any injury or damage to the Tenant Improvements and the Original Improvements installed in the Premises and shall return such Tenant Improvements and Original Improvements to their original condition. Whether or not Landlord delivers a “Landlord Repair Notice,” as that term is defined in Section 11.2 below, prior to the commencement of construction, Tenant shall submit to Landlord, for Landlord’s review and approval, all plans, specifications and working drawings relating thereto, and Landlord shall select the contractors to perform such improvement work. Tenant shall in addition cooperate with requests for information regarding any repairs from Landlord’s insurer(s) by providing the requested information within ten (10) days after Tenant receives the request. Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant’s business resulting in any way from such damage or the repair thereof; provided however, that if such Casualty shall have damaged the Premises or Common Areas necessary to Tenant’s occupancy, and the Premises are not occupied by Tenant as a result thereof, then during the time and to the extent the Premises are unfit for occupancy, the Rent shall be abated in proportion to the ratio that the amount of rentable square feet of the Premises which is unfit for occupancy for the purposes permitted under this Lease bears to the total rentable square feet of the Premises. In the event that Landlord shall not deliver the Landlord Repair Notice, Tenant’s right to rent abatement pursuant to the preceding sentence shall terminate as of the date which is reasonably determined by Landlord to be the date Tenant should have completed repairs to the Premises assuming Tenant used reasonable due diligence in connection therewith. Notwithstanding any contrary provision of this Article 11, the parties hereby agree as follows: (i) the closure of the Project, the Building, the Common Areas, or any part thereof to protect public health shall not constitute a Casualty for purposes of this Lease, (ii) Casualty covered by this Article 11 shall require that the physical or structural integrity of the Premises, the Project, the Building, or the Common Areas is degraded as a direct result of such occurrence, and (iii) a Casualty under this Article 11 shall not be deemed to occur merely because Tenant is unable to productively use the Premises in the event that the physical and structural integrity of the Premises is undamaged.

1.31 **Landlord’s Option to Repair.** Upon the occurrence of any damage to the Premises, Landlord may, at Landlord’s option, deliver a notice (the “Landlord Repair Notice”) to Tenant, and upon receipt of a Landlord Repair Notice Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Tenant’s insurance required under Section 10.3 of this Lease, and Landlord shall repair any injury or damage to the Tenant Improvements and the Original Improvements installed in the Premises and shall return such Tenant Improvements and Original Improvements to their original condition; provided that if the cost of such repair by Landlord exceeds the amount of insurance proceeds received by Landlord from Tenant’s insurance carrier (including by taking into account any deductible or self-insured retention), as assigned by Tenant, the cost of such repairs shall be paid by Tenant to Landlord prior to Landlord’s commencement of repair of the damage. Notwithstanding the terms of Section 11.1 of this Lease, Landlord may elect not to rebuild and/or restore the Premises, Building and/or Project, and instead terminate this Lease, by notifying Tenant in writing of such termination within sixty (60) days after the date of discovery of the damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises, but Landlord may so elect only if the Building or Project shall be damaged by Casualty, whether or not the Premises are affected, and one or more of the following conditions is present: (i) in Landlord’s reasonable judgment, repairs cannot reasonably be completed within one hundred eighty (180) days after the date of discovery of the damage (when such repairs are made without the payment of overtime or other premiums); (ii) the holder of any mortgage on the Building or Project or ground lessor with respect to the Building or Project shall require that the insurance proceeds or any portion thereof be used to retire the mortgage debt, or shall terminate the ground lease, as the case may be; (iii) the damage is not fully covered by Landlord’s insurance policies; (iv) Landlord decides to rebuild the Building or Common Areas so that they will be substantially different structurally or architecturally; (v) the damage occurs during the last twelve (12) months of the Lease Term; or (vi) any owner of any other portion of the Project, other than Landlord, does not intend to repair the damage to such portion of the Project; provided, however, that (i) if Landlord does not elect to terminate this Lease pursuant to Landlord’s termination right as provided above, and the repairs cannot, in the reasonable opinion of Landlord, be completed within one (1) year after being commenced, or (ii) if the damage occurs during the last twelve (12) months of the Lease Term, Tenant may elect, no earlier than sixty (60) days after the date of the damage and not later than ninety (90) days after the date of such damage, to terminate this Lease by written notice to Landlord effective as of the date specified in the notice, which date shall not be less than thirty (30) days nor more than sixty (60) days after the date such notice is given by Tenant. Notwithstanding the provisions of this Section 11.2, Tenant

shall have the right to terminate this Lease under this Section 11.2 only if each of the following conditions is satisfied: (a) as a result of the damage, Tenant cannot reasonably conduct business from fifty percent (50%) or more of the Premises for the Permitted Use; and, (b) as a result of the damage to the Project, Tenant does not occupy or use at least fifty percent (50%) of the Premises for the Permitted Use (as opposed to temporary storage purposes, or continued utilization of any server room within the Premises).

1.32 **Waiver of Statutory Provisions.** The provisions of this Lease, including this Article 11, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, the Building or the Project, and any statute or regulation of the State of California, including, without limitation, Sections 1932(2) and 1933(4) of the California Civil Code, with respect to any rights or obligations concerning damage or destruction in the absence of an express agreement between the parties, and any other statute or regulation, now or hereafter in effect, shall have no application to this Lease or any damage or destruction to all or any part of the Premises, the Building or the Project.

12. NONWAIVER No provision of this Lease shall be deemed waived by either party hereto unless expressly waived in a writing signed thereby. The waiver by either party hereto of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of same or any other term, covenant or condition herein contained. The subsequent acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such Rent. No acceptance of a lesser amount than the Rent herein stipulated shall be deemed a waiver of Landlord's right to receive the full amount due, nor shall any endorsement or statement on any check or payment or any letter accompanying such check or payment be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the full amount due. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder, or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit, or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment.

13. CONDEMNATION If the whole or any part of the Premises, Building or Project shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if any adjacent property or street shall be so taken or condemned, or reconfigured or vacated by such authority in such manner as to require the use, reconstruction or remodeling of any part of the Premises, Building or Project, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. Tenant shall not because of such taking assert any claim against Landlord or the authority for any compensation because of such taking and Landlord shall be entitled to the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, and for moving expenses, so long as such claims do not diminish the award available to Landlord, its ground lessor with respect to the Building or Project or its mortgagee, and such claim is payable separately to Tenant. All Rent shall be apportioned as of the date of such termination. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Rent shall be proportionately abated. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1265.130 of The California Code of Civil Procedure. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of one hundred and eighty (180) days or less, then this Lease shall not terminate but the Base Rent and the Additional Rent shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable square feet of the Premises. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking. Notwithstanding any contrary provision of this Lease, the following governmental actions shall not constitute a taking or condemnation, either permanent or temporary: (i) an action that requires Tenant's business or the Building or Project to close during the Lease Term, and (ii) an action taken for the purpose of protecting public safety (e.g., to protect against acts of war, the spread of communicable diseases, or an infestation), and no such governmental actions shall entitle Tenant to any compensation from Landlord or any authority, or Rent abatement or any other remedy under this Lease.

14. ASSIGNMENT AND SUBLETTING

1.33 **Transfers** Tenant shall not, without the prior written consent of Landlord, assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise transfer, this Lease or any interest hereunder, permit any assignment, or other transfer of this Lease or any interest hereunder by operation of law,

sublet the Premises or any part thereof, or enter into any license or concession agreements or otherwise permit the occupancy or use of the Premises or any part thereof by any persons other than Tenant and its employees and contractors (all of the foregoing are hereinafter sometimes referred to collectively as “**Transfers**” and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a “**Transferee**”). If Tenant desires Landlord’s consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the “**Transfer Notice**”) shall include (i) the proposed effective date of the Transfer, which shall not be less than thirty (30) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the “**Subject Space**”), (iii) all of the terms of the proposed Transfer and the consideration therefor, including calculation of the “**Transfer Premium**”, as that term is defined in Section 14.3 below, in connection with such Transfer, the name and address of the proposed Transferee, and a copy of all existing executed and/or proposed documentation pertaining to the proposed Transfer, and (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, business credit and personal references and history of the proposed Transferee and any other information reasonably required by Landlord which will enable Landlord to determine the financial responsibility, character, and reputation of the proposed Transferee, nature of such Transferee’s business and proposed use of the Subject Space. Any Transfer made without Landlord’s prior written consent shall, at Landlord’s option, be null, void and of no effect, and shall, at Landlord’s option, constitute an Event of Default by Tenant under this Lease. Whether or not Landlord consents to any proposed Transfer, Tenant shall pay Landlord’s reasonable review and processing fees, as well as any reasonable professional fees (including, without limitation, attorneys’, accountants’, architects’, engineers’ and consultants’ fees) incurred by Landlord, within thirty (30) days after written request by Landlord.

1.34 **Landlord’s Consent.** Landlord shall not unreasonably withhold or delay its consent to any proposed Transfer of the Subject Space to the Transferee on the terms specified in the Transfer Notice. Without limitation as to other reasonable grounds for withholding consent, the parties hereby agree that it shall be reasonable under this Lease and under any Applicable Law for Landlord to withhold consent to any proposed Transfer where one or more of the following apply:

- 1.2.1 The Transferee is of a character or reputation or engaged in a business which is not consistent with the quality of the Building or the Project;
- 1.2.2 The Transferee is either a governmental agency or instrumentality thereof;
- 1.2.3 The Transferee is not a party of reasonable financial worth and/or financial stability in light of the responsibilities to be undertaken in connection with the Transfer on the date consent is requested; or
- 1.2.4 The proposed Transfer would cause a violation of another lease for space in the Project, or would give an occupant of the Project a right to cancel its lease.

If Landlord consents to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 of this Lease), Tenant may within six (6) months after Landlord’s consent, but not later than the expiration of said six-month period, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 of this Lease, provided that if there are any changes in the terms and conditions from those specified in the Transfer Notice such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, Tenant shall again submit the Transfer to Landlord for its approval and other action under this Article 14 (including Landlord’s right of recapture, if any, under Section 14.4 of this Lease). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has unreasonably withheld or delayed its consent under Section 14.2 or otherwise has breached or acted unreasonably under this Article 14, their sole remedies shall be a suit for contract damages (other than damages for injury to, or interference with, Tenant’s business including, without limitation, loss of profits, however occurring) or declaratory judgment and an injunction for the relief sought, and Tenant hereby waives all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all Applicable Laws, on behalf of the proposed Transferee.

1.35 **Transfer Premium.** If Landlord consents to a Transfer, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of any “**Transfer Premium**,” as that term is defined in this Section 14.3, received by Tenant from such Transferee. “**Transfer Premium**” shall mean all rent, additional rent or other consideration payable by such Transferee in connection with the Transfer in excess of the Rent and Additional Rent payable by Tenant under this Lease during the term of the Transfer on a per rentable square foot basis if less than all of the Premises is transferred, and after deduction of (i) any costs of improvements made to the Subject Space in connection with such Transfer, (ii) brokerage commissions paid in connection with such Transfer, and (iii) reasonable legal and brokerage fees incurred in connection with such Transfer. “**Transfer Premium**” shall also include, but not be limited to, key money, bonus money or other cash consideration paid by

Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to Transferee in connection with such Transfer. The determination of the amount of Landlord's applicable share of the Transfer Premium shall be made on a monthly basis as rent or other consideration is received by Tenant under the Transfer.

1.36 **Landlord's Option as to Subject Space.** Notwithstanding anything to the contrary contained in this Article 14, in the event Tenant contemplates a Transfer which, together with all prior Transfers then remaining in effect, would cause fifty percent (50%) or more of the Premises to be Transferred for more than fifty percent (50%) of the then remaining Lease Term (taking into account any extension of the Lease Term which has irrevocably exercised by Tenant), Tenant shall give Landlord notice (the "**Intention to Transfer Notice**") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer (the "**Contemplated Transfer Space**"), the contemplated date of commencement of the Contemplated Transfer (the "**Contemplated Effective Date**"), and the contemplated length of the term of such contemplated Transfer, and shall specify that such Intention to Transfer Notice is delivered to Landlord pursuant to this Section 14.4 in order to allow Landlord to elect to recapture the Contemplated Transfer Space. Thereafter, Landlord shall have the option, by giving written notice to Tenant within thirty (30) days after receipt of any Intention to Transfer Notice, to recapture the Contemplated Transfer Space. Such recapture shall cancel and terminate this Lease with respect to such Contemplated Transfer Space as of the Contemplated Effective Date. In the event of a recapture by Landlord, if this Lease shall be canceled with respect to less than the entire Premises, the Rent reserved herein shall be prorated on the basis of the number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same. If Landlord declines, or fails to elect in a timely manner, to recapture such Contemplated Transfer Space under this Section 14.4, then, subject to the other terms of this Article 14, for a period of nine (9) months (the "**Nine Month Period**") commencing on the last day of such thirty (30) day period, Landlord shall not have any right to recapture the Contemplated Transfer Space with respect to any Transfer made during the Nine Month Period, provided that any such Transfer is substantially on the terms set forth in the Intention to Transfer Notice, and provided further that any such Transfer shall be subject to the remaining terms of this Article 14. If such a Transfer is not so consummated within the Nine Month Period (or if a Transfer is so consummated, then upon the expiration of the term of any Transfer of such Contemplated Transfer Space consummated within such Nine Month Period), Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect any contemplated Transfer, as provided above in this Section 14.4.

1.37 **Effect of Transfer.** If Landlord consents to a Transfer, (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified, (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee, (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord, (iv) Tenant shall furnish upon Landlord's request a complete statement, certified by an independent certified public accountant, or Tenant's chief financial officer, setting forth in detail the computation of any Transfer Premium Tenant has derived and shall derive from such Transfer, and (v) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from any liability under this Lease, including, without limitation, in connection with the Subject Space. Landlord or its authorized representatives shall have the right at all reasonable times to audit the books, records and papers of Tenant relating to any Transfer, and shall have the right to make copies thereof. If the Transfer Premium respecting any Transfer shall be found understated, Tenant shall, within thirty (30) days after demand, pay the deficiency, and if understated by more than two percent (2%), Tenant shall pay Landlord's costs of such audit.

1.38 **Additional Transfers.** For purposes of this Lease, the term "**Transfer**" shall also include (i) if Tenant is a partnership, the withdrawal or change, voluntary, involuntary or by operation of law, of fifty percent (50%) or more of the partners, or transfer of fifty percent (50%) or more of partnership interests, within a twelve (12)-month period, or the dissolution of the partnership without immediate reconstitution thereof, and (ii) if Tenant is a closely held corporation (*i.e.*, whose stock is not publicly held and not traded through an exchange or over the counter), (A) the dissolution, merger, consolidation or other reorganization of Tenant or (B) the sale or other transfer of an aggregate of fifty percent (50%) or more of the voting shares of Tenant (other than to immediate family members by reason of gift or death), within a twelve (12)-month period, or (C) the sale, mortgage, hypothecation or pledge of an aggregate of fifty percent (50%) or more of the value of the unencumbered assets of Tenant within a twelve (12)-month period.

1.39 **Occurrence of Default.** Any Transfer hereunder shall be subordinate and subject to the provisions of this Lease, and if this Lease shall be terminated during the term of any Transfer, Landlord shall have the right to: (i) treat such Transfer as cancelled and repossess the Subject Space by any lawful means, or (ii) require that such Transferee attorn to and recognize Landlord as its landlord under any such Transfer. If Tenant shall be in

default under this Lease, Landlord is hereby irrevocably authorized, as Tenant's agent and attorney-in-fact, to direct any Transferee to make all payments under or in connection with the Transfer directly to Landlord (which Landlord shall apply towards Tenant's obligations under this Lease) until such default is cured. Such Transferee shall rely on any representation by Landlord that Tenant is in default hereunder, without any need for confirmation thereof by Tenant. Upon any assignment, the assignee shall assume in writing all obligations and covenants of Tenant thereafter to be performed or observed under this Lease. No collection or acceptance of rent by Landlord from any Transferee shall be deemed a waiver of any provision of this Article 14 or the approval of any Transferee or a release of Tenant from any obligation under this Lease, whether theretofore or thereafter accruing. In no event shall Landlord's enforcement of any provision of this Lease against any Transferee be deemed a waiver of Landlord's right to enforce any term of this Lease against Tenant or any other person. If Tenant's obligations hereunder have been guaranteed, Landlord's consent to any Transfer shall not be effective unless the guarantor also consents to such Transfer.

1.40 **Deemed Consent Transfers.** Notwithstanding anything to the contrary contained in this Lease, (A) an assignment or subletting of all or a portion of the Premises to an affiliate of Tenant (an entity which is controlled by, controls, or is under common control with, Tenant as of the date of this Lease), (B) a sale of corporate shares of capital stock in Tenant in connection with an initial public offering of Tenant's stock on a nationally-recognized stock exchange, (C) an assignment of the Lease to an entity which acquires all or substantially all of the stock or assets of Tenant, or (D) an assignment of the Lease to an entity which is the resulting entity of a merger or consolidation of Tenant during the Lease Term, shall not be deemed a Transfer requiring Landlord's consent under this Article 14 (any such assignee or sublessee described in items (A) through (D) hereinafter referred to as a "**Permitted Transferee**"), provided that (i) Tenant notifies Landlord in writing of any such assignment or sublease (which written notification shall be given not less than ten (10) days prior to the effective date of such assignment or sublease, if reasonably practicable and not a breach of confidentiality, but in any event within five (5) days after the effective date of such assignment or sublease), and promptly supplies Landlord with any documents or information reasonably requested by Landlord regarding such transfer or transferee as set forth above, (ii) Tenant is not in default, beyond any applicable notice and cure period, and such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, (iii) such Permitted Transferee shall be of a character and reputation consistent with the quality of the Building, (iv) such Permitted Transferee shall have a tangible net worth (not including goodwill as an asset) computed in accordance with generally accepted accounting principles ("**Net Worth**") at least equal to \$100,000,000.00, and (v) except in cases of a Series Reorganization, in which case the surviving entity in the series to which this Lease has been designated shall be liable as the Tenant under this Lease, no assignment relating to this Lease, whether with or without Landlord's consent, shall relieve Tenant from any liability under this Lease, and, in the event of an assignment of Tenant's entire interest in this Lease, the liability of Tenant and such transferee shall be joint and several. An assignee of Tenant's entire interest in this Lease who qualifies as a Permitted Transferee may also be referred to herein as a "**Permitted Transferee Assignee**." "Control," as used in this Section 14.8, shall mean the ownership, directly or indirectly, of at least fifty-one percent (51%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of at least fifty-one percent (51%) of the voting interest in, any person or entity. If any parent, affiliate or subsidiary of Tenant to which this Lease is assigned or the Premises sublet (in whole or in part) shall cease to be such a parent, affiliate or subsidiary, such cessation shall be considered an assignment or subletting requiring Landlord's consent.

15. SURRENDER OF PREMISES; OWNERSHIP AND REMOVAL OF TRADE FIXTURES

1.41 **Surrender of Premises.** No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in writing by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been properly terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises or terminate any or all such sublessees or subtenancies.

1.42 **Removal of Tenant Property by Tenant.** Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, and such items of furniture, equipment, free-standing cabinet work, movable partitions and other articles of personal property owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other

persons claiming under Tenant, as Landlord may, in its sole discretion, require to be removed, and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal.

1.43 **Condition of the Building and Premises Upon Surrender.** In addition to the above requirements of this Article 15, upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, surrender the Premises in good order and condition and with Tenant having complied with all of Tenant's obligations under this Lease, including those relating to improvement, repair, maintenance, compliance with law, testing and other related obligations of Tenant set forth in Article 7 of this Lease. In the event that the Building and Premises shall be surrendered in a condition which does not comply with the terms of this Section 15.3, because Tenant failed to comply with its obligations set forth in Lease, then following thirty (30) days' notice to Tenant, during which thirty (30) day period Tenant shall have the right to cure such noncompliance, Landlord shall be entitled to expend all reasonable costs in order to cause the same to comply with the required condition upon surrender and Tenant shall within thirty (30) days reimburse Landlord for all such costs upon notice.

16. HOLDING OVER If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, with the express or implied consent of Landlord, such tenancy shall be from month-to-month only, and shall not constitute a renewal hereof or an extension for any further term. If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, without the express or implied consent of Landlord, such tenancy shall be deemed to be a tenancy by sufferance only, and shall not constitute a renewal hereof or an extension for any further term. In either case, Base Rent shall be payable at a monthly rate equal to 150% of the Base Rent applicable during the last rental period of the Lease Term under this Lease, and Tenant shall continue to pay all Additional Rent in accordance with the terms of the Lease. Such month-to-month tenancy or tenancy by sufferance, as the case may be, shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant fails to surrender the Premises within thirty (30) days following the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect, defend, indemnify and hold Landlord harmless from all loss, costs (including reasonable attorneys' fees) and liability resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender and any lost profits to Landlord resulting therefrom.

17. ESTOPPEL CERTIFICATES Within ten (10) business days following a request in writing by Landlord, Tenant shall execute, acknowledge and deliver to Landlord an estoppel certificate, which, as submitted by Landlord, shall be substantially in the form of Exhibit D, attached hereto (or such other commercially reasonable form as may be required by any prospective mortgagee or purchaser of the Project, or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other factual information reasonably requested by Landlord or Landlord's mortgagee or prospective mortgagee. Any such certificate may be relied upon by any prospective mortgagee or purchaser of all or any portion of the Project. Tenant shall execute and deliver whatever other commercially reasonable instruments may be reasonably required for such purposes. At any time during the Lease Term (but not more than once in any calendar year unless in connection with the sale or proposed sale, or the financing/refinancing, of the Project or any portion thereof), Landlord may require Tenant to provide Landlord with a current financial statement and financial statements of the two (2) years prior to the current financial statement year. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. If Tenant fails to timely execute, acknowledge and deliver such estoppel certificate (or provide written comments to any proposed certificate delivered by Landlord), Landlord may provide to Tenant a second written request with respect to such estoppel certificate which written notice must state in bold and all caps "**FAILURE TO RESPOND TO THIS WRITTEN NOTICE WITHIN FIVE (5) BUSINESS DAYS AFTER RECEIPT HEREOF SHALL CONSTITUTE ACCEPTANCE OF AN ESTOPPEL CERTIFICATE**" (the "**Estoppel Reminder Notice**"). If Tenant fails to execute and deliver such certificate (or provide written comments to any proposed certificate delivered by Landlord) within a five (5) business day period following the receipt of an Estoppel Reminder Notice, such failure shall constitute an acceptance of the Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception. Notwithstanding the foregoing, in the event that (i) stock in the entity which constitutes Tenant under this Lease (as opposed to an entity that "controls" Tenant or is otherwise an "affiliate" of Tenant) is publicly traded on a national stock exchange, and (ii) Tenant has its own, separate and distinct 10K and 10Q filing requirements (as opposed joint or cumulative filings with an entity that controls Tenant or with entities which are otherwise Affiliates of Tenant), then Tenant's obligation to provide Landlord with a copy of its most recent current financial statement shall be deemed satisfied.

18. SUBORDINATION As of the date of this Lease the Project is not subject to the lien of any mortgage or deed of trust. This Lease shall be subject and subordinate to all present and future ground or underlying leases of the Building or Project and to the lien of any mortgage, trust deed or other encumbrances now or hereafter in force

against the Building or Project or any part thereof, if any, and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of such mortgages or trust deeds (collectively, the “**Encumbrances**”), unless the holders of such mortgages, trust deeds or other encumbrances, or the lessors under such ground lease or underlying leases (collectively, the “**Mortgagee**”), require in writing that this Lease be superior thereto; provided, however, that in consideration of and a condition precedent to Tenant’s agreement to subordinate this Lease to any future Encumbrances, shall be the receipt by Tenant of a commercially reasonable non-disturbance agreement which requires such Mortgagee to accept this Lease, and not to disturb Tenant’s possession, so long as Tenant is not in default under this Lease after any applicable notice and cure period expressly set forth in this Lease (a “**SNDA**”) executed by Landlord and the appropriate Mortgagee. Tenant covenants and agrees in the event any proceedings are brought for the foreclosure of any such mortgage or deed in lieu thereof (or if any ground lease is terminated), to attorn, without any deductions or set-offs whatsoever, to the lienholder or purchaser or any successors thereto upon any such foreclosure sale or deed in lieu thereof (or to the ground lessor), if so requested to do so by such purchaser or lienholder or ground lessor, and to recognize such purchaser or lienholder or ground lessor as the lessor under this Lease, provided such lienholder or purchaser or ground lessor shall agree to accept this Lease and not disturb Tenant’s occupancy, so long as Tenant timely pays the rent and observes and performs the terms, covenants and conditions of this Lease to be observed and performed by Tenant. Landlord’s interest herein may be assigned as security at any time to any lienholder. Tenant shall, within twenty (20) days of request by Landlord, execute such further commercially reasonable instruments or assurances as Landlord may reasonably deem necessary to evidence or confirm the subordination or superiority of this Lease to any such mortgages, trust deeds, ground leases or underlying leases. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of the Tenant hereunder in the event of any foreclosure proceeding or sale.

19. DEFAULTS; REMEDIES

1.44 **Events of Default.** In addition to any other Events of Default specified in this Lease, the occurrence of any of the following shall constitute a default of this Lease by Tenant (each, an “**Event of Default**”):

1.1.10 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, when due unless such failure is cured within five (5) business days after notice; or

1.1.11 Except where a specific time period is otherwise set forth for Tenant’s performance in this Lease, in which event the failure to perform by Tenant within such time period shall be a default by Tenant under this Section 19.1.2, any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant; provided that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure such default; or

1.1.12 Abandonment of all or a substantial portion of the Premises by Tenant; or

1.1.13 The failure by Tenant to observe or perform according to the provisions of Articles 5, 14, 17 or 18 of this Lease or any provision of the Tenant Work Letter, where, in each instance, such failure continues for more than three (3) business days after notice from Landlord.

Any notices to be provided by Landlord under this Section 19.1 shall be in lieu of, and not in addition to, any notice required under Section 1161 et seq. of the Code of Civil Procedure, and may be served on Tenant in the manner allowed for service of notices under this Lease.

1.45 **Remedies Upon Event of Default.** Upon the occurrence of any event of default by Tenant, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity (all of which remedies shall be distinct, separate and cumulative), the option to pursue any one or more of the following remedies (including, without limitation, during any eviction moratorium, to the extent allowed by Applicable Law), each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

1.2.1 Terminate this Lease, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor; and Landlord may recover from Tenant the following:

- (i) The worth at the time of award of the unpaid rent which has been earned at the time of such termination; plus
- (ii) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus
- (iii) The worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus
- (iv) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and
- (v) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by Applicable Law.

The term "**rent**" as used in this Section 19.2 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 19.2.1(i) and (ii), above, the "worth at the time of award" shall be computed by allowing interest at the rate set forth in Article 25 of this Lease, but in no case greater than the maximum amount of such interest permitted by law. As used in Section 19.2.1(iii) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

1.2.1 Landlord shall have the remedy described in California Civil Code Section 1951.4 (lessor may continue lease in effect after lessee's breach and abandonment and recover rent as it becomes due, if lessee has the right to sublet or assign, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease on account of any Event of Default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

1.2.2 Landlord shall at all times have the rights and remedies (which shall be cumulative with each other and cumulative and in addition to those rights and remedies available under Sections 19.2.1 and 19.2.2, above, or any law or other provision of this Lease), without prior demand or notice except as required by Applicable Law, to seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease, or restrain or enjoin a violation or breach of any provision hereof.

1.46 **Subleases of Tenant.** If Landlord elects to terminate this Lease on account of any Event of Default by Tenant, as set forth in this Article 19, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. In the event of Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

1.47 **Efforts to Relet.** No re-entry or repossession, repairs, maintenance, changes, alterations and additions, reletting, appointment of a receiver to protect Landlord's interests hereunder, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, or to accept a surrender of the Premises, nor shall same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express written notice of such intention is sent by Landlord to Tenant. Tenant hereby irrevocably waives any right otherwise available under any law to redeem or reinstate this Lease.

1.48 **Landlord Default.** Landlord shall be in default under this Lease if Landlord fails to perform any of its obligations hereunder following the Lease Commencement Date and such failure continues for thirty (30) days after Tenant delivers to Landlord written notice specifying such failure; however, if such failure cannot reasonably be cured within such 30-day period, but Landlord commences to cure such failure within such 30-day period and

thereafter diligently pursues the curing thereof to completion, then Landlord shall not be in default hereunder or liable for damages therefor. Except where the provisions of this Lease grant Tenant an express, exclusive remedy, or expressly deny Tenant a remedy, Tenant's exclusive remedy for Landlord's failure to perform its obligations under this Lease shall be limited to damages, injunctive relief, or specific performance; in each case, Landlord's liability or obligations with respect to any such remedy shall be limited as provided in Section 29.13.

20. COVENANT OF QUIET ENJOYMENT. Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, provisions and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, provisions and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

21. LETTER OF CREDIT

1.49 **Delivery of Letter of Credit.** Tenant shall deliver to Landlord, concurrently with Tenant's execution of this Lease, an unconditional, clean, irrevocable letter of credit (the "**L-C**") in the amount set forth in Section 9 of the Lease Summary (the "**L-C Amount**"), which L-C shall be issued by a money-center, solvent and nationally recognized bank (a bank which accepts deposits, maintains accounts, has a local San Francisco Bay Area office which will negotiate a letter of credit, and whose deposits are insured by the FDIC) reasonably acceptable to Landlord (such approved, issuing bank being referred to herein as the "**Bank**"), which Bank must have a rating from Standard and Poors Corporation of A- or better (or any equivalent rating thereto from any successor or substitute rating service selected by Lessor) and a letter of credit issuer rating from Moody's Investor Service of A3 or better (or any equivalent rating thereto from any successor rating agency thereto)) (collectively, the "**Bank's Credit Rating Threshold**"), and which L-C shall be substantially in the form of Exhibit F, attached hereto. Tenant shall pay all expenses, points and/or fees incurred by Tenant in obtaining the L-C. The L-C shall (i) be "callable" at sight, irrevocable and unconditional, (ii) be maintained in effect, whether through renewal or extension, for the period commencing on the date of this Lease and continuing until the date (the "**L-C Expiration Date**") that is no less than ninety (90) days after the expiration of the Lease Term as the same may be extended, and Tenant shall deliver a new L-C or certificate of renewal or extension to Landlord at least thirty (30) days prior to the expiration of the L-C then held by Landlord, without any action whatsoever on the part of Landlord, (iii) be fully assignable by Landlord, its successors and assigns, (iv) permit partial draws and multiple presentations and drawings, and (v) be otherwise subject to the Uniform Customs and Practices for Documentary Credits (1993-Rev), International Chamber of Commerce Publication #500, or the International Standby Practices-ISP 98, International Chamber of Commerce Publication #590. Landlord, or its then managing agent, shall have the right to draw down an amount up to the face amount of the L-C if any of the following shall have occurred or be applicable: (A) such amount is due to Landlord under the terms and conditions of this Lease, and has not been paid within applicable notice and cure periods (or, if Landlord is prevented by law from providing notice, within the period for payment set forth in the Lease), or (B) Tenant has filed a voluntary petition under the U. S. Bankruptcy Code or any state bankruptcy code (collectively, "**Bankruptcy Code**"), or (C) an involuntary petition has been filed against Tenant under the Bankruptcy Code that is not dismissed within thirty (30) days, or (D) the Lease has been rejected, or is deemed rejected, under Section 365 of the U.S. Bankruptcy Code, following the filing of a voluntary petition by Tenant under the Bankruptcy Code, or the filing of an involuntary petition against Tenant under the Bankruptcy Code, or (E) the Bank has notified Landlord that the L-C will not be renewed or extended through the L-C Expiration Date, and Tenant has not provided a replacement L-C that satisfies the requirements of this Lease at least thirty (30) days prior to such expiration, or (F) Tenant is placed into receivership or conservatorship, or becomes subject to similar proceedings under Federal or State law, or (G) Tenant executes an assignment for the benefit of creditors, or (H) if (1) any of the Bank's (other than Silicon Valley Bank) Fitch Ratings (or other comparable ratings to the extent the Fitch Ratings are no longer available) have been reduced below the Bank's Credit Rating Threshold, or (2) there is otherwise a material adverse change in the financial condition of the Bank, and Tenant has failed to provide Landlord with a replacement letter of credit, conforming in all respects to the requirements of this Article 21 (including, but not limited to, the requirements placed on the issuing Bank more particularly set forth in this Section 21.1 above), in the amount of the applicable L-C Amount, within ten (10) business days following Landlord's written demand therefor (with no other notice or cure or grace period being applicable thereto, notwithstanding anything in this Lease to the contrary) (each of the foregoing being an "**L-C Draw Event**"). The L-C shall be honored by the Bank regardless of whether Tenant disputes Landlord's right to draw upon the L-C. In addition, in the event the Bank is placed into receivership or conservatorship by the Federal Deposit Insurance Corporation or any successor or similar entity, then, effective as of the date such receivership or conservatorship occurs, said L-C shall be deemed to fail to meet the requirements of this Article 21, and, within ten (10) business days following Landlord's notice to Tenant of such receivership or conservatorship (the "**L-C FDIC Replacement Notice**"), Tenant shall replace such L-C with a substitute letter of credit from a different issuer (which issuer shall meet or exceed the Bank's Credit Rating Threshold and shall otherwise be acceptable to Landlord in its reasonable discretion) and that complies in all respects with the requirements of this Article 21. If Tenant fails to replace such L-C with such conforming, substitute letter of credit pursuant to the terms and conditions of this Section 21.1, then,

notwithstanding anything in this Lease to the contrary, Landlord shall have the right to declare Tenant in default of this Lease for which there shall be no notice or grace or cure periods being applicable thereto (other than the aforesaid ten (10) business day period). Tenant shall be responsible for the payment of any and all Tenant's and Bank's costs incurred with the review of any replacement L-C, which replacement is required pursuant to this Section or is otherwise requested by Tenant. In the event of an assignment by Tenant of its interest in the Lease (and irrespective of whether Landlord's consent is required for such assignment), the acceptance of any replacement or substitute letter of credit by Landlord from the assignee shall be subject to Landlord's prior written approval, in Landlord's reasonable discretion, and the actual and reasonable attorney's fees incurred by Landlord in connection with such determination shall be payable by Tenant to Landlord within ten (10) days of billing.

1.50 **Application of L-C.** Tenant hereby acknowledges and agrees that Landlord is entering into this Lease in material reliance upon the ability of Landlord to draw upon the L-C upon the occurrence of any L-C Draw Event and apply the proceeds of the L-C in accordance with this Article 21, Landlord may, but without obligation to do so, and without notice to Tenant (except in connection with an L-C Draw Event under Section 21.1(H) above), draw upon the L-C, in part or in whole, in the amount necessary to cure any such L-C Draw Event and/or to compensate Landlord for any and all damages of any kind or nature sustained or which Landlord reasonably estimates that it will sustain resulting from Tenant's breach or default of the Lease or other L-C Draw Event and/or to compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. The use, application or retention of the L-C proceeds, or any portion thereof, by Landlord shall not prevent Landlord from exercising any other right or remedy provided by this Lease or by any applicable law, it being intended that Landlord shall not first be required to proceed against the L-C, and such L-C shall not operate as a limitation on any recovery to which Landlord may otherwise be entitled. Tenant agrees and acknowledges that (i) the L-C constitutes a separate and independent contract between Landlord and the Bank, (ii) Tenant is not a third party beneficiary of such contract, (iii) Tenant has no property interest whatsoever in the L-C or the proceeds thereof, and (iv) in the event Tenant becomes a debtor under any chapter of the Bankruptcy Code, Tenant is placed into receivership or conservatorship, and/or there is an event of a receivership, conservatorship or a bankruptcy filing by, or on behalf of, Tenant, neither Tenant, any trustee, nor Tenant's bankruptcy estate shall have any right to restrict or limit Landlord's claim and/or rights to the L-C and/or the proceeds thereof by application of Section 502(b)(6) of the U. S. Bankruptcy Code or otherwise.

1.51 **Maintenance of L-C by Tenant.** If, as a result of any proper drawing by Landlord of all or any portion of the L-C, the amount of the L-C shall be less than the L-C Amount, Tenant shall, within five (5) business days thereafter, provide Landlord with additional letter(s) of credit in an amount equal to the deficiency, and any such additional letter(s) of credit shall comply with all of the provisions of this Article 21. Tenant further covenants and warrants that it will neither assign nor encumber the L-C or any part thereof and that neither Landlord nor its successors or assigns will be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance. Without limiting the generality of the foregoing, if the L-C expires earlier than the L-C Expiration Date, Landlord will accept a renewal thereof (such renewal letter of credit to be in effect and delivered to Landlord, as applicable, not later than thirty (30) days prior to the expiration of the L-C), which shall be irrevocable and automatically renewable as above provided through the L-C Expiration Date upon the same terms as the expiring L-C or such other terms as may be acceptable to Landlord in its sole discretion. If Tenant exercises its option to extend the Lease Term pursuant to Section 2.2 of this Lease then, not later than thirty (30) days prior to the commencement of the Option Term, Tenant shall deliver to Landlord a new L-C or certificate of renewal or extension evidencing the L-C Expiration Date as thirty (30) days after the expiration of the Option Term. However, if the L-C is not timely renewed, or if Tenant fails to maintain the L-C in the amount and in accordance with the terms set forth in this Article 21, Landlord shall have the right to present the L-C to the Bank in accordance with the terms of this Article 21, and the proceeds of the L-C may be applied by Landlord against any Rent payable by Tenant under this Lease that is not paid when due and/or to pay for all losses and damages that Landlord has suffered or that Landlord reasonably estimates that it will suffer as a result of any breach or default by Tenant under this Lease. In the event Landlord elects to exercise its rights as provided above, (I) any unused proceeds shall constitute the property of Landlord (and not Tenant's property or, in the event of a receivership, conservatorship, or a bankruptcy filing by, or on behalf of, Tenant, property of such receivership, conservatorship or Tenant's bankruptcy estate) and need not be segregated from Landlord's other assets, and (II) Landlord agrees to pay to Tenant within thirty (30) days after the L-C Expiration Date the amount of any proceeds of the L-C received by Landlord and not applied against any Rent payable by Tenant under this Lease that was not paid when due or used to pay for any losses and/or damages suffered by Landlord (or reasonably estimated by Landlord that it will suffer) as a result of any breach or default by Tenant under this Lease; provided, however, that if prior to the L-C Expiration Date a voluntary petition is filed by Tenant, or an involuntary petition is filed against Tenant by any of Tenant's creditors, under the Bankruptcy Code, then Landlord shall not be obligated to make such payment in the amount of the unused L-C proceeds until either all preference issues relating to payments under this Lease have been resolved in such bankruptcy or reorganization case or such bankruptcy or reorganization case has been dismissed. If Landlord draws on the L-C due to Tenant's failure to timely renew or provide a replacement L-C, such failure shall not be considered a default under this Lease and Landlord shall return such cash proceeds upon Tenant's

presentation of a replacement L-C that satisfies the requirements of this Lease, subject to reasonable satisfaction of any preference risk to Landlord.

1.52 **Transfer and Encumbrance**. The L-C shall also provide that Landlord may, at any time and without notice to Tenant and without first obtaining Tenant's consent thereto, transfer (one or more times) all or any portion of its interest in and to the L-C to another party, person or entity, as a part of the assignment by Landlord of its rights and interests in and to this Lease. In the event of a transfer of Landlord's interest in this Lease, Landlord shall transfer the L-C, in whole or in part, to the transferee and thereupon Landlord shall, without any further agreement between the parties, be released by Tenant from all liability therefor, and it is agreed that the provisions hereof shall apply to every transfer or assignment of the whole of said L-C to a new landlord. In connection with any such transfer of the L-C by Landlord, Tenant shall, at Tenant's sole cost and expense, execute and submit to the Bank such applications, documents and instruments as may be necessary to effectuate such transfer and, Tenant shall be responsible for paying the Bank's transfer and processing fees in connection therewith; provided that, Landlord shall have the right (in its sole discretion), but not the obligation, to pay such fees on behalf of Tenant, in which case Tenant shall reimburse Landlord within thirty (30) days after Tenant's receipt of an invoice from Landlord therefor.

1.53 **L-C Not a Security Deposit**. Landlord and Tenant (1) acknowledge and agree that in no event or circumstance shall the L-C or any renewal thereof or substitute therefor or any proceeds thereof be deemed to be or treated as a "security deposit" under any law applicable to security deposits in the commercial context, including, but not limited to, Section 1950.7 of the California Civil Code, as such Section now exists or as it may be hereafter amended or succeeded (the "**Security Deposit Laws**"), (2) acknowledge and agree that the L-C (including any renewal thereof or substitute therefor or any proceeds thereof) is not intended to serve as a security deposit, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (3) waive any and all rights, duties and obligations that any such party may now, or in the future will, have relating to or arising from the Security Deposit Laws. Tenant hereby irrevocably waives and relinquishes the provisions of Section 1950.7 of the California Civil Code and any successor statute, and all other provisions of law, now or hereafter in effect, which (x) establish the time frame by which a landlord must refund a security deposit under a lease, and/or (y) provide that a landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by a tenant or to clean the premises, it being agreed that Landlord may, in addition, claim those sums specified in this Article 21 and/or those sums reasonably necessary to (a) compensate Landlord for any loss or damage caused by Tenant's breach of this Lease, including any damages Landlord suffers following termination of this Lease, and/or (b) compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. Tenant agrees not to interfere in any way with any payment to Landlord of the proceeds of the L-C, either prior to or following a "draw" by Landlord of all or any portion of the L-C, regardless of whether any dispute exists between Tenant and Landlord as to Landlord's right to draw down all or any portion of the L-C. No condition or term of this Lease shall be deemed to render the L-C conditional and thereby afford the Bank a justification for failing to honor a drawing upon such L-C in a timely manner. Tenant shall not request or instruct the Bank of any L-C to refrain from paying sight draft(s) drawn under such L-C.

1.54 **Remedy for Improper Drafts**. Tenant's sole remedy in connection with Landlord's improper draw against the L-C or Landlord's improper application of any proceeds of sight drafts drawn under the L-C shall be the right to obtain from Landlord a refund of the amount of any sight draft(s) that were improperly presented or the proceeds of which were misapplied, and reasonable actual out-of-pocket attorneys' fees and costs, provided that at the time of such refund, Tenant restores the amount of such L-C to the amount (if any) then required under the applicable provisions of this Lease. Tenant acknowledges that Landlord's draw against the L-C, application or retention of any proceeds thereof, the presentment of sight drafts drawn under any L-C, or the Bank's payment of sight drafts drawn under such L-C, could not under any circumstances cause Tenant injury that could not be remedied by an award of money damages, and that the recovery of money damages would be an adequate remedy therefor. In the event Tenant shall be entitled to a refund as aforesaid and Landlord shall fail to make such payment within ten (10) business days after demand, Tenant shall have the right to deduct the amount thereof from the next installment(s) of Base Rent.

22. **COMMUNICATIONS AND COMPUTER LINE**. Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the "**Lines**"), provided that Tenant shall obtain Landlord's prior written consent, use an experienced and qualified contractor approved in writing by Landlord, and comply with all of the other provisions of Articles 7 and 8 of this Lease. Tenant shall pay all costs in connection therewith. Landlord reserves the right, upon notice to Tenant prior to the expiration or earlier termination of this Lease, to require that Tenant, at Tenant's sole cost and expense, remove any Lines located in or serving the Premises prior to the expiration or earlier termination of this Lease.

23. SIGNS

1.55 **Exterior Signage.** Provided all signs are in keeping with the quality, design and style of the Building and Project, Landlord, at its sole cost and expense, shall install (i) identification signage at the entrance to the Premises, and (ii) Tenant's name in the directory serving the Building (collectively, "**Tenant Signage**"); provided, however, in no event shall Tenant's Signage include an "Objectionable Name," as that term is defined in Section 23.3, of this Lease. All such signage shall be subject to Tenant's obtaining all required governmental approvals. All permitted signs shall be maintained by Tenant at its expense in a first-class and safe condition and appearance. Upon the expiration or earlier termination of this Lease, Tenant shall remove all of its signs at Tenant's sole cost and expense. The graphics, materials, color, design, lettering, lighting, size, illumination, specifications and exact location of Tenant's Signage (collectively, the "**Sign Specifications**") shall be subject to the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed, and shall be consistent and compatible with the quality and nature of the Project. Tenant hereby acknowledges that, notwithstanding Landlord's approval of Tenant's Signage, Landlord has made no representation or warranty to Tenant with respect to the probability of obtaining all necessary governmental approvals and permits for Tenant's Signage. In the event Tenant does not receive the necessary governmental approvals and permits for Tenant's Signage, Tenant's and Landlord's rights and obligations under the remaining TCCs of this Lease shall be unaffected.

1.56 **Objectionable Name.** Tenant's Signage shall not include a name or logo which relates to an entity which is of a character or reputation, or is associated with a political faction or orientation, which is inconsistent with the quality of the Project, or which would otherwise reasonably offend a landlord of the Comparable Buildings (an "**Objectionable Name**"). The parties hereby agree that the following name, or any reasonable derivation thereof, shall be deemed not to constitute an Objectionable Name: "CareDx, Inc.."

1.57 **Prohibited Signage and Other Items.** Any signs, notices, logos, pictures, names or advertisements which are installed and that have not been separately approved by Landlord may be removed without notice by Landlord at the sole expense of Tenant. Any signs, window coverings, or blinds (even if the same are located behind the Landlord-approved window coverings for the Building), or other items visible from the exterior of the Premises or Building, shall be subject to the prior approval of Landlord, in its sole discretion.

1.58 **Termination of Right to Tenant's Signage.** The rights contained in this Article 23 shall be personal to Original Tenant and its Permitted Assignee, and may only be exercised and maintained by such parties (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease) to the extent (x) they are not in default under this Lease (beyond any applicable notice and cure period) and (y) if they occupy the entire Premises.

24. COMPLIANCE WITH LAW

1.59 **In General.** Landlord shall comply with all Applicable Laws relating to the Building structure and Building systems, provided that compliance with such Applicable Laws is not the responsibility of Tenant under this Lease, and provided further that Landlord's failure to comply therewith would prohibit Tenant from obtaining or maintaining a certificate of occupancy for the Premises, or would unreasonably and materially affect the safety of Tenant's employees or create a significant health hazard for Tenant's employees, or would otherwise materially and adversely affect Tenant's use of or access to the Premises. Landlord shall be permitted to include in Operating Expenses any costs or expenses incurred by Landlord under this Article 24 to the extent not prohibited by the terms of Article 4 of this Lease, above. Tenant shall not do anything or suffer anything to be done in or about the Premises or the Project which will in any way conflict with any law, statute, ordinance or other rule, directive, order, regulation, guideline or requirement of any governmental entity or governmental agency (the "Applicable Laws") now in force or which may hereafter be enacted or promulgated. At its sole cost and expense, Tenant shall promptly comply with all such governmental measures. Should any standard or regulation now or hereafter be imposed on Landlord or Tenant by a state, federal or local governmental body charged with the establishment, regulation and enforcement of occupational, health or safety standards for employers, employees, landlords or tenants, then Tenant agrees, at its sole cost and expense, to comply promptly with such standards or regulations. Tenant shall be responsible, at its sole cost and expense, to make all alterations to the Building and Premises as are required to comply with the governmental rules, regulations, requirements or standards described in this Article 24. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said governmental measures, shall be conclusive of that fact as between Landlord and Tenant.

1.60 **California Required Disclosures.** For purposes of Section 1938 of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that the Project, Building and Premises have not undergone inspection by a Certified Access Specialist (CASp). As required by Section 1938(e) of the California Civil Code, Landlord hereby states as follows: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject

premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the premises.” In furtherance of the foregoing, Landlord and Tenant hereby agree as follows: (a) any CASp inspection requested by Tenant shall be conducted, at Tenant’s sole cost and expense, by a CASp approved in advance by Landlord; and (b) pursuant to Article 24 below, Tenant, at its cost, is responsible for making any repairs within the Premises to correct violations of construction-related accessibility standards; and, if anything done by or for Tenant in its use or occupancy of the Premises shall require repairs to the Building (outside the Premises) to correct violations of construction-related accessibility standards, then Tenant shall, at Landlord’s option, either perform such repairs at Tenant’s sole cost and expense or reimburse Landlord upon demand, as Additional Rent, for the cost to Landlord of performing such repairs. The terms of this Section 24.2 do not amend or reduce the obligations of Landlord and Tenant set forth in this Lease regarding compliance with Applicable Laws in general, and repair and maintenance of the Premises and the Project, but apply solely to the obligations of Landlord and Tenant in connection with Tenant’s election to conduct a CASp inspection hereunder.

25. LATE CHARGES If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord’s designee within five (5) business days after Tenant’s receipt of written notice from Landlord that said amount is due, then Tenant shall pay to Landlord a late charge equal to five percent (5%) of the overdue amount plus any reasonable attorneys’ fees incurred by Landlord by reason of Tenant’s failure to pay Rent and/or other charges when due hereunder. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord’s other rights and remedies hereunder or at law and shall not be construed as liquidated damages or as limiting Landlord’s remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid within ten (10) days after the date they are due shall bear interest from the date when due until paid at a rate per annum equal to the lesser of (i) the annual “Bank Prime Loan” rate cited in the Federal Reserve Statistical Release Publication G.13(415), published on the first Tuesday of each calendar month (or such other comparable index as Landlord and Tenant shall reasonably agree upon if such rate ceases to be published) plus four (4) percentage points, and (ii) the highest rate permitted by Applicable Law.

26. LANDLORD’S RIGHT TO CURE DEFAULT; PAYMENTS BY TENANT

1.61 **Landlord’s Cure.** All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant’s sole cost and expense and without any reduction of Rent, except to the extent, if any, otherwise expressly provided herein. If Tenant shall fail to perform any obligation under this Lease, and such failure shall continue in excess of the time allowed under Section 19.1.2, above, unless a specific time period is otherwise stated in this Lease, Landlord may, but shall not be obligated to, make any such payment or perform any such act on Tenant’s part without waiving its rights based upon any default of Tenant and without releasing Tenant from any obligations hereunder.

1.62 **Tenant’s Reimbursement.** Except as may be specifically provided to the contrary in this Lease, Tenant shall pay to Landlord, upon delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with the remedying by Landlord of Tenant’s defaults pursuant to the provisions of Section 26.1; (ii) sums equal to all losses, costs, liabilities, damages and expenses referred to in Article 10 of this Lease; and (iii) sums equal to all expenditures made and obligations incurred by Landlord in collecting or attempting to collect the Rent or in enforcing or attempting to enforce any rights of Landlord under this Lease or pursuant to law, including, without limitation, all reasonable legal fees and other amounts so expended. Tenant’s obligations under this Section 26.2 shall survive the expiration or sooner termination of the Lease Term.

27. ENTRY BY LANDLORD Landlord reserves the right at all reasonable times and upon not less than twenty-four (24) hours’ notice to Tenant (except in the case of an emergency) to enter the Premises to (i) inspect them; (ii) show the Premises to prospective purchasers, or to current or prospective mortgagees, ground or underlying lessors or insurers or, during the last nine (9) months of the Lease Term, to prospective tenants; (iii) post notices of nonresponsibility (to the extent applicable pursuant to then Applicable Law); or (iv) alter, improve or repair the Premises or the Building, or for structural alterations, repairs or improvements to the Building or the Building’s systems and equipment. Landlord may make any such entries without the abatement of Rent, except as otherwise provided in this Lease, and may take such reasonable steps as required to accomplish the stated purposes. In an emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises. At all times, Landlord shall use commercially reasonable efforts to

perform any such entries in in the Premises in a manner designed to minimize interference with Tenant's use of the Premises for the Permitted Use. With respect to entry into the Premises for the performance of alterations or improvements (other than maintenance and repair Landlord is required to perform under this Lease) ("**Landlord Alterations**") that are reasonably anticipated to create unreasonable levels of noise, dust or vibrations, including without limitation, concrete sawing, coring or jack hammering, or otherwise materially interfere with Tenant's business operations in the Premises (the "**Disruptive Work**"), Landlord will provide Tenant with reasonable advance notice of not less than thirty (30) days prior to the commencement of any such Disruptive Work and the anticipated schedule and work program for the Disruptive Work. Upon Tenant's request, Landlord agrees to meet with Tenant no later than three (3) days before the commencement of the Disruptive Work and on a weekly basis during the performance of any Disruptive Work and use commercially reasonable efforts to address any of Tenant's reasonable ongoing concerns related to the Disruptive Work. Landlord agrees to provide an overall construction schedule and updated "two week look ahead" schedules at the start of each week during which any Disruptive Work is being performed.

28. TENANT PARKING Tenant shall have the right to use the amount of parking set forth in Section 10 of the Summary, in the on-site parking facility (or facilities) which serve the Project. Tenant shall abide by all reasonable rules and regulations which are prescribed from time to time for the orderly operation and use of the parking facility where the parking passes are located (including any sticker or other identification system established by Landlord and the prohibition of vehicle repair and maintenance activities in the parking facilities), and shall cooperate in seeing that Tenant's employees and visitors also comply with such rules and regulations. Tenant's use of the Project parking facility shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever for damage to the vehicles of Tenant, its employees and/or visitors, or for other personal injury or property damage or theft relating to or connected with the parking rights granted herein or any of Tenant's, its employees' and/or visitors' use of the parking facilities.

29. MISCELLANEOUS PROVISIONS

1.63 **Terms; Captions.** The words "**Landlord**" and "**Tenant**" as used herein shall include the plural as well as the singular. The necessary grammatical changes required to make the provisions hereof apply either to corporations or partnerships or individuals, men or women, as the case may require, shall in all cases be assumed as though in each case fully expressed. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

1.64 **Binding Effect.** Subject to all other provisions of this Lease, each of the covenants, conditions and provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective heirs, personal representatives, successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 of this Lease.

1.65 **No Air Rights.** No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light or view therefrom is obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Project, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

1.66 **Modification of Lease.** Should any current or prospective mortgagee or ground lessor for the Building or Project require a modification of this Lease, which modification will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever documents are reasonably required therefor and to deliver the same to Landlord within ten (10) business days following a request therefor. At the request of Landlord or any mortgagee or ground lessor, Tenant agrees to execute a short form of Lease and deliver the same to Landlord within ten (10) business days following the request therefor.

1.67 **Transfer of Landlord's Interest.** Tenant acknowledges that Landlord has the right to transfer all or any portion of its interest in the Project or Building and in this Lease, and Tenant agrees that in the event of any such transfer, Landlord shall automatically be released from all liability under this Lease arising from and after such transfer and Tenant agrees to look solely to such transferee for the performance of Landlord's obligations hereunder after the date of transfer and such transferee shall be deemed to have fully assumed and be liable for all obligations of this Lease to be performed by Landlord, including the return of any security deposit or letter of credit, and Tenant shall attorn to such transferee.

1.68 **Prohibition Against Recording.** Except as provided in Section 29.4 of this Lease, neither this Lease, nor any memorandum, affidavit or other writing with respect thereto, shall be recorded by Tenant or by anyone acting through, under or on behalf of Tenant.

1.69 **Landlord's Title.** Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord.

1.70 **Relationship of Parties.** Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant.

1.71 **Application of Payments.** Landlord shall have the right to apply payments received from Tenant pursuant to this Lease, regardless of Tenant's designation of such payments, to satisfy any obligations of Tenant hereunder, in such order and amounts as Landlord, in its sole discretion, may elect.

1.72 **Time of Essence.** Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

1.73 **Partial Invalidity.** If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

1.74 **No Warranty.** In executing and delivering this Lease, Tenant has not relied on any representations, including, but not limited to, any representation as to the amount of any item comprising Additional Rent or the amount of the Additional Rent in the aggregate or that Landlord is furnishing the same services to other tenants, at all, on the same level or on the same basis, or any warranty or any statement of Landlord which is not set forth herein or in one or more of the exhibits attached hereto.

1.75 **Landlord Exculpation; Mutual Waiver of Consequential Damages.** The liability of Landlord or the Landlord Parties to Tenant for any default by Landlord under this Lease or arising in connection herewith or with Landlord's operation, management, leasing, repair, renovation, alteration or any other matter relating to the Project or the Premises shall be limited solely and exclusively to an amount which is equal to the lesser of (a) the interest of Landlord in the Building or (b) the equity interest Landlord would have in the Building if the Building were encumbered by third-party debt in an amount equal to eighty percent (80%) of the value of the Building (as such value is determined by Landlord), provided that in no event shall such liability extend to any sales or insurance proceeds received by Landlord or the Landlord Parties in connection with the Project, Building or Premises. Neither Landlord, nor any of the Landlord Parties shall have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant. The limitations of liability contained in this Section 29.13 shall inure to the benefit of Landlord's and the Landlord Parties, present and future partners, beneficiaries, officers, directors, trustees, shareholders, agents and employees, and their respective partners, heirs, successors and assigns. Under no circumstances shall any present or future partner of Landlord (if Landlord is a partnership), or trustee or beneficiary (if Landlord or any partner of Landlord is a trust), have any liability for the performance of Landlord's obligations under this Lease. Notwithstanding any contrary provision herein, except in the event of a holdover in the Premises by Tenant as set forth in Article 16 of this Lease, neither Landlord nor the Landlord Parties, nor Tenant nor the Tenant Parties, shall be liable under any circumstances for injury or damage to, or interference with, Tenant's business, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, specimens, samples, and/or scientific, business, accounting and other records of every kind and description kept at the premises and any and all income derived or derivable therefrom. Similarly, except with respect to Tenant's violations of the provisions of this Lease regarding Hazardous Materials and Tenant's holding over in the Premises following the expiration or sooner termination of this Lease as set forth in Article 16, Tenant shall not be liable under any circumstances for injury or damage to, or interference with, Landlord's business, including, but not limited to, loss of profits or other revenues (not including, however, loss of rents), loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring. Except to the extent provided by Applicable Law (e.g., piercing the corporate veil), under no circumstances shall any present or future partner, member, stockholder, trustee, beneficiary, officer, director, employee or agent of Tenant or the Tenant Parties have any personal liability for the performance of Tenant's obligations under this Lease.

1.76 **Entire Agreement.** It is understood and acknowledged that there are no oral agreements between the parties hereto affecting this Lease and this Lease constitutes the parties' entire agreement with respect to the leasing of the Premises and supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. None of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

1.77 **Right to Lease.** Landlord reserves the absolute right to effect such other tenancies in the Project as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Building or Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building or Project.

1.78 **Force Majeure.** Notwithstanding anything to the contrary contained in this Lease, any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, civil commotions, Casualty, actual or threatened public health emergency (including, without limitation, epidemic, pandemic, famine, disease, plague, quarantine, and other significant public health risk), governmental edicts, actions, declarations or quarantines by a governmental entity or health organization (including, without limitation, any shelter-in-place orders, stay at home orders or any restrictions on travel related thereto that preclude Tenant, its agents, contractors or its employees from accessing the Premises, national or regional emergency), breaches in cybersecurity, and other causes beyond the reasonable control of the party obligated to perform, regardless of whether such other causes are (i) foreseeable or unforeseeable or (ii) related to the specifically enumerated events in this paragraph (collectively, a "**Force Majeure**"), shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage. If this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure. Notwithstanding anything to the contrary in this Lease, no event of Force Majeure shall (i) excuse Tenant's obligations to pay Rent and other charges due pursuant to this Lease, (ii) be grounds for Tenant to abate any portion of Rent due pursuant to this Lease, or entitle either party to terminate this Lease, except as allowed pursuant to Articles 11 and 13 of this Lease, or (iii) excuse Tenant's obligations under Articles 5 and 24 of this Lease.

1.79 **Waiver of Redemption by Tenant.** Tenant hereby waives, for Tenant and for all those claiming under Tenant, any and all rights now or hereafter existing to redeem by order or judgment of any court or by any legal process or writ, Tenant's right of occupancy of the Premises after any termination of this Lease.

1.80 **Notices.** All notices, demands, statements, designations, approvals or other communications (collectively, "**Notices**") given or required to be given by either party to the other hereunder or by law shall be in writing, shall be (A) sent by United States certified or registered mail, postage prepaid, return receipt requested ("**Mail**"), (B) transmitted by telecopy, if such telecopy is promptly followed by a Notice sent by Mail, (C) delivered by a nationally recognized overnight courier, or (D) delivered personally. Any Notice shall be sent, transmitted, or delivered, as the case may be, to Tenant at the appropriate address set forth in Section 10 of the Summary, or to such other place as Tenant may from time to time designate in a Notice to Landlord, or to Landlord at the addresses set forth below, or to such other places as Landlord may from time to time designate in a Notice to Tenant. Any Notice will be deemed given (i) three (3) days after the date it is posted if sent by Mail, (ii) the date the telecopy is transmitted, (iii) the date the overnight courier delivery is made, or (iv) the date personal delivery is made. As of the date of this Lease, any Notices to Landlord must be sent, transmitted, or delivered, as the case may be, to the following addresses:

HCP Life Science REIT, Inc.
c/o Healthpeak Properties, Inc.
5050 S Syracuse St. #800
Denver, CO 80237
Attn: Legal Department

with a copy to:

Healthpeak Properties, Inc.
2000 Sierra Point Parkway, Suite 100
Brisbane, CA 94005
Attention: Scott Bohn

and

Allen Matkins Leck Gamble Mallory & Natsis LLP
1901 Avenue of the Stars, Suite 1800
Los Angeles, California 90067
Attention: Anton N. Natsis, Esq.

1.81 **Joint and Several**. If there is more than one tenant, the obligations imposed upon Tenant under this Lease shall be joint and several.

1.82 **Authority**. If Tenant is a corporation, trust or partnership, each individual executing this Lease on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in the State of California and that Tenant has full right and authority to execute and deliver this Lease and that each person signing on behalf of Tenant is authorized to do so.

1.83 **Attorneys' Fees**. In the event that either Landlord or Tenant should bring suit for the possession of the Premises, for the recovery of any sum due under this Lease, or because of the breach of any provision of this Lease or for any other relief against the other, then all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party therein shall be paid by the other party, which obligation on the part of the other party shall be deemed to have accrued on the date of the commencement of such action and shall be enforceable whether or not the action is prosecuted to judgment.

1.84 **Governing Law; WAIVER OF TRIAL BY JURY; JUDICIAL REFERENCE**. This Lease shall be construed and enforced in accordance with the laws of the State of California. In any action or proceeding arising herefrom, landlord and tenant hereby consent to (i) the jurisdiction of any competent court within the State of California, (ii) service of process by any means authorized by California law, AND (III) IN THE INTEREST OF SAVING TIME AND EXPENSE, TRIAL WITHOUT A JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER OF THE PARTIES HERETO AGAINST THE OTHER OR THEIR SUCCESSORS IN RESPECT OF ANY MATTER ARISING OUT OF OR IN CONNECTION WITH THIS LEASE, THE RELATIONSHIP OF LANDLORD AND TENANT, TENANT'S USE OR OCCUPANCY OF THE PREMISES, AND/OR ANY CLAIM FOR INJURY OR DAMAGE, OR ANY EMERGENCY OR STATUTORY REMEDY. IN THE EVENT LANDLORD COMMENCES ANY SUMMARY PROCEEDINGS OR ACTION FOR NONPAYMENT OF BASE RENT OR ADDITIONAL RENT, TENANT SHALL NOT INTERPOSE ANY COUNTERCLAIM OF ANY NATURE OR DESCRIPTION (UNLESS SUCH COUNTERCLAIM SHALL BE MANDATORY) IN ANY SUCH PROCEEDING OR ACTION, BUT SHALL BE RELEGATED TO AN INDEPENDENT ACTION AT LAW. IF THE JURY WAIVER PROVISIONS OF THIS SECTION 29.22 ARE NOT ENFORCEABLE UNDER CALIFORNIA LAW, THEN THE FOLLOWING PROVISIONS SHALL APPLY. IT IS THE DESIRE AND INTENTION OF THE PARTIES TO AGREE UPON A MECHANISM AND PROCEDURE UNDER WHICH CONTROVERSIES AND DISPUTES ARISING OUT OF THIS LEASE OR RELATED TO THE PREMISES WILL BE RESOLVED IN A PROMPT AND EXPEDITIOUS MANNER. ACCORDINGLY, EXCEPT WITH RESPECT TO ACTIONS FOR UNLAWFUL OR FORCIBLE DETAINER OR WITH RESPECT TO THE PREJUDGMENT REMEDY OF ATTACHMENT, ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER PARTY HERETO AGAINST THE OTHER (AND/OR AGAINST ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR SUBSIDIARIES OR AFFILIATED ENTITIES) ON ANY MATTERS WHATSOEVER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS LEASE, TENANT'S USE OR OCCUPANCY OF THE PREMISES AND/OR ANY CLAIM OF INJURY OR DAMAGE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, SHALL BE HEARD AND RESOLVED BY A REFEREE UNDER THE PROVISIONS OF THE CALIFORNIA CODE OF CIVIL PROCEDURE, SECTIONS 638 — 645.1, INCLUSIVE (AS SAME MAY BE AMENDED, OR ANY SUCCESSOR STATUTE(S) THERETO) (THE "REFEREE SECTIONS"). ANY FEE TO INITIATE THE JUDICIAL REFERENCE PROCEEDINGS AND ALL FEES CHARGED AND COSTS INCURRED BY THE REFEREE SHALL BE PAID BY THE PARTY INITIATING SUCH PROCEDURE (EXCEPT THAT IF A REPORTER IS REQUESTED BY EITHER PARTY, THEN A REPORTER SHALL BE PRESENT AT ALL PROCEEDINGS WHERE REQUESTED AND THE FEES OF SUCH REPORTER — EXCEPT FOR COPIES ORDERED BY THE OTHER PARTIES — SHALL BE BORNE BY THE PARTY REQUESTING THE REPORTER); PROVIDED HOWEVER, THAT ALLOCATION OF THE COSTS AND FEES, INCLUDING ANY INITIATION FEE, OF SUCH PROCEEDING SHALL BE ULTIMATELY DETERMINED IN ACCORDANCE WITH SECTION 29.21 ABOVE. THE VENUE OF THE PROCEEDINGS SHALL BE IN THE COUNTY IN WHICH THE PREMISES ARE LOCATED. WITHIN TEN (10) DAYS OF RECEIPT BY ANY PARTY OF A WRITTEN REQUEST TO RESOLVE ANY DISPUTE OR CONTROVERSY PURSUANT TO THIS SECTION 29.22, THE PARTIES SHALL AGREE UPON A SINGLE REFEREE WHO SHALL TRY ALL ISSUES, WHETHER OF FACT OR LAW, AND REPORT A FINDING AND JUDGMENT ON SUCH ISSUES AS REQUIRED BY THE REFEREE SECTIONS. IF THE PARTIES ARE UNABLE TO AGREE UPON A REFEREE WITHIN SUCH TEN (10) DAY PERIOD, THEN ANY PARTY MAY THEREAFTER FILE A LAWSUIT IN THE COUNTY IN WHICH THE PREMISES ARE LOCATED FOR THE PURPOSE OF APPOINTMENT OF A REFEREE UNDER THE REFEREE SECTIONS. IF THE REFEREE IS APPOINTED BY THE COURT, THE REFEREE SHALL BE A

NEUTRAL AND IMPARTIAL RETIRED JUDGE WITH SUBSTANTIAL EXPERIENCE IN THE RELEVANT MATTERS TO BE DETERMINED, FROM JAMS, THE AMERICAN ARBITRATION ASSOCIATION OR SIMILAR MEDIATION/ARBITRATION ENTITY. THE PROPOSED REFEREE MAY BE CHALLENGED BY ANY PARTY FOR ANY OF THE GROUNDS LISTED IN THE REFEREE SECTIONS. THE REFEREE SHALL HAVE THE POWER TO DECIDE ALL ISSUES OF FACT AND LAW AND REPORT HIS OR HER DECISION ON SUCH ISSUES, AND TO ISSUE ALL RECOGNIZED REMEDIES AVAILABLE AT LAW OR IN EQUITY FOR ANY CAUSE OF ACTION THAT IS BEFORE THE REFEREE, INCLUDING AN AWARD OF ATTORNEYS' FEES AND COSTS IN ACCORDANCE WITH THIS LEASE. THE REFEREE SHALL NOT, HOWEVER, HAVE THE POWER TO AWARD PUNITIVE DAMAGES, NOR ANY OTHER DAMAGES WHICH ARE NOT PERMITTED BY THE EXPRESS PROVISIONS OF THIS LEASE, AND THE PARTIES HEREBY WAIVE ANY RIGHT TO RECOVER ANY SUCH DAMAGES. THE PARTIES SHALL BE ENTITLED TO CONDUCT ALL DISCOVERY AS PROVIDED IN THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE REFEREE SHALL OVERSEE DISCOVERY AND MAY ENFORCE ALL DISCOVERY ORDERS IN THE SAME MANNER AS ANY TRIAL COURT JUDGE, WITH RIGHTS TO REGULATE DISCOVERY AND TO ISSUE AND ENFORCE SUBPOENAS, PROTECTIVE ORDERS AND OTHER LIMITATIONS ON DISCOVERY AVAILABLE UNDER CALIFORNIA LAW. THE REFERENCE PROCEEDING SHALL BE CONDUCTED IN ACCORDANCE WITH CALIFORNIA LAW (INCLUDING THE RULES OF EVIDENCE), AND IN ALL REGARDS, THE REFEREE SHALL FOLLOW CALIFORNIA LAW APPLICABLE AT THE TIME OF THE REFERENCE PROCEEDING. THE PARTIES SHALL PROMPTLY AND DILIGENTLY COOPERATE WITH ONE ANOTHER AND THE REFEREE, AND SHALL PERFORM SUCH ACTS AS MAY BE NECESSARY TO OBTAIN A PROMPT AND EXPEDITIOUS RESOLUTION OF THE DISPUTE OR CONTROVERSY IN ACCORDANCE WITH THE TERMS OF THIS SECTION 29.22. IN THIS REGARD, THE PARTIES AGREE THAT THE PARTIES AND THE REFEREE SHALL USE BEST EFFORTS TO ENSURE THAT (A) DISCOVERY BE CONDUCTED FOR A PERIOD NO LONGER THAN SIX (6) MONTHS FROM THE DATE THE REFEREE IS APPOINTED, EXCLUDING MOTIONS REGARDING DISCOVERY, AND (B) A TRIAL DATE BE SET WITHIN NINE (9) MONTHS OF THE DATE THE REFEREE IS APPOINTED. IN ACCORDANCE WITH SECTION 644 OF THE CALIFORNIA CODE OF CIVIL PROCEDURE, THE DECISION OF THE REFEREE UPON THE WHOLE ISSUE MUST STAND AS THE DECISION OF THE COURT, AND UPON THE FILING OF THE STATEMENT OF DECISION WITH THE CLERK OF THE COURT, OR WITH THE JUDGE IF THERE IS NO CLERK, JUDGMENT MAY BE ENTERED THEREON IN THE SAME MANNER AS IF THE ACTION HAD BEEN TRIED BY THE COURT. ANY DECISION OF THE REFEREE AND/OR JUDGMENT OR OTHER ORDER ENTERED THEREON SHALL BE APPEALABLE TO THE SAME EXTENT AND IN THE SAME MANNER THAT SUCH DECISION, JUDGMENT, OR ORDER WOULD BE APPEALABLE IF RENDERED BY A JUDGE OF THE SUPERIOR COURT IN WHICH VENUE IS PROPER HEREUNDER. THE REFEREE SHALL IN HIS/HER STATEMENT OF DECISION SET FORTH HIS/HER FINDINGS OF FACT AND CONCLUSIONS OF LAW. THE PARTIES INTEND THIS GENERAL REFERENCE AGREEMENT TO BE SPECIFICALLY ENFORCEABLE IN ACCORDANCE WITH THE CODE OF CIVIL PROCEDURE. NOTHING IN THIS SECTION 29.22 SHALL PREJUDICE THE RIGHT OF ANY PARTY TO OBTAIN PROVISIONAL RELIEF OR OTHER EQUITABLE REMEDIES FROM A COURT OF COMPETENT JURISDICTION AS SHALL OTHERWISE BE AVAILABLE UNDER THE CODE OF CIVIL PROCEDURE AND/OR APPLICABLE COURT RULES.

1.85 **Submission of Lease.** Submission of this instrument for examination or signature by Tenant does not constitute a reservation of, option for or option to lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

1.86 **Brokers.** Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 12 of the Summary (the "**Brokers**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Lease. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party. The terms of this Section 29.24 shall survive the expiration or earlier termination of the Lease Term.

1.87 **Independent Covenants.** This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord.

1.88 **Project or Building Name, Address and Signage.** Landlord shall have the right at any time to change the name and/or address of the Project or Building and to install, affix and maintain any and all signs on the exterior and on the interior of the Project or Building as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project or Building or use pictures or illustrations of the Project or Building in advertising or other publicity or for any purpose other than as the address of the business to be conducted by Tenant in the Premises, without the prior written consent of Landlord.

1.89 **Counterparts.** This Lease may be executed in counterparts with the same effect as if both parties hereto had executed the same document. Both counterparts shall be construed together and shall constitute a single lease.

1.90 **Confidentiality.** Tenant acknowledges that the content of this Lease and any related documents are confidential information. Tenant shall keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's financial, legal, and space planning consultants.

1.91 **Development of the Project.**

1.29.1 **Subdivision.** Landlord reserves the right to subdivide all or a portion of the buildings and Common Areas. Tenant agrees to execute and deliver, upon demand by Landlord and in the form requested by Landlord, any additional documents needed to conform this Lease to the circumstances resulting from a subdivision and any all maps in connection therewith. Notwithstanding anything to the contrary set forth in this Lease, the separate ownership of any buildings and/or Common Areas by an entity other than Landlord shall not affect the calculation of Direct Expenses or Tenant's payment of Tenant's Share of Direct Expenses.

1.29.2 **Construction of Property and Other Improvements.** Tenant acknowledges that portions of the Project may be under construction following Tenant's occupancy of the Premises, and that such construction may result in levels of noise, dust, obstruction of access, etc. which are in excess of that present in a fully constructed project. Tenant hereby waives any and all rent offsets or claims of constructive eviction which may arise in connection with such construction.

1.92 **No Violation.** Tenant hereby warrants and represents that neither its execution of nor performance under this Lease shall cause Tenant to be in violation of any agreement, instrument, contract, law, rule or regulation by which Tenant is bound, and Tenant shall protect, defend, indemnify and hold Landlord harmless against any claims, demands, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable attorneys' fees and costs, arising from Tenant's breach of this warranty and representation.

1.93 **Transportation Management.** Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project and/or the Building, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project, Building or area-wide ridesharing program manager; (v) instituting employer-sponsored incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

1.94 **Signatures.** The parties hereto consent and agree that this Lease may be signed and/or transmitted by facsimile, e-mail of a .pdf document or using electronic signature technology (e.g., via DocuSign or similar electronic signature technology), and that such signed electronic record shall be valid and as effective to bind the party so signing as a paper copy bearing such party's handwritten signature. The parties further consent and agree that (1) to the extent a party signs this Lease using electronic signature technology, by clicking "SIGN", such party is signing this Lease electronically, and (2) the electronic signatures appearing on this Lease shall be treated, for purposes of validity, enforceability and admissibility, the same as handwritten signatures.

[signatures contained on following page]

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be executed the day and date first above written.

LANDLORD:

HCP LIFE SCIENCES REIT, INC.,
a Maryland corporation

By: /s/ Scott Bohn

Scott Bohn

Print Name

Its: Executive Vice President

TENANT:

CAREDX, INC.,
a Delaware corporation

By: /s/ Reginald Seeto, MBBS

Reginald Seeto, MBBS

Print Name

Its: President and Chief Executive Officer

By: _____

Print Name

Its: _____

LEASE

THE TOWERS AT SIERRA POINT

HCP LIFE SCIENCES REIT, INC.,
a Maryland corporation,

as Landlord,

and

CAREDX, INC.,
a Delaware corporation,
as Tenant.

[The Towers at Sierra Point]
[CareDx, Inc.]

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(iii)

[The Towers at Sierra Point]
[CareDx, Inc.]

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Reginald Seeto, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CareDx, 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.

Date: August 4, 2022

By: /s/ Reginald Seeto, MBBS
 Reginald Seeto, MBBS
 Chief Executive Officer
 (Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Abhishek Jain, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CareDx, 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.

Date: August 4, 2022

By: /s/ Abhishek Jain

Abhishek Jain
Interim Chief Financial Officer
(Principal Accounting and Financial Officer)

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

In connection with the Quarterly Report on Form 10-Q of CareDx, Inc. (the “Company”) for the period ended June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to their knowledge that:

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

By: /s/ Reginald Seeto, MBBS
 Reginald Seeto, MBBS
 President and Chief Executive Officer
(Principal Executive Officer)
 Date: August 4, 2022

By: /s/ Abhishek Jain
 Abhishek Jain
 Interim Chief Financial Officer
(Principal Accounting and Financial Officer)
 Date: August 4, 2022

A signed original of this written statement required by Section 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.

This certification accompanies the Report, is not deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.