UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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, 2018

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: 001-36086

FOUNDATION MEDICINE, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**27-1316416**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
150 Second Street Cambridge MA	**02141**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (617) 418-2200

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	☐ (Do not check if a smaller reporting company)	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 ☒

As of July 30, 2018, the registrant had 37,240,138 shares of common stock, $0.0001 par value per share, outstanding.

FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. In some cases, you can identify forward-looking statements by words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "seek," "should," "target," "will," "would," or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- our plans or ability to obtain reimbursement coverage and thereafter payment for FoundationOne, FoundationOneHeme, FoundationACT, and FoundationOne CDx, including expectations as to our ability or the amount of time it will take to achieve successful reimbursement coverage and thereafter payment from third-party payors, such as commercial insurance companies and health maintenance organizations, and government insurance programs, such as Medicare and Medicaid;
- our ability to generate revenue from sales of FoundationOne CDx in light of our receipt of a final National Coverage Determination in March 2018 that establishes nationwide Medicare coverage for FoundationOne CDx for all solid tumor types when ordered by the patient's treating physician for Medicare beneficiaries with advanced cancer (*i.e.*, either recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer), who either have not been previously tested using FoundationOne CDx for the same primary diagnosis of cancer or are seeking repeat testing with FoundationOne CDx for a new primary cancer diagnosis, and continue to seek further cancer therapy;
- the evolving treatment paradigm for cancer, including physicians' issuance and acceptance of practice guidelines, and the use in clinical practice of molecular information and targeted oncology therapeutics and the market size for molecular information services;
- physicians' need for molecular information services and any perceived advantage of our services over those of our competitors, including the ability of our molecular information platform to help physicians treat their patients' cancers, our first mover advantage in providing comprehensive molecular information services on a commercial scale or the sustainability of our competitive advantages;
- our ability to generate revenue from sales of services enabled by our molecular information platform to physicians in clinical practice and our biopharmaceutical partners, including our ability to increase adoption of our molecular information services, and to maintain and expand existing or to develop new relationships with biopharmaceutical partners;
- our plans and ability to develop, receive approval for, and commercialize new services and improvements to our existing services;
- our ability to increase the commercial success of our molecular information services;
- the outcome or success of our clinical trials;
- the ability of our molecular information platform to enhance our biopharmaceutical partners' ability to develop targeted oncology therapies;
- our ability to comprehensively assess cancer tissue simultaneously for all known genomic alterations across all known cancer-related genes, including our ability to update our molecular information platform to interrogate new cancer genes and incorporate new targeted oncology therapies and clinical trials;
- our ability to scale our molecular information platform, including the capacity to process additional tests at high specificity and sensitivity as our volume increases;
- our ability to capture, aggregate, analyze, or otherwise utilize genomic data in new ways;
- the acceptance of our publications in peer-reviewed journals or our presentations at scientific and medical conference presentations;
- our plans and ability to expand our laboratory operations;
- our relationships with our suppliers from whom we obtain laboratory reagents, equipment, or other materials which we use in our molecular information platform, some of which are sole source arrangements;
- anticipated increases in our sales and marketing costs due to expansions in our sales force and marketing activities within and outside of the United States;

- our ability to operate outside of the United States in compliance with evolving legal and regulatory requirements;
- our ability to meet future anticipated demand by making additional investments in personnel, infrastructure, and systems to scale our laboratory operations;
- federal, state, and foreign regulatory requirements, including potential United States Food and Drug Administration, or FDA, regulation of our molecular information services or future services;
- our plans to seek approval from the FDA or other regulatory authorities for certain of our services or future services, as well as our ability to secure such approvals;
- our ability to protect and enforce our intellectual property rights, including our trade secret protected proprietary rights in our molecular information platform;
- our anticipated cash needs and our estimates regarding our capital requirements and our needs for additional financing, as well as our ability to obtain such additional financing on reasonable terms;
- our ability to recognize the benefits of our broad strategic collaboration with affiliates of Roche Holdings, Inc. and Roche's ability to successfully market and sell our services outside of the United States;
- our ability to borrow all available amounts under our credit facility with Roche Finance Ltd, and our ability to comply with our covenants and other obligations contained in the credit agreement;
- anticipated trends and challenges in our business and the markets in which we operate; and
- other factors discussed elsewhere in this Quarterly Report on Form 10-Q.

Any forward-looking statements in this Quarterly Report on Form 10-Q reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Part II, Item 1A. "Risk Factors" in this Quarterly Report and our prior filings with the Securities and Exchange Commission. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Unless the context requires otherwise, references in this Quarterly Report to "we," "us", "our" and "Foundation" refer to Foundation Medicine, Inc. and our subsidiaries. We own various U.S. federal trademark registrations and applications, and unregistered trademarks and service marks. Foundation Medicine®, FoundationOne®, FoundationACT®, Interactive Cancer Explorer®, FoundationICE®, GeneKit®, Once. And for All®, and The Molecular Information Company® are all registered trademarks of Foundation Medicine in the United States, and several of these marks are at various stages of the registration process in other countries. FoundationOne CDx™, FoundationFocus™, FoundationCORE™, PatientMatch™, Precision Medicine Exchange Consortium™, SmartTrials™, and FoundationACCESS™ are also trademarks of Foundation Medicine. Other trademarks or service marks that may appear in this Quarterly Report are the property of their respective holders. For convenience, we do not use the ® and ™ symbols in each instance in which one of our trademarks appears throughout this Quarterly Report, but this should not be construed as any indication that we will not assert, to the fullest extent under applicable law, our rights thereto.

FOUNDATION MEDICINE, INC.

REPORT ON FORM 10-Q

For the Quarterly Period Ended June 30, 2018

FOUNDATION MEDICINE, INC.
Condensed Consolidated Balance Sheets
(unaudited)

(In thousands, except share and per share data)

	June 30, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 53,418	$ 71,404
Accounts receivable	40,939	19,967
Receivable due from Roche	11,402	10,159
Inventory	25,815	13,171
Prepaid expenses and other current assets	5,641	9,118
Total current assets	137,215	123,819
Property and equipment, net	50,778	41,119
Restricted cash	2,305	2,305
Other assets	3,142	1,760
Total assets	$ 193,440	$ 169,003
Liabilities and stockholders' (deficit) equity		
Current liabilities:		
Accounts payable	$ 28,834	$ 21,926
Accrued expenses and other current liabilities	32,256	36,745
Deferred revenue	10,720	2,212
Roche related-party deferred revenue	8,190	3,742
Current portion of deferred rent	1,854	1,818
Total current liabilities	81,854	66,443
Deferred rent, net of current portion and other non-current liabilities	10,122	10,892
Indebtedness to Roche - non-current	110,000	60,000
Commitments and contingencies (Note 15)		
Stockholders' (deficit) equity:		
Common stock, $0.0001 par value, 150,000,000 shares authorized; 37,147,273 and 36,541,770 shares issued and outstanding at June 30, 2018 and December 31, 2017, respectively	4	4
Additional paid-in capital	550,511	537,904
Accumulated other comprehensive (loss) income	(200)	109
Accumulated deficit	(558,851)	(506,349)
Total stockholders' (deficit) equity	(8,536)	31,668
Total liabilities and stockholders' (deficit) equity	$ 193,440	$ 169,003

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

FOUNDATION MEDICINE, INC.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited)

(In thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Revenue:				
Molecular information services	$ 38,702	$ 24,777	$ 70,478	$ 40,371
Related-party molecular information services from Roche	12,005	5,520	26,820	11,024
Pharma research and development services	3,732	1,215	8,514	2,302
Related-party pharma research and development services from Roche	2,567	3,492	4,034	7,635
Total revenue	57,006	35,004	109,846	61,332
Costs and expenses:				
Cost of molecular information services	22,676	19,537	43,955	36,654
Cost of related-party molecular information services from Roche	4,800	2,045	10,748	2,945
Selling and marketing	17,141	17,115	34,621	33,551
General and administrative	19,771	17,648	40,466	32,925
Research and development	24,702	22,973	48,561	46,258
Total costs and expenses	89,090	79,318	178,351	152,333
Loss from operations	(32,084)	(44,314)	(68,505)	(91,001)
Interest (expense) income, net	(1,477)	56	(2,471)	146
Other income	182	—	182	144
Net loss	$ (33,379)	$ (44,258)	$ (70,794)	$ (90,711)
Other comprehensive (loss)/income:				
Unrealized gain/(loss) on available-for-sale securities	—	12	—	(6)
Foreign currency translation adjustment	(23)	102	(309)	85
Total other comprehensive (loss)/income	(23)	114	(309)	79
Comprehensive loss	$ (33,402)	$ (44,144)	$ (71,103)	$ (90,632)
Net loss per common share, basic and diluted	$ (0.90)	$ (1.24)	$ (1.92)	$ (2.55)
Weighted-average common shares outstanding, basic and diluted	37,068,518	35,660,430	36,931,510	35,544,003

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

FOUNDATION MEDICINE, INC.
Condensed Consolidated Statements of Cash Flows
(unaudited)

(In thousands)

	Six Months Ended June 30,	
	2018	**2017**
Operating activities		
Net loss	$ (70,794)	$ (90,711)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	10,715	8,841
Stock-based compensation expense	7,293	13,125
Amortization of premiums and discounts on marketable securities	—	18
Gain on disposal of long-lived assets	—	(139)
Gain on equity investment	(182)	—
Changes in operating assets and liabilities:		
Accounts receivable	(3,759)	(5,439)
Receivable from Roche	(1,216)	(2,076)
Inventory	(12,679)	1,655
Prepaid expenses and other current assets	4,165	195
Other assets	(627)	133
Accounts payable	3,631	4,430
Accrued expenses and other current liabilities	(8,752)	4,184
Deferred rent and other non-current liabilities	(736)	(126)
Deferred revenue	8,352	(178)
Roche related-party deferred revenue	4,370	(5)
Net cash used in operating activities	(60,219)	(66,093)
Investing activities		
Purchases of property and equipment	(12,997)	(6,705)
Purchases of marketable securities and other investments	—	(4,996)
Proceeds from maturities of marketable securities	—	49,390
Net cash (used in) provided by investing activities	(12,997)	37,689
Financing activities		
Proceeds from indebtedness to Roche	50,000	—
Proceeds from stock option exercises	5,316	2,188
Net cash provided by financing activities	55,316	2,188
Net decrease in cash, cash equivalents, and restricted cash	(17,900)	(26,216)
Effect of exchange rate changes on cash and cash equivalents	(86)	41
Cash, cash equivalents, and restricted cash at beginning of period	73,709	65,012
Cash, cash equivalents, and restricted cash at end of period	$ 55,723	$ 38,837
Supplemental disclosure of non-cash investing and financing activities		
Cash paid for interest	$ 2,212	$ 150
Acquisition of property and equipment included in accounts payable and accrued expenses	$ 11,690	$ 1,247

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

1. Nature of Business and Basis of Presentation

Foundation Medicine, Inc., and its wholly-owned subsidiaries, Foundation Medicine Securities Corporation and FMI Germany GmbH (collectively, the "Company"), is a molecular information company focused on fundamentally changing the way in which patients with cancer are evaluated and treated. The Company believes an information-based approach to making clinical treatment decisions based on comprehensive genomic profiling ("CGP") will become a standard of care for patients with cancer. The Company derives revenue from selling services that are enabled by its molecular information platform to physicians and biopharmaceutical companies.

The Company's molecular information services for genomic profiling, FoundationOne CDx, an FDA-approved broad companion diagnostic assay for solid tumors, FoundationOne for solid tumors, FoundationOneHeme for hematologic malignancies and sarcomas, and FoundationACT, a blood-based (liquid biopsy) assay to measure circulating tumor DNA ("ctDNA"), are widely available comprehensive genomic profiles designed for use in the routine care of patients with cancer. Following the United States Food & Drug Administration's ("FDA") approval of FoundationOne CDx in November 2017, the Centers for Medicare & Medicaid Services ("CMS") issued a final National Coverage Determination ("NCD") in March 2018 that establishes nationwide Medicare coverage for FoundationOne CDx for all solid tumor types when ordered by the patient's treating physician for Medicare beneficiaries with advanced cancer (*i.e.*, either recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer), who either have not been previously tested using FoundationOne CDx for the same primary diagnosis of cancer or are seeking repeat testing with FoundationOne CDx for a new primary cancer diagnosis, and continue to seek further cancer therapy.

To accelerate its commercial growth and enhance its competitive advantage, the Company is developing and commercializing new molecular information services for physicians and biopharmaceutical companies, strengthening its commercial organization, introducing new marketing, education and provider engagement efforts, growing its molecular information knowledgebase, called FoundationCORE, pursuing reimbursement from regional and national third-party payors, publishing scientific and medical advances, and fostering relationships throughout the oncology community.

The accompanying condensed consolidated financial statements are unaudited. In the opinion of management, the unaudited condensed consolidated financial statements contain all adjustments considered normal and recurring and necessary for their fair presentation. Interim results are not necessarily indicative of results to be expected for the year. These interim financial statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and in accordance with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, these unaudited condensed consolidated financial statements do not include all of the information and footnotes necessary for a complete presentation of financial position, results of operations, comprehensive loss and cash flows. The Company's audited consolidated financial statements as of and for the year ended December 31, 2017 included information and footnotes necessary for such presentation and were included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 7, 2018. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and notes thereto as of and for the year ended December 31, 2017.

On June 19, 2018, the Company entered into an Agreement and Plan of Merger, dated as of June 18, 2018, as amended (the "Merger Agreement"), with Roche Holdings, Inc., a Delaware corporation ("Parent" or "Roche Holdings"), and 062018 Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), providing for the acquisition of the Company by Parent in a two-step all-cash transaction, consisting of a tender offer, followed by a subsequent back-end merger of Merger Sub with and into the Company (the "Merger"), with the Company surviving the Merger as an indirect wholly owned subsidiary of Roche Holding Ltd. Pursuant to the Merger Agreement, Parent caused Merger Sub to conduct a tender offer (the "Offer") for all of the issued and outstanding shares of common stock, par value $0.0001 per share (the "Shares"), of the Company at a price of $137.00 per Share (the "Offer Price"), net to the seller in cash, without interest and subject to any applicable withholding of taxes, and on the terms and conditions set forth in the Merger Agreement.

The Offer expired at 12:00 midnight, New York City time, at the end of the day on Monday, July 30, 2018. Citibank, N.A., in its capacity as depositary for the Offer (the "Depositary"), advised that, as of the expiration of the Offer, a total of 12,535,376 Shares (excluding Shares with respect to which notices of guaranteed delivery were delivered and for which certificates were not yet delivered) were validly tendered and not validly withdrawn pursuant to the Offer, representing approximately 77.3% of the Shares outstanding as of the expiration of the Offer (excluding those Shares held by Roche Holdings and its affiliates) and, when taken together with the Shares owned by Roche Holdings and its affiliates, representing approximately 90.1% of the Shares outstanding as of the expiration of the Offer. In addition, the Depositary advised that, as of July 31, 2018, Notices of Guaranteed Delivery were delivered with respect to approximately 1,342,573 Shares that had not yet been tendered, representing approximately 3.6% of the outstanding Shares. Each condition to the Offer was satisfied, and Merger Sub irrevocably accepted for payment all Shares that were validly tendered and not withdrawn.

On July 31, 2018, the Merger was completed pursuant to Section 251(h) of the DGCL, with no vote of the Company's stockholders required to consummate the Merger. Upon the consummation of the Merger, the Company became an indirect wholly owned subsidiary of Roche Holding Ltd. The aggregate consideration paid by Merger Sub in the Offer and Merger to purchase all outstanding Shares (other than the Shares owned by Roche Holdings and its affiliates) and other equity-based interests of the Company pursuant to the Offer and the Merger, was approximately $2.2 billion.

In connection with the consummation of the Merger, the Company (i) notified The Nasdaq Stock Market ("Nasdaq") of the consummation of the Merger and (ii) requested that Nasdaq (x) halt trading in the Shares on the morning of July 31, 2018, prior to market open, and suspend trading of the Shares effective as of the close of business on July 31, 2018 and (y) file with the SEC a Notification of Removal from Listing and/or Registration on Form 25 to delist and deregister the Shares under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Company has filed with the SEC a Certification and Notice of Termination of Registration on Form 15 under the Exchange Act, requesting that the Company's reporting obligations under Sections 13 and 15(d) of the Exchange Act be suspended.

2. Summary of Significant Accounting Policies

Summary of 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, 2017, and the notes thereto, which are included in the Company's Annual Report on Form 10-K. 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, 2017 are reflected below.

Revenue Recognition

The Company derives revenue from the provision of molecular information services provided to its ordering physicians and biopharmaceutical customers, as well as from pharma research and development services provided to its biopharmaceutical customers. Molecular information services include molecular profiling and the delivery of other molecular information derived from the Company's platform. Pharma research and development services include the development of new platforms and information solutions, including companion diagnostic development. The Company currently receives payments from commercial third-party payors, Medicare, certain hospitals and cancer centers with which it has direct-bill relationships, individual patients, and its biopharmaceutical customers. All amounts are due to be paid in accordance with the customers agreed upon payment terms and we have not identified the existence of any significant financing components.

Effective January 1, 2018, the Company began recognizing revenue in accordance with FASB ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). The Company adopted ASC 606 utilizing the modified retrospective method, meaning the cumulative effect of applying the standard was recognized to opening retained earnings as of January 1, 2018. ASC 606 provides for a five-step 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.

Performance Obligations

Molecular Information Services

Clinical

Our clinical contracts included within molecular information services typically have a single performance obligation to transfer molecular profiling services to either a patient or a facility. In certain limited contracted scenarios, such as arrangements with academic medical centers, the transaction price is stated within the contract and is therefore fixed consideration. For most of our clinical volume, we identified the patient as the customer in Step 1 of the model and have determined an implied contract exists with the patient in Step 1. As such, a stated contract price does not exist and the transaction price for each contract represents variable consideration. In developing the estimate of variable consideration, we utilize the expected value method under a portfolio approach. Our estimate requires significant judgment and is developed using historical reimbursement data from payors and patients, as well as known current reimbursement trends not reflected in the historical data. As these contracts typically have a single performance obligation, no allocation of the transaction price is required in Step 4 of the model. Control over molecular information services is transferred to our ordering physicians at a point in time. Specifically, we determined the customer obtains control of the promised service upon our delivery of the test results. Certain incremental costs, such as commissions, are incurred in obtaining clinical contracts. We have elected to utilize the practical expedient to expense incremental costs of obtaining a contract that meet the capitalization criteria, as the amortization period of any contract acquisition asset would be one year or less due to the short-term nature of our clinical contracts.

Biopharma

Our biopharma contracts included within molecular information services may include single or multiple performance obligations depending on the contract, and may include different molecular information service offerings, such as molecular profiling, provision of data through either database queries or subscription access to our platform, and clinical trial enrollment assistance, as separately identifiable from other promises in the contracts and therefore distinct performance obligations.

The transaction price in biopharma molecular information service contracts is typically fixed consideration. In certain instances, contracts may include variable consideration. In these contracts, variable consideration is estimated utilizing the expected value method. The primary method used to determine standalone selling price for the biopharma molecular information services is observable standalone selling price. When standalone selling price is not directly observable, the primary method used to estimate standalone selling price for molecular information services is the adjusted market assessment approach, under which we evaluate the market in which we sell the services and estimate the price that a customer in that market would be willing to pay for those services.

Control over biopharma molecular information services from molecular profiling and database queries is transferred to customers at a point in time. We determined the customer obtains control of the promised service upon delivery of the test results or the delivery of responses to database queries to the biopharma partner. Control over biopharma molecular information services from subscription access to our data platform is transferred to customers ratably over time. We determined that the customer obtains control of the promised service as we host the content throughout the contract term. Control over biopharma molecular information services from clinical trial enrollment assistance is transferred to customers ratably over time. We determined that the customer obtains control of the promised service as we stand ready to perform such services throughout the contract term.

Pharma Research and Development Services

Our biopharma contracts included within pharma research and development services may include single or multiple performance obligations depending on the contract. Research and development ("R&D") services typically represent a single performance obligation as the Company performs a significant integration service for the individual goods or services in the R&D workstream, such as analytical validation and regulatory submissions. The individual promises are not separately identifiable from other promises in the contracts and, therefore, are not distinct. However, in certain contracts, a partner may engage the Company for multiple distinct R&D workstreams which are both capable of being distinct and separately identifiable from other promises in the contracts and, therefore, distinct performance obligations. Additionally, for regulatory contracts in pursuit of approval of a companion diagnostic assay, the Company identifies a performance obligation for commercial availability of the assay subsequent to obtaining regulatory approval.

The transaction price can consist of a combination of an upfront fee, performance-based development milestones, cost reimbursement, fixed per sample fees, commercial royalties, and commercial milestones. With the exception of upfront and fixed per sample fees, the other forms of compensation represent variable consideration. Variable consideration in the form of cost reimbursement and commercial royalties is estimated using the expected value method. Variable consideration in the form of development and commercial milestones is estimated using the most likely amount method. All variable consideration is constrained such that it is probable a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Application of the constraint for variable consideration to milestone payments is an area that requires significant judgment. In making this assessment, the Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be managed to achieve the respective milestone and the level of effort and investment required to achieve the respective milestone.

The primary method used to estimate standalone selling price for the R&D service performance obligations is the expected cost plus a margin approach, under which we forecast our expected costs of satisfying each performance obligation and then add an appropriate margin for that distinct good or service. The primary method used to estimate standalone selling price for a commercial availability performance obligation is the adjusted market assessment approach, under which we evaluate the market in which we sell the services and estimate the price that a customer in that market would be willing to pay for those services. The estimation of standalone selling price is an area that requires significant judgment, as it impacts the allocation objective in Step 4 of the model. Revenue will be recognized over time for R&D services and commercial availability services. Specifically, for R&D services we will recognize revenue using an input method to measure progress, utilizing costs incurred to-date relative to total expected costs as our measure of progress. For commercial availability services, we will recognize revenue using an input method to measure progress, resulting in a time-elapsed measure of progress.

The Company performs R&D services as part of its normal activities. The Company records payments for these services as Pharma research and development services revenue in the Consolidated Statements of Operations and Comprehensive Loss. The R&D costs incurred by the Company under these arrangements are included as Research and development expenses in the Company's Consolidated Statements of Operations and Comprehensive Loss given these costs are related to the development of new services to be owned and offered by the Company to its customers.

Significant Judgments and Contract Estimates

Molecular Information Services

For our clinical molecular information services, we have concluded that an implied contract exists with the patient. This is a significant judgment as contract existence is a requirement to applying the general five-step model of ASC 606.

Accounting for clinical revenue contracts includes estimation of the transaction price, defined as the amount we expect to be entitled to receive in exchange for providing the services under the contract. Due to our out-of-network status with the majority of payors, estimation of the transaction price represents variable consideration. In order to estimate variable consideration, we utilize a portfolio approach in which payors with similar reimbursement experience are grouped into portfolios. Our estimates of variable consideration are based primarily on historical reimbursement data. Certain assumptions will also be adjusted based on known and anticipated factors not reflected in the historical reimbursement data. We monitor these accrual estimates at each reporting period based on actual cash collections in order to assess whether a revision to the estimate is required. Both the initial accrual estimate and any subsequent revision to the estimate contain uncertainty and require the use of judgment in the estimation of the transaction price and application of the constraint for variable consideration.

Pharma Research and Development Services

Accounting for biopharma revenue contracts includes several judgments and estimates which impact the timing and pattern of revenue recognition. Specifically, biopharma contracts require evaluation of separability of promised services, estimation of the transaction price, allocation of the transaction price to performance obligations, and estimation of measure of progress toward complete satisfaction for those performance obligations satisfied over time.

Certain biopharma contracts, typically those for pharma research and development services, contain promises to deliver multiple services. The process for evaluating contracts for material promises, in contrast to immaterial promises or administrative tasks, requires judgment. Once material promises have been identified, we then evaluate whether these promises are both capable of being distinct and distinct within the context of the contract. If both of these criteria are satisfied, a separate performance obligation will be identified. If both criteria are not satisfied, certain promises will be combined in the identification of a combined performance obligation. In assessing whether a promised service is capable of being distinct, the Company considers whether the customer could benefit from the service either on its own or together with other resources that are readily available to the customer, including factors such as the research, development, and commercialization capabilities of a third party and the availability of the associated expertise in the general marketplace. In assessing whether a promised service is distinct within the context of the contract, the Company considers whether we provide a significant integration of the services, whether the services significantly modify or customize one another, or whether the services are highly interdependent or interrelated.

The nature of certain biopharma contracts, primarily contracts for pharma research and development services, requires that the transaction price must be estimated, including application of the constraint to performance-based milestones. The Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be managed to achieve the respective milestone and the level of effort and investment required to achieve the respective milestone in making this assessment. Application of the constraint is based on our historical experience with similar milestones, the degree of complexity and uncertainty associated with each milestone, and whether achievement of the milestone is dependent on parties other than the Company. The constraint for variable consideration is applied such that it is probable a significant reversal of revenue will not occur when the uncertainty associated with the contingency is resolved. Application of the constraint for variable consideration is updated at each reporting period as a revision to the estimated transaction price.

Once the transaction price has been estimated, the standalone selling price for each identified performance obligation must be determined in order to allocate the transaction price to performance obligations. Observable standalone selling price is used when available. When an observable price is not available, standalone selling price is estimated using either the adjusted market assessment approach or the expected cost plus a margin approach, utilizing the approach which maximizes the use of observable inputs. Under the adjusted market assessment approach, we utilize pricing on historical similar transactions as well as competitor pricing as relevant inputs. Under the expected cost plus a margin approach, we utilize internal cost models for required personnel and sample resources as the relevant inputs.

Lastly, once the transaction price has been allocated to the identified performance obligations, we must determine the timing and pattern of revenue recognition. For certain biopharma services, particularly pharma research and development services satisfied over time, this requires estimation of the total cost pool in order to determine our measure of progress under the input method. This cost pool is the same cost model utilized to estimate standalone selling price under the expected cost plus a margin approach. At the end of each reporting period, we track actual costs incurred in order to measure progress under the input method and recognize revenue accordingly.

For further discussion on the Company’s revenue recognition, refer to Note 4: Revenue and Note 7: Contract Balances.

Reclassifications

A reclassification was made to other assets within the prior year Condensed Consolidated Statement of Cash Flows to reflect the adoption of ASU 2016-18. This reclassification had no net effect on the Company's consolidated results.

Recent Accounting Pronouncements

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

The Company adopted ASU 2014-09 Revenue from Contracts with Customers and all related amendments (collectively codified as ASC 606) on January 1, 2018 utilizing the modified retrospective method, meaning the cumulative effect of applying the standard to all contracts that were not completed as of the date of initial application was recognized to opening retained earnings as of January 1, 2018. The Company identified certain differences in accounting for revenue recognition as a result of adoption of ASC 606 which are expected to have a material impact on its financial position or results of operations. These differences are discussed below and any other identified policy differences are not expected to have a material impact on the Company's financial position or results of operations.

For molecular information services revenue, the Company identified a difference in accounting for certain revenue arrangements from the application of the new revenue accounting standard as compared to the previous revenue accounting standards. Historically, for certain clinical customers, the Company deferred revenue recognition until cash receipt when the price pursuant to the underlying customer arrangement was not fixed and determinable and collectability was not reasonably assured. Under the new standard, this is considered variable consideration. For these arrangements, the Company will record an estimate of the transaction price, subject to the constraint in the new standard for variable consideration, as revenue at the time of delivery. This estimate will be monitored in subsequent periods and adjusted as necessary based on actual collection experience. This will result in earlier revenue recognition as compared to previous revenue recognition.

For pharma research and development services revenue, the Company identified a difference in accounting for certain contracts from the application of the new revenue accounting standard as compared to previous revenue accounting standards. Historically, for arrangements with regulatory and other developmental milestone payments, the Company limited revenue recognition based on the right to invoice the customer. Under the new standard, for these arrangements, the Company will constrain revenue such that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Based on the facts and circumstances associated with each milestone, this could result in a change to the timing and pattern of revenue recognition as compared to previous accounting policy.

Effective January 1, 2018, the Company recognizes revenue in accordance with ASC 606. Comparative information from prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods.

The cumulative effect of changes made to the Condensed Consolidated Balance Sheet at January 1, 2018 for the adoption of ASC 606 were as follows (in thousands):

	Balance at December 31, 2017	Adjustments Due to ASC 606	Balance at January 1, 2018
Assets:			
Accounts receivable	$ 19,967	$ 17,243	$ 37,210
Prepaid expenses and other current assets	9,118	710	9,828
Other assets	1,760	573	2,333

	Balance at December 31, 2017	Adjustments Due to ASC 606	Balance at January 1, 2018
Liabilities:			
Deferred revenue	$ 2,212	$ 156	$ 2,368
Roche related-party deferred revenue	3,742	78	3,820

	Balance at December 31, 2017	Adjustments Due to ASC 606	Balance at January 1, 2018
Equity:			
Accumulated deficit	$ (506,349)	$ 18,292	$ (488,057)

In accordance with ASC 606 requirements under the modified retrospective method of adoption, the disclosure of the impact of adoption on our Condensed Consolidated Statement of Operations and Condensed Consolidated Balance Sheet was as follows (in thousands):

	For the three months ended June 30, 2018		
Revenue:	**As Reported Under ASC 606**	**Effect of Change** Higher/(Lower)	**Balances Without Adoption of ASC 606**
Molecular information services	$ 38,702	$ 1,890	$ 40,592
Related-party molecular information services from Roche	12,005	1,995	14,000
Pharma research and development services	3,732	4,050	7,782
Related-party pharma research and development services from Roche	2,567	—	2,567

	For the six months ended June 30, 2018		
Revenue:	**As Reported Under ASC 606**	**Effect of Change** Higher/(Lower)	**Balances Without Adoption of ASC 606**
Molecular information services	$ 70,478	$ 5,102	$ 75,580
Related-party molecular information services from Roche	26,820	1,620	28,440
Pharma research and development services	8,514	128	8,642
Related-party pharma research and development services from Roche	4,034	—	4,034

	June 30, 2018		
Assets:	**As Reported Under ASC 606**	**Effect of Change** Higher/(Lower)	**Balances Without Adoption of ASC 606**
Accounts receivable	$ 40,939	$ (12,077)	$ 28,862
Prepaid expenses and other current assets	5,641	(177)	5,464
Other assets	3,142	(357)	2,785

Liabilities:	**As Reported Under ASC 606**	**Effect of Change** Higher/(Lower)	**Balances Without Adoption of ASC 606**
Deferred revenue	$ 10,720	$ (136)	$ 10,584
Roche related-party deferred revenue	8,190	(1,259)	6,931

Equity:	**As Reported Under ASC 606**	**Effect of Change** Higher/(Lower)	**Balances Without Adoption of ASC 606**
Accumulated deficit	$ (558,851)	$ (11,216)	$ (570,067)

ASC 606 did not have an aggregate impact on the Company's net cash used in operating activities, but resulted in offsetting changes in certain assets and liabilities presented within net cash used in operating activities in the Company's Condensed Consolidated Statement of Cash Flows, as reflected in the above tables.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"). ASU 2016-01 provides guidance about how to recognize, measure, present and make disclosures about certain financial assets and financial liabilities under Topic 825. ASU 2016-01 became effective for fiscal years beginning after December 15, 2017. The adoption of ASU 2016-01 did not have a material effect on the Company's consolidated financial statements or disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases* ("ASU 2016-02"), to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities, including for operating leases, on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company is still performing its assessment of ASU 2016-02, however expects that substantially all of its operating lease commitments will be subject to the new guidance.

In November 2016, the FASB issued ASU 2016-18, *Restricted Cash* ("ASU 2016-18"). ASU 2016-18 provides guidance on the classification of restricted cash and cash equivalents in the statement of cash flows. Although it does not provide a definition of

restricted cash or restricted cash equivalents, it states that amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of period total amounts shown on the statement of cash flows. ASU 2016-18 became effective for fiscal years beginning after December 15, 2017. The adoption of ASU 2016-18 did not have a material effect on the Company's consolidated financial statements or disclosures.

In May 2017, the FASB issued ASU 2017-09, *Scope of Modification Accounting* ("ASU 2017-09"). ASU 2017-09 provides guidance about which terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. ASU 2017-09 became effective for fiscal years beginning after December 15, 2017. The adoption of ASU 2017-09 did not have an effect on the Company's consolidated financial statements or disclosures.

3. Significant Agreements

Roche Holdings, Inc. and its affiliates

Summary of the Transaction

On January 11, 2015, the Company signed a broad strategic collaboration with Roche Holdings, Inc. and certain of its affiliates (collectively, "Roche") to further advance the Company's leadership position in genomic analysis and molecular information solutions in oncology. The transaction, which is a broad multi-part arrangement that includes an R&D collaboration, an ex-U.S. commercial collaboration, a U.S. medical education collaboration, and an equity investment with certain governance provisions, closed on April 7, 2015.

Under the terms of the transaction, Roche (a) made a primary investment of $250,000,000 in cash through the purchase of 5,000,000 newly issued shares of the Company's common stock at a purchase price of $50.00 per share and (b) completed a tender offer to acquire 15,604,288 outstanding shares of the Company's common stock at a price of $50.00 per share. Immediately following the closing of the transaction, Roche owned approximately 61.3% of the outstanding shares. As of June 30, 2018, Roche's ownership was approximately 56.6% of the outstanding shares. Upon the closing of the transaction, the size of the Board of Directors of the Company ("Board") was increased to nine, including three designees of Roche. In February 2017, the Board was increased to ten members. In June 2017, the Board was decreased to nine members when a director retired from the Board at our 2017 annual meeting of stockholders.

The Company assessed the agreements related to each of the R&D collaboration, an ex-U.S. commercial collaboration, and the U.S. medical education collaboration and determined they should be treated as separate contracts for accounting purposes.

Summary of the R&D Collaboration Agreement

Under the terms of the Collaboration Agreement by and among the Company, F. Hoffmann-La Roche Ltd, and Hoffmann-La Roche Inc., dated January 11, 2015 (as amended, the "R&D Collaboration Agreement"), Roche could pay the Company more than $150,000,000 over a period of five years to access its molecular information platform, to reserve capacity for sample profiling, and to fund R&D programs. Amounts under the R&D Collaboration Agreement will be received as services are performed and obligations are fulfilled under each platform program. Roche will utilize the Company's molecular information platform to standardize sample profiling conducted as part of its clinical trials, to enable comparability of clinical trial results for R&D purposes, and to better understand the potential for combination therapies. In addition, Roche and the Company will jointly develop solutions related to cancer immunotherapy testing, blood-based genomic analysis using ctDNA assays, and next generation companion diagnostics, each of which represents a distinct platform within the R&D Collaboration Agreement. The R&D Collaboration Agreement is governed by a Joint Management Committee ("JMC") formed by an equal number of representatives from the Company and Roche. There are also other sub-committees for each platform that will be established to oversee the day to day responsibilities of the respective platform. The JMC will, among other activities, review and approve R&D plans and establish and set expectations for the other platform sub-committees. The JMC and other sub-committees, although considered promises under the arrangement, are immaterial in relation to the entire arrangement and therefore were not identified as performance obligations.

On April 6, 2016, the Company and Roche entered into the First Amendment to the R&D Collaboration Agreement, which reduced certain restrictions on the Company's activities in immuno-oncology and revised certain criteria for the achievement of a development milestone.

On June 16, 2016, the Company and Roche entered into the Second Amendment to the R&D Collaboration Agreement, which set forth the terms of an omnibus development program to provide for R&D projects that do not fall within the scope of the other programs already covered by the R&D Collaboration Agreement. R&D reimbursements and milestone payments will be recognized using an input method measure of progress based on costs incurred by the Company.

On July 25, 2016, the Company and Roche entered into a Third Amendment to the R&D Collaboration Agreement, which modified certain exclusivity provisions relating to cancer immunotherapy.

On December 20, 2016, the Company and Roche entered into a Fourth Amendment to the R&D Collaboration Agreement, which further modified certain exclusivity provisions relating to cancer immunotherapy.

On September 8, 2017, the Company and Roche entered into a Fifth Amendment to the R&D Collaboration Agreement, which reduced certain exclusivity provisions relating to blood-based tumor mutational burden assays.

On November 1, 2017, the Company and Roche entered into a Sixth Amendment to the R&D Collaboration Agreement, which further modified certain exclusivity provisions relating to cancer immunotherapy.

On July 10, 2018, the Company and Roche entered into a Seventh Amendment to the R&D Collaboration Agreement, which modified certain capacity and fee provisions related to the molecular information platform program, effective as of April 7, 2018.

Molecular Information Platform Program

Under the molecular information platform program within the R&D Collaboration Agreement, the following promises were identified: (i) cross-licenses for access to relevant intellectual property ("IP"), (ii) sample profiling, (iii) access to the Company's molecular information database, and (iv) full-time equivalent persons ("FTEs") per year for performance of database queries and the delivery of results.

The Company assessed which promises within the arrangement are distinct from the other promises and identified the following separate performance obligations: (i) sample profiling and (ii) access to the Company's molecular information database and FTEs per year for the performance of database queries and the delivery of results. The cross-licenses grant each party access to relevant IP to perform under the contract or to exploit the promised services. The licenses are delivered at the inception of the arrangement and relate to development and sample profiling work performed under the platform. The Company does not sell the licenses separately as they are closely connected to the development and sample profiling activities and have little value to Roche without these other promised services. Therefore, the licenses are combined with the other performance obligations identified under the molecular information platform program and are not considered distinct.

The Company identified an estimated transaction price of approximately $85,000,000 related to the molecular information platform program, which was allocated to the individual performance obligations based on standalone selling price. Revenue related to sample profiling will be recognized at the point in time at which test results are delivered to Roche. The database access and FTE payments will be recognized using a time-elapsed measure of progress over the five-year contract life. The FTEs will perform database queries and will deliver results of the requested database queries. The value to Roche is not only the access to the database, but also the service being performed by the FTEs. Therefore, the Company concluded the FTEs should be combined with the database access as one performance obligation.

Immunotherapy Testing Platform Development Program

Under the immunotherapy testing platform development program within the R&D Collaboration Agreement, the following promises were identified: (i) cross-licenses for access to relevant IP and (ii) obligations to perform R&D services for immuno-biomarker discovery and signature identification.

The Company assessed which promises within the arrangement are distinct from the other promises and identified a single performance obligation for the performance of R&D services for immuno-biomarker discovery and signature identification. The cross-licenses grant each party access to relevant IP of the other party to perform such party's obligations under the contract and to exploit the promised service. The licenses are delivered at the inception of the arrangement and relate to R&D work performed under the platform. The Company does not sell the licenses separately as they are closely connected to the R&D activities and have little value to Roche without these other promised services. Therefore, the licenses are combined with the other performance obligation identified under the immunotherapy testing platform development program and are not considered distinct.

Under this platform, Roche will reimburse the Company for certain R&D costs incurred related to the immuno-biomarker discovery and signature identification activities, as well as costs incurred in the development of immunotherapy assays for clinical studies. In addition, Roche will be required to make certain milestone payments upon the achievement of specified clinical events under the immunotherapy testing platform development program. Clinical milestone payments up to $6,600,000 in the aggregate are triggered upon the initiation of Roche clinical trials using immunotherapy assays developed under the R&D Collaboration Agreement. The R&D reimbursements and clinical milestone payments will be recognized using an input method measure of progress based on costs incurred by the Company.

Circulating Tumor DNA (ctDNA) Platform Development Program

Under the ctDNA platform development program within the R&D Collaboration Agreement, the following promises were identified: (i) cross-licenses for access to relevant IP and (ii) obligations to perform R&D services for the development of a ctDNA clinical trial assay, including its analytical validation.

The Company assessed which promises within the arrangement are distinct from the other promised services and identified a single performance obligation for the performance of R&D services for the development of a ctDNA clinical trial assay. The cross-licenses grant each party access to relevant IP of the other party to perform such party's obligations under the contract and to exploit the promised service. The licenses are delivered at the inception of the arrangement and relate to R&D work performed under the platform. The Company does not sell the licenses separately as they are closely connected to the R&D activities and have little value to Roche without these other promised services. Therefore, the licenses are combined with the other performance obligation identified under the ctDNA platform development program and are not considered distinct.

The Company was responsible for all R&D costs under the ctDNA platform development program. Roche was required to make certain milestone payments upon the achievement of specified events. Milestone payments equal to $12,000,000 in the aggregate were triggered upon successful analytical validation of a ctDNA clinical trial assay and delivery of a ctDNA clinical trial assay for use in Roche clinical trials. All milestones were recognized at the point in time at which benefit transferred to Roche.

Companion Diagnostics (CDx) Development Program

Under the Companion Diagnostic (CDx) Development Program within the R&D Collaboration Agreement, the following promises were identified: (i) cross-licenses for access to relevant IP, (ii) obligations to perform R&D services for the development of CDx assays for use in connection with certain Roche products, and (iii) obligations to maintain commercial availability of our assay inclusive of Roche biomarkers.

The Company assessed which promises within the arrangement are distinct from the other promised services and identified the following separate performance obligations: (i) obligation to perform R&D services for the development of a CDx assay and (ii) obligation to maintain commercial availability of our assay inclusive of Roche biomarkers. The cross-licenses grant each party access to relevant IP of the other party to perform such party's obligations under the contract and to exploit the promised services. The licenses are delivered at the inception of the arrangement and relate to R&D work performed under the platform. The Company does not sell the licenses separately as they are closely connected to the R&D activities and have little value to Roche without these other promised services. Therefore, the licenses are combined with the obligation to perform R&D services for the development of a CDx assay as a single performance obligation.

Under this platform, Roche reimbursed the Company for certain costs incurred related to R&D under the Companion Diagnostic (CDx) Development Program with respect to approved and investigational markers. In addition, Roche was required to make certain milestone payments upon the achievement of specified regulatory and commercial events under the Companion Diagnostic (CDx) Development Program. Regulatory milestone payments of $600,000 were triggered upon obtaining FDA approval of a premarket approval application for each CDx product developed under the arrangement. The R&D reimbursements and regulatory milestone payments were recognized using an input method measure of progress based on costs incurred by the Company. Commercial milestone payments are triggered upon the performance of a specified number of CDx assays for certain commercial clinical diagnostic uses. Any commercial milestone payments received by the Company will be recognized using an input method to measure progress, resulting in a time-elapsed measure of progress.

Termination of the R&D Collaboration Agreement

The R&D Collaboration Agreement may be terminated by either the Company or Roche on a program-by-program basis, upon written notice, in the event of the other party's uncured material breach. Roche may also terminate the entire R&D Collaboration Agreement or an individual program under the R&D Collaboration Agreement for any reason upon written notice to the Company, subject to certain exceptions. If the R&D Collaboration Agreement is terminated, license and IP rights are returned to each party and the Company must return to Roche or dispose of any unused samples delivered for profiling purposes. If Roche terminates the R&D Collaboration Agreement as a result of a breach by the Company, Roche retains the license rights granted to certain IP of the Company, and the Company shall refund to Roche any reserved capacity fees and database access fees previously received by the Company that were unused based on the passage of time up to termination for the given contract year. If the R&D Collaboration Agreement is terminated by Roche without cause or by the Company due to a breach by Roche, the Company has a right to receive the contractual payments it would have expected to receive for each program had the agreement not been terminated.

Summary of the Ex-U.S. Commercialization Agreement

In addition to the R&D Collaboration Agreement, the Company entered into the Ex-U.S. Commercialization Agreement with Roche (as most recently amended and restated in February 2018, the "Ex-U.S. Commercialization Agreement") designed to facilitate the delivery of the Company's services outside the United States ("Ex-U.S.") in partnership with Roche. Pursuant to the Ex-U.S. Commercialization Agreement, on April 7, 2016, Roche obtained Ex-U.S. commercialization rights to the Company's existing services and to future co-developed services. The Company remains solely responsible for commercialization of its services within the United States. The selected geographic areas where Roche exercised its commercialization rights constitute the "Roche Territory." For those geographic areas that Roche does not select, the commercialization rights for such geographic areas revert back to the Company. The Ex-U.S. Commercialization Agreement is governed by the JMC. There is also a Joint Operational Committee ("JOC") that has

been established to oversee the activities under the Ex-U.S. Commercialization Agreement. The JMC will have the responsibilities as outlined under the R&D Collaboration Agreement. The JMC and JOC, although considered promises under the arrangement, are immaterial in relation to the entire arrangement and therefore were not identified as performance obligations.

Under the Ex-U.S. Commercialization Agreement, the following promises were identified: (i) the right, granted by means of a license, for Roche to market and sell the Company's services in the Roche Territory and (ii) obligations to perform sample profiling and other services relating to Company services sold by Roche in the Roche Territory. The Company concluded that the license is delivered at the inception of the arrangement. The Company does not sell the license separately as it is closely connected to the sample profiling and other services and has little value to Roche without these services being performed. Therefore, the promises identified will be combined as a single performance obligation under the Ex-U.S. Commercialization Agreement and revenue will be recognized at the point in time test results are delivered for each test sold by Roche.

Roche will reimburse the Company for costs incurred in performing sample profiling and other services relating to Company services sold by Roche in the Roche Territory. These reimbursements will be recognized as revenue in the period the sample profiling service has been completed. In addition, Roche will be required to make a one-time milestone payment of $10,000,000 when the aggregate gross margin on sales of certain of the Company's services reaches $100,000,000 in the Roche Territory in any calendar year. In the event Roche does not satisfy its specified commercialization obligations under the agreement, including its obligation to launch Company services in specific countries within a specified timeframe, after a cure period, Roche may be required to make penalty payments to the Company. This milestone payment and these penalty payments will be constrained and recognized in their entirety when the associated contingency is resolved as no enforceable right to payment exists until achievement.

The Company is entitled to receive, on a quarterly basis, tiered payments ranging from the mid-single digits to high-teens based on a percentage of the aggregate gross margin generated on sales of specified services in the Roche Territory during any calendar year. These payments are recognized in the period when tests are delivered.

The Ex-U.S. Commercialization Agreement may be terminated by either the Company or Roche in its entirety or on a country-by-country or product-by-product basis, upon written notice, in the event of the other party's uncured breach of its material obligations under the agreement. Roche may also terminate the Ex-U.S. Commercialization Agreement without cause on a product-by-product and/or country-by-country basis, upon written notice to the Company, after the initial five-year term. If the Ex-U.S. Commercialization Agreement is terminated, the license and IP rights granted by the Company to Roche terminate. In addition, if Roche terminates the Ex-U.S. Commercialization Agreement as a result of a breach by the Company, Roche may seek damages via arbitration or be eligible to receive either a one-time payment reflecting the value of the terminated services or a royalty on sales of the terminated products based on the royalty Roche would have paid the Company for the terminated products had the Ex-U.S. Commercialization Agreement not been terminated.

In April 2018, the Company announced a three-party collaboration with Roche and Dian Diagnostics Group, Co., Ltd. ("Dian") to integrate the Company's CGP assays into clinical patient care in mainland China and establish a collaboration with Dian for the purpose of implementing the Ex-U.S. Commercialization Agreement in China. Under the collaboration, Dian is the exclusive clinical sequencing partner in China for FoundationOne, FoundationACT and FoundationOneHeme, enabling the delivery of molecular information services associated with these tests for patients in China. Roche maintains commercial exclusivity for the Company's molecular information services in China, and in cooperation with Dian continues its current in-county activities to support the broad integration of CGP into clinical care.

Summary of the U.S. Education Collaboration Agreement

Within the United States, the Company has entered into the U.S. Education Collaboration Agreement with Genentech, Inc. ("Genentech"), an affiliate of Roche. Genentech has agreed to engage its pathology education team to provide information and medical education to health care providers regarding CGP in cancer. The Company will pay Genentech on a quarterly basis for costs incurred by Genentech in conducting the education activities based on a number of factors. The total amount of payments to be made over the course of the arrangement is immaterial and all payments will be expensed as incurred.

IVD Collaboration Agreement

On April 6, 2016, the Company entered into a Master IVD Collaboration Agreement (the "IVD Collaboration Agreement") with F. Hoffmann-La Roche Ltd and Roche Molecular Systems, Inc., which memorializes in a definitive agreement the terms set forth in that certain Binding Term Sheet for an In Vitro Diagnostics Collaboration, by and between F. Hoffmann-La Roche Ltd and the Company, which was entered into in connection with the Company's strategic collaboration with Roche.

The IVD Collaboration Agreement provides terms for the Company and Roche to collaborate non-exclusively to develop and commercialize *in vitro* diagnostic versions of certain existing Company tests, including FoundationOne and FoundationOneHeme, and future Company tests, including those developed under the R&D Collaboration Agreement.

The IVD Collaboration Agreement expires on April 7, 2020, unless earlier terminated as provided therein. Roche also has the right, in its sole discretion, to extend the term of the IVD Collaboration Agreement for additional two-year periods of time during any period of time in which Roche continues to hold at least 50.1% of the Company's capital stock. Either party may terminate the IVD Collaboration Agreement for an uncured breach of the agreement, or for insolvency or bankruptcy.

Biopharmaceutical Partner

In July 2012, the Company entered into a Master Services Agreement ("Services Agreement") with a biopharmaceutical partner ("Partner") to perform sample profiling at the Partner's request. The Services Agreement established the legal and administrative framework for the partnership between the entities. The Services Agreement also included a right for the Partner to initiate an exclusive negotiation with the Company for the development of a Companion Diagnostic ("CDx"). In March 2014, the Company and Partner expanded the scope of work by executing a Companion Diagnostic Agreement ("Amended Agreement"), thereby amending the Services Agreement to include the joint development and regulatory approval for a CDx. The Amended Agreement defined the term of the arrangement as the earlier of five years or receipt of certain regulatory approvals of a CDx. The Company concluded that the amendment to the original Services Agreement should be treated as a new agreement pursuant to ASC 606 as the Amended Agreement changed both the scope and price of the existing arrangement.

The Company identified six promises under the Amended Agreement: (i) cross-licenses for access to relevant IP, (ii) obligations to continue to perform sample profiling pursuant to the original Services Agreement, (iii) obligations to perform specific R&D activities for the development of a CDx assay for use in connection with the Partner's product, (iv) obligations to assist in obtaining regulatory approval of the Partner's product at its request, (v) obligations to perform analytical validation of the CDx assay, and (vi) obligations to make the CDx assay commercially available, following any required regulatory approval.

The Company then determined the following promises were separate performance obligations: (i) obligations to continue to perform sample profiling pursuant to the original Services Agreement, (ii) obligations to perform specific R&D activities for the development of a CDx assay for use in connection with the Partner's product and to provide assistance in obtaining regulatory approval of the Partner's product at its request, inclusive of analytical validation of the CDx assay, and (iii) obligations to make the CDx assay commercially available, following any regulatory approval obtained. The cross-licenses grant each party access to relevant IP of the other party to perform such party's obligations under the contract and to exploit the promised services. The licenses are delivered at the inception of the arrangement and primarily relate to the R&D development activities performed under the Amended Agreement. The Company does not sell the licenses separately as they are closely connected to the R&D development activities and have little value to the Partner without the other promised services. Therefore, the licenses are combined with the obligation to perform R&D services for the development of a CDx assay as a single performance obligation.

Under the Amended Agreement, the Partner pays a fixed fee for each sample to be profiled; will reimburse the Company for a portion of costs incurred in performing analytical validation of the CDx assay; and will be required to make certain substantive milestone and other payments upon the achievement of specified regulatory and clinical events tied to the development and commercialization of the CDx. The estimated transaction price under the Amended Agreement was allocated to the performance obligations based on standalone selling price. The transaction price allocated to sample profiling is recognized as results of sample profiling are delivered. Consideration allocated to the R&D development activities is recognized using an input method measure of progress based on costs incurred by the Company. As of December 31, 2016, the CDx assay had achieved regulatory approval and the regulatory and development obligations under the Amended Agreement had been completed. Consideration allocated to the commercial availability performance obligation is recognized using a time-elapsed measure of progress.

Under the Amended Agreement, the Company recognized revenue of $3,059,000 and $5,384,000 for the three and six months ended June 30, 2018, respectively, and $830,000 and $1,300,000 for the three and six months ended June 30, 2017, respectively, which was primarily related to sample profiling.

4. Revenue

Refer to Note 2: Summary of Significant Accounting Policies and Note 7: Contract Balances for a complete description of our revenue recognition policy under ASC 606, as well as comparative information demonstrating the impact of ASC 606 on our consolidated financial statements.

We disaggregate our revenue from contracts with customers by type of service, as we believe this best depicts how the nature, amount, timing, and uncertainty of our revenue and cash flows are affected by economic factors. The following tables present our revenue disaggregated by type of service.

By Service Offering – Third Party:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Clinical sample profiling services	$ 20,709	$ 11,977	$ 36,298	$ 22,626
Pharma sample profiling services	15,746	10,697	28,852	13,151
Other molecular information services	2,247	2,103	5,328	4,594
Total molecular information services	38,702	24,777	70,478	40,371
R&D and regulatory services	3,732	1,215	8,514	2,302
Total pharma research and development services	3,732	1,215	8,514	2,302
Total revenue	$ 42,434	$ 25,992	$ 78,992	$ 42,673

By Service Offering – Related Party:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Clinical sample profiling services	$ 3,089	$ 964	$ 6,287	$ 1,934
Pharma sample profiling services	6,277	3,556	16,727	7,090
Other molecular information services	2,639	1,000	3,806	2,000
Total molecular information services	12,005	5,520	26,820	11,024
R&D and regulatory services	2,567	3,492	4,034	7,635
Total pharma research and development services	2,567	3,492	4,034	7,635
Total revenue	$ 14,572	$ 9,012	$ 30,854	$ 18,659

On June 30, 2018, we had $138.6 million of remaining transaction price allocated to performance obligations which are unsatisfied or partially unsatisfied, of which $57.4 million is associated with related parties. For the $57.4 million associated with related parties, we expect to recognize approximately 64 percent of our remaining transaction price as revenue within the next 12 months following June 30, 2018 and an additional 34 percent in the 12 months thereafter, and the remaining 2 percent thereafter. For the remaining $81.2 million, we expect to recognize approximately 39 percent of our remaining transaction price as revenue within the next 12 months following June 30, 2018, an additional 26 percent in the 12 months thereafter, and the remaining 35 percent thereafter. We have elected to utilize the practical expedient of excluding contracts with an original duration of one year or less. As a result, the majority of our molecular information services contracts are excluded from the calculation and the balance is primarily comprised of transaction price associated with our long-term pharma research and development service contracts, as well as the molecular information platform program within the R&D Collaboration Agreement with Roche.

During the three and six months ended June 30, 2018, we recognized $1.7 million and $3.0 million, respectively, of revenue from performance obligations satisfied in prior periods, as a result of changes in the estimation of the transaction price for certain arrangements. Changes in the estimation of the transaction price for our clinical molecular information services revenue occur when we adjust our initial estimate based on actual cash collection experience from payors. Changes in the estimation of the transaction price for our pharma research and development services revenue occur based on revisions to our estimate of the constraint for variable consideration of performance-based milestones.

5. Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturity from the date of purchase of three months or less to be cash equivalents. Cash and cash equivalents include bank demand deposits and money market funds that invest primarily in U.S. government-backed securities and treasuries. Cash equivalents are carried at cost, which approximates their fair value.

6. Restricted Cash

Restricted cash consists of deposits securing letters of credit issued to lessors as collateral in connection with the Company's operating leases. As of each June 30, 2018 and December 31, 2017, the Company had restricted cash of $2.3 million.

7. Contract Balances

The timing of revenue recognition, invoicing, and cash collection results in billed accounts receivable, unbilled receivables (contract assets), and deferred revenue (contract liabilities). The Company presents current contract assets within prepaid expenses and other current assets and non-current contract assets within other assets, while accounts receivable and deferred revenue are presented separately on the Condensed Consolidated Balance Sheet. For clinical molecular information services revenue, billing generally occurs at the same time as revenue recognition, meaning the Company does not record unbilled receivables or deferred revenue related

to these services. For biopharmaceutical molecular information services revenue, billing generally occurs at the same time as revenue recognition. However, we sometimes receive payment in advance of services being performed. For example, contracts may contain upfront payments or, for our subscription-type arrangements, may call for invoicing at the start of each quarter. Both of these scenarios result in the recording of deferred revenue. For Pharma research and development services, the timing between revenue recognition and invoicing is likely to vary due to the longer-term nature of these contracts. For example, these contracts often contain upfront payments, which results in the recording of deferred revenue to the extent cash is received prior to our performance of the related services. Conversely, these contracts typically contain performance-based milestones. Dependent on our estimation of variable consideration and application of the constraint, we may recognize revenue as we perform toward these milestones but prior to achievement of the milestones, which would result in the recording of contract assets. In all cases, deferred revenue is relieved as we perform under our obligations and revenue is consequently recognized. Contract assets are relieved when milestones are achieved and we invoice the customer, thereby shifting the balances from contract assets to accounts receivable. Revenue recognized in the three and six months ended June 30, 2018 that was included in the deferred revenue balance as of December 31, 2017 was $0.4 million and $4.3 million, respectively, and represented primarily revenue from provision of sample profiling services under the reserved capacity arrangement with Roche. As of June 30, 2018, the Company had current unbilled receivables of $0.2 million and non-current unbilled receivables of $0.4 million, as compared to current unbilled receivables of $0.7 million and non-current unbilled receivables of $0.6 million as of January 1, 2018. The Company did not record unbilled receivables for its contract assets prior to adoption of ASC 606 on January 1, 2018.

Two customer account receivable balances consisting of $11,402,000 and $8,604,000 were greater than 10% of the total accounts receivable balance, including receivables due from Roche, representing 22% and 16%, respectively, of total accounts receivable at June 30, 2018. Two customer account balances consisting of $10,159,000 and $8,990,000 were greater than 10% of the total accounts receivable balance, including receivables due from Roche, representing 34% and 30%, respectively, of total accounts receivable at December 31, 2017.

8. Inventory

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

	June 30, 2018	December 31, 2017
Raw materials	$ 20,129	$ 8,963
Work-in-process	5,686	4,208
	$ 25,815	$ 13,171

9. Property and Equipment

Property and equipment and related accumulated depreciation and amortization are as follows (in thousands):

	June 30, 2018	December 31, 2017
Lab equipment	$ 37,867	$ 36,533
Computer equipment	12,285	11,808
Software	13,013	10,694
Furniture and office equipment	5,442	3,959
Leasehold improvements	37,765	26,968
Construction in progress	10,214	7,523
Total cost	116,586	97,485
Less: accumulated depreciation and amortization	(65,808)	(56,366)
Total property and equipment, net	$ 50,778	$ 41,119

Depreciation and amortization expense for the three and six months ended June 30, 2018 was $5,350,000 and $10,715,000, respectively, and $4,375,000 and $8,841,000 for the three and six months ended June 30, 2017, respectively. The Company classifies capitalized internal use software in lab equipment, computer equipment and software based on its intended use.

10. Accrued Expenses

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

	June 30, 2018	December 31, 2017
Payroll and employee-related costs	$ 15,475	$ 19,630
Professional services	6,319	7,935
Property and equipment purchases	4,733	688
Other	5,729	8,492
Total accrued expenses and other current liabilities	$ 32,256	$ 36,745

11. Debt

On July 31, 2017, the Company entered into an Amendment Letter Agreement (the "Amendment") with Roche Finance Ltd ("Roche Finance"), amending the Credit Facility Agreement, dated August 2, 2016, between the Company and Roche (the "Existing Credit Facility" and, as amended, the "Roche Credit Facility").

The Amendment amends certain provisions of the Existing Credit Facility to provide for an extension of the period during which the Company may borrow funds from three to four years, ending August 2, 2020 (the "Draw Period"), and an increase in the available funds from $100 million to $200 million, of which $80 million was made available immediately and $120 million was made available upon the achievement of certain milestones. Pursuant to the Amendment, loans made under the Roche Credit Facility will bear interest at 6.5% per annum, as compared to 5% under the Existing Credit Facility. The Company shall pay Roche quarterly during the Draw Period and for six months thereafter accrued interest on the outstanding principal of the loans. Beginning six months after the Draw Period and for five years thereafter, the Company shall pay Roche quarterly equal payments of principal, with accrued interest, in arrears until maturity of the Roche Credit Facility on February 2, 2026 (the "Final Maturity Date"). The Company shall also pay Roche a quarterly commitment fee of 0.4% per annum on the available commitment until the end of the Draw Period, as compared to 0.3% under the Existing Credit Facility. The other provisions of the Existing Credit Facility remain substantially unchanged. The proceeds from the Roche Credit Facility are intended to be used for R&D and commercialization, corporate development, and working capital management.

The Roche Credit Facility is secured by a lien on all of the Company's tangible and intangible personal property, including, but not limited to, shares of its subsidiaries (65% of the equity interests in the case of foreign subsidiaries), intellectual property, insurance, trade and intercompany receivables, inventory and equipment, and contract rights, and all proceeds and services thereof (other than certain excluded assets).

The Roche Credit Facility contains certain affirmative covenants, including, among others, obligations for the Company to provide monthly and annual financial statements, to meet specified minimum cash requirements, to provide tax gross-up and indemnification protection, and to comply with laws. The Roche Credit Facility also contains certain negative covenants, including, among others, restrictions on the Company's ability to dispose of certain assets, to acquire another company or business, to encumber or permit liens on certain assets, to incur additional indebtedness (subject to customary exceptions), and to pay dividends on the Company's common stock. The Company was in compliance with its covenants under the Roche Credit Facility as of June 30, 2018.

The Roche Credit Facility contains customary events of default, including, among others, defaults due to non-payment, bankruptcy, failure to comply with covenants, breaches of representations and warranties, a change of control, a material adverse effect and judgment defaults. Upon the occurrence and continuation of an event of default following applicable notice and cure periods, amounts due under the Roche Credit Facility may be accelerated. The Company had no events of default under the Roche Credit Facility as of June 30, 2018.

As of June 30, 2018, the Company had $110 million in borrowings outstanding and $90 million of unused and available credit under the Roche Credit Facility. Interest expense was $1.7 million and $2.9 million for the three and six months ended June 30, 2018, respectively, and $0.1 million and $0.2 million for the three and six months ended June 30, 2017, respectively.

12. Net Loss per Common Share

Basic net loss per share is calculated by dividing net loss applicable to common stockholders by the weighted-average shares outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is calculated by adjusting the weighted-average shares outstanding for the dilutive effect of common stock equivalents outstanding for the period, determined using the treasury-stock method and the if-converted method. For purposes of the diluted net loss per share calculation, stock options, and unvested restricted stock are considered to be common stock equivalents, but are excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive. Therefore, basic and diluted net loss per share applicable to common stockholders was the same for all periods presented.

The following potential common stock equivalents were not included in the calculation of diluted net loss per common share because the inclusion thereof would be antidilutive.

	Three and Six Months Ended June 30,	
	2018	2017
Outstanding stock options	385,974	1,012,833
Unvested restricted stock	956,247	1,524,058
Total	1,342,221	2,536,891

13. Fair Value Measurements

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. FASB ASC Topic 820, *Fair Value Measurements and Disclosures* establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of a company. Unobservable inputs are inputs that reflect a company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The hierarchy defines three levels of valuation inputs:

Level 1 inputs	Quoted prices in active markets for identical assets or liabilities
Level 2 inputs	Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly
Level 3 inputs	Unobservable inputs that reflect a company's own assumptions about the assumptions market participants would use in pricing the asset or liability

The fair value hierarchy prioritizes valuation inputs based on the observable nature of those inputs. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

The Company's financial instruments consist of cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued liabilities, and debt. The carrying amount of cash and cash equivalents, restricted cash, accounts receivable, accounts payable, and accrued liabilities approximate their fair values because of the short-term nature of the instruments. The fair value of our outstanding debt balance approximates the carrying value as of the balance sheet date. The principal amount of our outstanding debt balance at June 30, 2018 and December 31, 2017 was $110.0 million and $60.0 million, respectively.

The following tables present information about the Company's assets and liabilities that are measured at fair value on a recurring basis as of June 30, 2018 and December 31, 2017, and indicate the fair value hierarchy of the valuation techniques utilized to determine such fair value (in thousands):

	Fair Value Measurement at June 30, 2018			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets:				
Cash equivalents	$ 25,367	$ —	$ —	$ 25,367
Total assets	$ 25,367	$ —	$ —	$ 25,367
Liabilities:				
Indebtedness to Roche	$ —	$ 110,000	$ —	$ 110,000
Total liabilities	$ —	$ 110,000	$ —	$ 110,000

	Fair Value Measurement at December 31, 2017			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets:				
Cash equivalents	$ 25,183	$ —	$ —	$ 25,183
Total assets	$ 25,183	$ —	$ —	$ 25,183
Liabilities:				
Indebtedness to Roche	$ —	$ 60,000	$ —	$ 60,000
Total liabilities	$ —	$ 60,000	$ —	$ 60,000

The Company measures eligible assets and liabilities at fair value, with changes in value recognized in the statement of operations and comprehensive loss. Fair value treatment may be elected either upon initial recognition of an eligible asset or liability or, for an existing asset or liability, if an event triggers a new basis of accounting. Items measured at fair value on a recurring basis at June 30, 2018 include cash equivalents and indebtedness to Roche. The Company did not elect to remeasure any other existing financial assets or liabilities, and did not elect the fair value option for any other financial assets and liabilities transacted during the three and six months ended June 30, 2018 and 2017.

14. Stockholders' Equity

The Company has reserved for future issuance the following number of shares of common stock:

	June 30, 2018	December 31, 2017
Unvested restricted stock	956,247	1,164,040
Common stock options	385,974	666,717
Shares available for issuance under the 2013 Stock Option and Incentive Plan	4,618,038	3,273,334
Shares available for issuance under the 2013 Employee Stock Purchase Plan	788,503	788,503
	6,748,762	5,892,594

2010 and 2013 Stock Incentive Plans

In 2010, the Company adopted the Foundation Medicine, Inc. 2010 Stock Incentive Plan (the "2010 Stock Plan") under which it granted restricted stock, incentive stock options ("ISOs") and non-statutory stock options to eligible employees, officers, directors and consultants to purchase up to 1,162,500 shares of common stock. In the year ended December 31, 2013, the Company amended the 2010 Stock Plan to increase the number of shares of common stock available for issuance to 4,232,500.

In 2013, in conjunction with its initial public offering, the Company adopted the Foundation Medicine, Inc. 2013 Stock Option and Incentive Plan (the "2013 Stock Plan") under which it may grant restricted and unrestricted stock, restricted stock units, ISOs, non-statutory stock options, stock appreciation rights, cash-based awards, performance share awards and dividend equivalent rights to eligible employees, officers, directors and consultants to purchase up to 1,355,171 shares of common stock. In connection with the establishment of the 2013 Stock Plan, the Company terminated the 2010 Stock Plan and the 512,568 shares which remained available for grant under the 2010 Stock Plan were included in the number of shares authorized under the 2013 Stock Plan. Shares forfeited or repurchased from the 2010 Stock Plan are returned to the 2013 Stock Plan for future issuance. On January 1, 2018 and 2017, the number of shares reserved and available for issuance under the 2013 Stock Plan increased by 1,461,671 and 1,403,616 shares of common stock, respectively, pursuant to a provision in the 2013 Stock Plan that provides that the number of shares reserved and available for issuance will automatically increase each January 1, beginning on January 1, 2014, by 4% of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or such lesser number as determined by the compensation committee of the Board.

The terms of stock award agreements, including vesting requirements, are determined by the Board, or permissible designee thereof, subject to the provisions of the 2010 Stock Plan and the 2013 Stock Plan. Options, restricted stock, and restricted stock units granted by the Company typically vest over a four-year period. The options are exercisable from the date of grant for a period of 10 years. The exercise price for stock options granted is equal to the closing price of the Company's common stock on the applicable date of grant.

Restricted Stock

For restricted stock, including restricted stock units, granted to employees, the intrinsic value on the date of grant is recognized as stock-based compensation expense ratably over the period in which the restrictions lapse. For restricted stock granted to non-employees, the intrinsic value is remeasured at each vesting date and at the end of the reporting period. The following table shows a roll forward of restricted stock activity pursuant to the 2010 Stock Plan and the 2013 Stock Plan:

	Number of Shares
Unvested at December 31, 2017	1,164,040
Granted	296,005
Vested	(332,586)
Forfeited	(171,212)
Unvested at June 30, 2018	956,247

Total stock-based compensation expense recognized for restricted stock awards was $3,935,000 and $6,932,000 for the three and six months ended June 30, 2018, respectively, and $6,071,000 and $11,710,000 for the three and six months ended June 30, 2017, respectively.

Stock Options

A summary of stock option activity under the 2010 Stock Plan and the 2013 Stock Plan for the six months ended June 30, 2018 is as follows:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
				(in thousands)
Outstanding as of December 31, 2017	666,717	$ 19.53	5.6	$ 32,450
Granted	—	—		
Exercised	(272,917)	19.48		
Forfeited	(7,826)	34.10		
Outstanding as of June 30, 2018	385,974	$ 19.27	5.3	$ 45,325
Exercisable as of June 30, 2018	360,495	$ 18.40	5.1	$ 42,646

The Company recorded total stock-based compensation expense for stock options granted to employees, directors and non-employees from the 2010 Stock Plan and the 2013 Stock Plan of $150,000 and $361,000 for the three and six months ended June 30, 2018, respectively, and $655,000 and $1,415,000 for the three and six months ended June 30, 2017, respectively.

The Company recorded stock-based compensation expense in the statements of operations and comprehensive loss as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Cost of revenue	$ 309	$ 563	$ 547	$ 1,658
Selling and marketing	957	1,297	1,869	2,517
General and administrative	1,813	3,159	3,094	5,937
Research and development	1,006	1,707	1,783	3,013
Total	$ 4,085	$ 6,726	$ 7,293	$ 13,125

As of June 30, 2018, unrecognized compensation cost of approximately $36,046,000 related to non-vested stock options and restricted stock awards is expected to be recognized over weighted-average period of 2.4 years.

15. Commitments and Contingencies

Legal Matters

From time to time, we are a party to litigation arising in the ordinary course of its business. On July 28, 2017, a purported stockholder of the Company filed a putative class action in the U.S. District Court for the District of Massachusetts, against the Company and certain of its current and former executives, captioned *Mahoney v. Foundation Medicine, Inc., et al.*, No. 1:17-cv-11394. The complaint alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act") and Rule 10b-5 thereunder based on allegedly false and misleading statements and omissions when providing 2015 financial guidance. The lawsuit seeks among other things, unspecified compensatory damages in connection with the Company's allegedly inflated stock price between February 26, 2014 and November 3, 2015, interest, attorneys' fees and costs, and unspecified equitable/injunctive relief. On December 22, 2017, the plaintiffs filed an amended class action complaint alleging violations of Sections 10(b) and 20(a) of the Exchange Act and Rule 10b-5 thereunder based on allegedly false and misleading statements and omissions concerning providing 2015 financial guidance and other statements during the class period concerning demand and reimbursement for certain of the Company's tests. On February 20, 2018, the Company moved to dismiss the complaint for failure to state a claim, which plaintiffs opposed on April 23, 2018. On June 7, 2018, defendants filed a reply in further support of their motion to dismiss. The court has not yet scheduled oral argument on defendants' motion to dismiss. We believe this case is without merit and, therefore, continue to vigorously defend ourselves against the allegations.

On July 10, 2018, a putative securities class action complaint, *Wang v. Foundation Medicine, Inc. et al.*, No. 1:18-cv-11435, was filed in the United States District Court for the District of Massachusetts by purported Company shareholder Elaine Wang against the Company and the Company's directors in connection with the offer by Roche to acquire all of the issued and outstanding shares of our common stock (the "Offer"). An amended complaint (the "Wang Complaint") was filed on July 11, 2018 against the Company, the Company's directors and Roche. The Wang Complaint alleged that the Schedule 14D-9 filed by the Company on July 2, 2018 in connection with the Offer omitted certain supposedly material information concerning (1) communications regarding the positions of the Company's directors and officers following the transactions, (2) communications regarding compensation to be paid to the Company's directors and officers in connection with the transactions, and (3) compensation received by Goldman Sachs in connection with the Company's initial public offering and Roche Holdings' 2015 investment in the Company. The Wang Complaint asserted claims against all the defendants for violation of Sections 14(d) and 14(e) of the Exchange Act, and against the Company's directors and Roche Holdings for violation of Section 20(a) of the Exchange Act. The Wang Complaint sought declaratory and injunctive relief, as well as damages and attorneys' fees and costs. On July 31, 2018, the plaintiff filed a notice of voluntary dismissal, dismissing the case with prejudice.

On July 11, 2018, a putative securities class action complaint, *Kent v. Foundation Medicine, Inc. et al.*, No. 1:18-cv-01028 (the "Kent Complaint"), was filed in the United States District Court for the District of Delaware by purported Company shareholder Michael Kent against the Company, the Company's directors and Roche in connection with the Offer. The Kent Complaint alleged that the Schedule 14D-9 filed by the Company on July 2, 2018 in connection with the Offer omitted certain supposedly material information concerning (1) communications regarding the positions of the Company's directors and officers following the transactions and (2) compensation received by Goldman Sachs in connection with the Company's initial public offering and Roche Holdings' 2015 investment in the Company. The Kent Complaint asserted claims against all the defendants for violation of Sections 14(d) and 14(e) of the Exchange Act, and against the Company's directors and Roche for violation of Section 20(a) of the Exchange Act. The Kent Complaint sought declaratory and injunctive relief, as well as damages and attorneys' fees and costs. On August 2, 2018, the plaintiff filed a notice of voluntary dismissal, dismissing the case without prejudice.

16. Related Party Transactions

Roche Holdings, Inc. and its affiliates

Related-party molecular information services revenue from Roche for the three and six months ended June 30, 2018 was $12,005,000 and $26,820,000, respectively, and $5,520,000 and $11,024,000 for the three and six months ended June 30, 2017, respectively, which was earned under the Molecular Information Platform Program and Ex-U.S. Commercialization Agreement.

Related-party pharma research and development services revenue from Roche for the three and six months ended June 30, 2018 was $2,567,000 and $4,034,000, respectively, and $3,492,000 and $7,635,000 for the three and six months ended June 30, 2017, respectively, from the reimbursement of R&D costs under the CDx Development, Immunotherapy Testing Platform Development and other programs.

Costs of related-party molecular information services from Roche were $4,800,000 and $10,748,000 for the three and six months ended June 30, 2018, respectively, and $2,045,000 and $2,945,000 for the three and six months ended June 30, 2017,

respectively, which consisted of costs incurred under the Molecular Information Platform Program and costs related to the delivery of services outside of the United States under the Ex-U.S. Commercialization Agreement.

At June 30, 2018, $11,402,000 and $8,190,000 was included in total accounts receivable and deferred revenue, respectively, related to this arrangement with Roche. At December 31, 2017, $10,159,000 and $3,742,000 was included in total accounts receivable and deferred revenue, respectively, related to this arrangement with Roche. As of June 30, 2018, the Company had $110 million in borrowings outstanding under the Roche Credit Facility. There were no other material Roche-related balances included in the condensed consolidated financial statements as of June 30, 2018 or December 31, 2017, or for the three and six months ended June 30, 2018 and 2017.

17. Subsequent Events

On July 10, 2018, the Company and Roche entered into a Seventh Amendment to the R&D Collaboration Agreement, which modified certain capacity and fee provisions related to the molecular information platform program, effective as of April 7, 2018.

On June 19, 2018, the Company entered into an Agreement and Plan of Merger, dated as of June 18, 2018, as amended (the "Merger Agreement"), with Roche Holdings, Inc., a Delaware corporation ("Parent" or "Roche Holdings"), and 062018 Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), providing for the acquisition of the Company by Parent in a two-step all-cash transaction, consisting of a tender offer, followed by a subsequent back-end merger of Merger Sub with and into the Company (the "Merger"), with the Company surviving the Merger as an indirect wholly owned subsidiary of Roche Holding Ltd. Pursuant to the Merger Agreement, Parent caused Merger Sub to conduct a tender offer (the "Offer") for all of the issued and outstanding shares of common stock, par value $0.0001 per share (the "Shares"), of the Company at a price of $137.00 per Share (the "Offer Price"), net to the seller in cash, without interest and subject to any applicable withholding of taxes, and on the terms and conditions set forth in the Merger Agreement.

The Offer expired at 12:00 midnight, New York City time, at the end of the day on Monday, July 30, 2018. Citibank, N.A., in its capacity as depositary for the Offer (the "Depositary"), advised that, as of the expiration of the Offer, a total of 12,535,376 Shares (excluding Shares with respect to which notices of guaranteed delivery were delivered and for which certificates were not yet delivered) were validly tendered and not validly withdrawn pursuant to the Offer, representing approximately 77.3% of the Shares outstanding as of the expiration of the Offer (excluding those Shares held by Roche Holdings and its affiliates) and, when taken together with the Shares owned by Roche Holdings and its affiliates, representing approximately 90.1% of the Shares outstanding as of the expiration of the Offer. In addition, the Depositary advised that, as of July 31, 2018, Notices of Guaranteed Delivery were delivered with respect to approximately 1,342,573 Shares that had not yet been tendered, representing approximately 3.6% of the outstanding Shares. Each condition to the Offer was satisfied, and Merger Sub irrevocably accepted for payment all Shares that were validly tendered and not withdrawn.

On July 31, 2018, the Merger was completed pursuant to Section 251(h) of the DGCL, with no vote of the Company's stockholders required to consummate the Merger. Upon the consummation of the Merger, the Company became an indirect wholly owned subsidiary of Roche Holding Ltd. The aggregate consideration paid by Merger Sub in the Offer and Merger to purchase all outstanding Shares (other than the Shares owned by Roche Holdings and its affiliates) and other equity-based interests of the Company pursuant to the Offer and the Merger, was approximately $2.2 billion.

In connection with the consummation of the Merger, the Company (i) notified The Nasdaq Stock Market ("Nasdaq") of the consummation of the Merger and (ii) requested that Nasdaq (x) halt trading in the Shares on the morning of July 31, 2018, prior to market open, and suspend trading of the Shares effective as of the close of business on July 31, 2018 and (y) file with the SEC a Notification of Removal from Listing and/or Registration on Form 25 to delist and deregister the Shares under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Company has filed with the SEC a Certification and Notice of Termination of Registration on Form 15 under the Exchange Act, requesting that the Company's reporting obligations under Sections 13 and 15(d) of the Exchange Act be suspended.

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

The following discussion of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and notes thereto appearing elsewhere in this Quarterly Report on Form 10-Q and the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2017. This discussion contains forward-looking statements that involve significant risks and uncertainties. As a result of many factors, such as those set forth under "Risk Factors" in Part II, Item 1A. of this Quarterly Report and our prior filings with the Securities and Exchange Commission, or SEC, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are a molecular information company focused on fundamentally changing the way in which patients with cancer are evaluated and treated. We believe an information-based approach to making clinical treatment decisions based on comprehensive genomic profiling, or CGP, will become a standard of care for patients with cancer. We derive revenue from selling molecular information services that are enabled by our molecular information platform to physicians and biopharmaceutical companies. Our platform includes proprietary methods and algorithms for analyzing specimens across all types of cancer, and for incorporating that information into clinical care in a concise and user-friendly fashion. Our services provide genomic information about each patient's individual cancer, enabling physicians to optimize treatments in clinical practice and biopharmaceutical companies to develop targeted oncology therapies more effectively. We believe we have a significant first mover advantage in providing a portfolio of CGP and molecular information services on a commercial scale.

Our clinical molecular information services, which include FoundationOne CDx, a U.S. Food & Drug Administration, or FDA, approved broad companion diagnostic assay for solid tumors, FoundationOne for solid tumors, FoundationOneHeme for blood-based cancers, or hematologic malignancies, and sarcomas, and FoundationACT, a blood-based (liquid biopsy) assay to measure circulating tumor DNA, or ctDNA, are widely available comprehensive genomic profiles designed for use in the routine care of patients with cancer and in research.

Following the FDA's approval of FoundationOne CDx in November 2017, the Centers for Medicare & Medicaid Services, or CMS, issued a final National Coverage Determination, or NCD, in March 2018 that establishes nationwide Medicare coverage for FoundationOne CDx for all solid tumor types when ordered by the patient's treating physician for Medicare beneficiaries with advanced cancer (*i.e.,* either recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer), who either have not been previously tested using FoundationOne CDx for the same primary diagnosis of cancer or are seeking repeat testing with FoundationOne CDx for a new primary cancer diagnosis, and continue to seek further cancer therapy.

To accelerate commercial growth and enhance our competitive advantage, we are continuing to develop and commercialize new molecular information services for physicians and biopharmaceutical companies, to strengthen our commercial organization, to introduce new marketing, education and provider engagement efforts, to grow our molecular information knowledgebase, FoundationCore, to pursue reimbursement from government payors and regional and national third-party commercial payors, to publish scientific and medical advances, and to foster relationships throughout the oncology community.

Since our inception in 2009, we have devoted substantially all of our resources to the development of our molecular information platform, the commercialization of FoundationOne, FoundationOneHeme, FoundationACT and FoundationOne CDx. We have incurred significant losses since our inception, and as of June 30, 2018 our accumulated deficit was $558.9 million. We expect to continue to incur operating losses over the near term as we expand our commercial operations, including supporting the commercial launch of FoundationOne CDx, invest in our molecular information platform and additional services, and continue to scale our technology and data infrastructure.

FoundationOne, FoundationOneHeme, and FoundationACT have been commercialized as laboratory developed tests, or LDTs, which are subject to the Clinical Laboratory Improvement Amendments of 1988 (CLIA) and are not currently regulated as medical devices under the Federal Food, Drug and Cosmetic Act. FoundationOne CDx is an FDA-approved companion diagnostic assay. We believe our work developing companion diagnostic assays with our biopharmaceutical partners accelerates our progress in this area, and is a key component of our strategy and a significant differentiator for our business.

Recent Developments

On April 11, 2018, we announced the presentation of new findings at the American Association for Cancer Research (AACR) Annual Meeting, supporting the use of both tissue- and blood-based CGP, to advance personalized cancer care and inform the use of targeted and immunotherapy treatment approaches.

On April 26, 2018, we announced that the FDA granted a Breakthrough Device designation (formerly Expedited Access Pathway program) for our new liquid biopsy assay, which is an expanded version of our FoundationACT assay. The new assay will

include more than 70 genes and genomic biomarkers for microsatellite instability, or MSI, and blood tumor mutational burden, or bTMB. If approved, this test could be the first FDA-approved liquid biopsy assay to incorporate multiple companion diagnostics and multiple biomarkers to inform the use of targeted oncology therapies, including immunotherapies.

On April 26, 2018, we announced a three-party collaboration with Roche and Dian Diagnostics Group, Co., Ltd., or Dian, to integrate the Company's CGP assays into clinical patient care in mainland China and establish a collaboration with Dian for the purpose of implementing our Ex-U.S. Commercialization Agreement in China. Under the collaboration, Dian is the exclusive clinical sequencing partner in China for FoundationOne, FoundationACT and FoundationOneHeme, enabling the delivery of molecular information services associated with these tests for patients in China. Roche maintains commercial exclusivity for the Company's molecular information services in China, and in cooperation with Dian continues its current in-county activities to support the broad integration of CGP into clinical care.

On May 2, 2018, we announced a comprehensive gene expression profiling (GEP) program to support precision oncology clinical research and development, or R&D.

On May 21, 2018, we announced that under the Protecting Access to Medicare Act of 2014 (PAMA) CMS approved new Advanced Diagnostic Laboratory Test (ADLT) status for FoundationOne CDx.

On May 24, 2018, we announced a collaboration with Merck, known as MSD outside the United States and Canada, to develop immuno-oncology companion diagnostic tests for use with KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy and the first approved immunotherapy for MSI high or mismatch repair deficient solid tumors. The companies will collaborate on the development of a pan-cancer companion diagnostic to measure MSI, potentially companion diagnostics for tumor mutational burden, or TMB, and other potential novel biomarkers of response.

On May 29, 2018, we announced that new data generated from our CGP assays was to be presented at the American Society of Clinical Oncology (ASCO) Annual Meeting from June 1-5, 2018 in Chicago. The company and our collaborators presented a total of 28 studies, including two oral presentations.

On June 18, 2018, we entered into an Agreement and Plan of Merger, or the Merger Agreement, with Roche and 062018 Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Roche, or Merger Sub, providing for the acquisition of us by Roche in a two-step all-cash transaction, consisting of a tender offer, or the Offer, followed by a subsequent back-end merger of Merger Sub with and into us, or the Merger, with us surviving the Merger as an indirect wholly owned subsidiary of Roche Holding Ltd. Pursuant to the Merger Agreement, and upon the terms and subject to the conditions described therein, Roche caused Merger Sub to commence the Offer for all of our outstanding shares of common stock not beneficially held by Roche at a purchase price of $137.00 per share, net to the seller in cash, without interest and subject to any withholding taxes, and on the terms and conditions set forth in the Merger Agreement.

On July 10, 2018, we and Roche entered into a Seventh Amendment to the Research and Development Collaboration Agreement, or R&D Collaboration Agreement, which modified certain capacity and fee provisions related to the molecular information platform program, effective as of April 7, 2018.

On July 18, 2018, we and Guardant Health, Inc. announced an agreement to settle a patent infringement lawsuit brought by Foundation Medicine against Guardant concerning U.S. Patent No. 9,340,830. Under the terms of the settlement, the lawsuit and counterclaims, as well as challenges to the patent in *inter partes* review, have been dismissed.

Acquisition

On June 19, 2018, the Company entered into an Agreement and Plan of Merger, dated as of June 18, 2018, as amended (the "Merger Agreement"), with Roche Holdings, Inc., a Delaware corporation ("Parent" or "Roche Holdings"), and 062018 Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), providing for the acquisition of the Company by Parent in a two-step all-cash transaction, consisting of a tender offer, followed by a subsequent back-end merger of Merger Sub with and into the Company (the "Merger"), with the Company surviving the Merger as an indirect wholly owned subsidiary of Roche Holding Ltd. Pursuant to the Merger Agreement, Parent caused Merger Sub to conduct a tender offer (the "Offer") for all of the issued and outstanding shares of common stock, par value $0.0001 per share (the "Shares"), of the Company at a price of $137.00 per Share (the "Offer Price"), net to the seller in cash, without interest and subject to any applicable withholding of taxes, and on the terms and conditions set forth in the Merger Agreement.

The Offer expired at 12:00 midnight, New York City time, at the end of the day on Monday, July 30, 2018. Citibank, N.A., in its capacity as depositary for the Offer (the "Depositary"), advised that, as of the expiration of the Offer, a total of 12,535,376 Shares (excluding Shares with respect to which notices of guaranteed delivery were delivered and for which certificates were not yet delivered) were validly tendered and not validly withdrawn pursuant to the Offer, representing approximately 77.3% of the Shares outstanding as of the expiration of the Offer (excluding those Shares held by Roche Holdings and its affiliates) and, when taken together with the Shares owned by Roche Holdings and its affiliates, representing approximately 90.1% of the Shares outstanding as

of the expiration of the Offer. In addition, the Depositary advised that, as of July 31, 2018, Notices of Guaranteed Delivery were delivered with respect to approximately 1,342,573 Shares that had not yet been tendered, representing approximately 3.6% of the outstanding Shares. Each condition to the Offer was satisfied, and Merger Sub irrevocably accepted for payment all Shares that were validly tendered and not withdrawn.

On July 31, 2018, the Merger was completed pursuant to Section 251(h) of the DGCL, with no vote of the Company's stockholders required to consummate the Merger. Upon the consummation of the Merger, the Company became an indirect wholly owned subsidiary of Roche Holding Ltd. The aggregate consideration paid by Merger Sub in the Offer and Merger to purchase all outstanding Shares (other than the Shares owned by Roche Holdings and its affiliates) and other equity-based interests of the Company pursuant to the Offer and the Merger, was approximately $2.2 billion.

In connection with the consummation of the Merger, the Company (i) notified The Nasdaq Stock Market ("Nasdaq") of the consummation of the Merger and (ii) requested that Nasdaq (x) halt trading in the Shares on the morning of July 31, 2018, prior to market open, and suspend trading of the Shares effective as of the close of business on July 31, 2018 and (y) file with the SEC a Notification of Removal from Listing and/or Registration on Form 25 to delist and deregister the Shares under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Company has filed with the SEC a Certification and Notice of Termination of Registration on Form 15 under the Exchange Act, requesting that the Company's reporting obligations under Sections 13 and 15(d) of the Exchange Act be suspended.

Financial Operations Overview

Revenue

We derive revenue from the provision of molecular information services provided to our ordering physicians and biopharmaceutical customers, as well as from pharma research and development services provided to our biopharmaceutical customers. Molecular information services include molecular profiling and the delivery of other molecular information derived from our platform. Pharma research and development services include the development of new platforms and information solutions, including companion diagnostic development. We currently receive payments from commercial third-party payors, Medicare, certain hospitals and cancer centers with which we have direct-bill relationships, individual patients, and our biopharmaceutical customers.

Effective January 1, 2018, the Company began recognizing revenue in accordance with FASB ASC Topic 606, *Revenue from Contracts with Customers*, or ASC 606. The Company adopted ASC 606 using the modified retrospective method of adoption, meaning the cumulative effect of applying ASC 606 has been recognized to accumulated deficit at January 1, 2018, the date of adoption of ASC 606, and prior comparative periods will not be recast to reflect ASC 606. As a result, revenue for the three and six months ended June 30, 2017 is presented in accordance with FASB ASC Topic 605, *Revenue Recognition*, or ASC 605, whereas revenue for the three and six months ended June 30, 2018 is presented under ASC 606. ASC 606 provides a five-step model for recognizing revenue 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.

Our clinical contracts included within molecular information services typically have a single performance obligation to transfer molecular profiling services to either a patient or a facility. In certain limited contracted scenarios, such as arrangements with academic medical centers, the transaction price is stated within the contract and is therefore fixed consideration. For most of our clinical volume, we identified the patient as the customer in Step 1 of the model and have determined an implied contract exists with the patient. As such, a stated contract price does not exist and the transaction price for each contract represents variable consideration. In developing the estimate of variable consideration, we utilize the expected value method under a portfolio approach. Our estimate requires significant judgement and is developed using historical reimbursement data from payors and patients, as well as known current reimbursement trends not reflected in the historical data. As these contracts typically have a single performance obligation, no allocation of the transaction price is required in Step 4 of the model. Molecular information services are transferred to our ordering physicians at a point in time. Specifically, we determined the customer obtains control of the promised service upon our delivery of the test results. Certain incremental costs, such as commissions, are incurred in obtaining clinical contracts. We have elected to utilize the practical expedient method to expense incremental costs of obtaining a contract that meet the capitalization criteria, as the amortization period of any contract acquisition asset would be one year or less due to the short-term nature of our clinical contracts.

For the majority of physician orders within the United States, the payment we ultimately receive depends upon the rate of reimbursement from commercial third-party payors and government payors. We are not currently a participating provider with most commercial third-party payors and, therefore, do not have specific coverage decisions from those third-party payors for our services with established payment rates. As a result, for most of our commercial third-party payors we are not a contracted provider and, therefore, do not have specific coverage decisions from those third-party payors for our specific services with established payment rates. Currently, most of the commercial third-party payors that reimburse our claims do so based upon Current Procedural Terminology, or CPT, codes, the predominant methodology, or based on other methods such as percentages of charges or other formulas that, to our knowledge are not specific to us, and are not made known to us. In addition, a small portion of commercial third-

party payors outsource our claims to preferred provider organizations or third-party administrators, which entities process our claims and pay us directly at negotiated rates. Further, coverage and payment for reimbursement claims for our services are determined by each third-party payor on a case-by-case basis.

As of June 30, 2018, we were not a participating provider in any state Medicaid program, and therefore, did not have coverage determinations under which our tests were covered by these Medicaid programs. We are a participating provider in the Medicare program.

For tests that we offer that are not subject to an NCD, local Medicare Administrative Contractors, or MACs, that administer the Medicare program in various regions may, in their discretion but subject to Medicare rules, determine coverage, rates of reimbursement and payment.

The local MAC for our laboratory in Cambridge, Massachusetts is National Government Services which succeeded the previous local MAC NHIC, Corp., or NHIC. In connection with the launch of FoundationOne, our first commercial test, and following discussions with NHIC, we agreed to not submit claims for FoundationOne tests provided to Medicare patients while NHIC assessed the appropriate coding, coverage, and payment for FoundationOne as a whole. To accommodate NHIC's request, we deferred the submission of claims until November 2013, when we commenced the process of submitting claims to National Government Services for FoundationOne and FoundationOneHeme tests for Medicare patients with dates of service on or after November 1, 2013. We have submitted these claims for FoundationOne and FoundationOneHeme tests to National Government Services using a miscellaneous CPT code, and have not recognized revenue from Medicare for those claims to date. National Government Services, issued a final Local Coverage Determination, or LCD, effective April 1, 2016, to provide coverage for hotspot tests of 5 to 50 genes for patients with metastatic non-small cell lung cancer, or NSCLC. We do not believe this LCD reflects coverage for our CGP services, which include comprehensive analysis of greater than 50 genes and all classes of alterations. As of June 30, 2018, National Government Services has either denied the FoundationOne or FoundationOneHeme claims that we have submitted using stacked CPT codes, or not processed and reimbursed us for the claims in a manner that we believe is consistent with applicable processing guidelines. In August 2016, we began submitting claims for FoundationACT tests associated with our Cambridge, Massachusetts laboratory to National Government Services using stacked CPT codes, and as of June 30, 2018, we have recognized revenue from many of those claims.

The local MAC for our laboratory in Research Triangle Park, North Carolina, is Palmetto GBA, or Palmetto. In May 2016, Palmetto issued a final LCD, or Palmetto LCD, to cover highly validated CGP received by Medicare patients initially diagnosed with Stage IIIB and Stage IV NSCLC and who otherwise meet the eligibility criteria of the Palmetto LCD.

In January 2017, we began submitting claims to Palmetto for FoundationOne test requisitions where components of our testing services were performed in our North Carolina facility. In March 2017, we began receiving payment for eligible NSCLC claims submitted under the Palmetto LCD based upon the allowable rate of $3,416 per test. In December 2016, Palmetto originally issued three draft LCDs for the use of CGP to guide treatment in patients with metastatic colorectal cancer, with metastatic melanoma, and with advanced primary peritoneal, fallopian tube and ovarian cancer, respectively. In March 2018, Palmetto re-issued revised versions of these draft LCDs, and accepted public comments on such drafts until May 10, 2018. If finalized as proposed, FoundationOne will be covered by Medicare when provided to patients with these conditions consistent with the terms of these LCDs.

In accordance with an exception to Medicare's Date of Service rule, commonly known as the 14-Day Rule, for a subset of Medicare claims we are required to bill the ordering institution directly instead of submitting claims to Medicare. We have recognized revenue associated with these bills upon receipt of payment from the institution.

We expect that our current lack of broad coverage decisions among commercial third-party payors, the fact that we are currently a contracted provider with only a few commercial third-party payors and the general uncertainty around reimbursement for our tests will continue to negatively impact our revenue and earnings. For Medicare tests we offer that are not subject to an NCD, a MAC having jurisdiction over any one of our laboratory facilities could issue a negative coverage determination for one or more of our tests that would apply to future claims for tests performed at the relevant facility and that MAC could defer processing claims pending a coverage or payment determination.

As of June 30, 2018, we had cash and cash equivalents of approximately $53.4 million. If we are not able to obtain additional coverage decisions over the longer term, and our available cash and cash equivalents balances, cash flows from operations, and available borrowings are insufficient to satisfy our liquidity requirements, we may require additional capital beyond our currently anticipated amounts. As of June 30, 2018, under the Credit Facility Agreement with Roche Finance Ltd dated August 2, 2016, as amended by the Amendment Letter Agreement with Roche Finance Ltd, dated July 31, 2017, or the Roche Credit Facility, we have $90 million of unused and available credit. Additional capital may not be available on reasonable terms, or at all.

We also receive a small portion of revenue from patients who make co-payments and pay deductibles. In addition, while we take on the primary responsibility for obtaining third-party reimbursement on behalf of patients, including appeals for any initial denials, we bill patients for amounts that are determined to be due from the patient. We initiated the process to seek reimbursement from Medicare at the end of 2013, and as part of the Medicare reimbursement process, we seek advance beneficiary notices (ABNs) from Medicare patients to enable us to bill a Medicare patient for all or part of a claim that is denied coverage by Medicare. We offer a

comprehensive patient assistance program to provide financial support to patients whose incomes are below certain thresholds, and we also may allow for extended payment terms, as necessary, given the patient's economic situation.

Our biopharma contracts included within molecular information services may include single or multiple performance obligations depending on the contract, and may include different molecular information service offerings, such as molecular profiling, provision of data through either database queries or subscription access to our platform, and clinical trial enrollment assistance, as separately identifiable from other promises in the contracts and therefore distinct performance obligations.

The transaction price in biopharma molecular information service contracts is typically fixed consideration. In certain instances, contracts may include variable consideration. In these contracts, variable consideration is estimated utilizing the expected value method. The primary method used to determine standalone selling price for the biopharma molecular information services is observable standalone selling price. When standalone selling price is not directly observable, the primary method used to estimate standalone selling price for molecular information services is the adjusted market assessment approach, under which we evaluate the market in which we sell the services and estimate the price that a customer in that market would be willing to pay for those services.

Control over biopharma molecular information services from molecular profiling and database queries is transferred to customers at a point in time. We determined the customer obtains control of the promised service upon delivery of the test results or the delivery of responses to database queries to the biopharma partner. Control over biopharma molecular information services from subscription access to our data platform is transferred to customers ratably over time. We determined that the customer obtains control of the promised service as we host the content throughout the contract term. Control over biopharma molecular information services from clinical trial enrollment assistance is transferred to customers ratably over time. We determined that the customer obtains control of the promised service as we stand ready to perform such services throughout the contract term.

Pharma research and development services may include single or multiple performance obligations dependent on the contract. R&D services typically represent a single performance obligation as the Company performs a significant integration service for the individual goods or services in the research and development workstream, such as analytical validation and regulatory submissions. The individual promises are not separately identifiable from other promises in the contracts and, therefore, are not distinct. However, in certain contracts, a partner may engage the Company for multiple distinct R&D workstreams which are both capable of being distinct and separately identifiable from other promises in the contracts and, therefore, distinct performance obligations. Additionally, for regulatory contracts in pursuit of approval of a companion diagnostic assay, the Company identifies a performance obligation for commercial availability of the assay subsequent to obtaining regulatory approval.

The transaction price can consist of a combination of an upfront fee, performance-based development milestones, cost reimbursement, fixed per sample fees, commercial royalties, and commercial milestones. With the exception of upfront and fixed per sample fees, the other forms of compensation represent variable consideration. Variable consideration in the form of cost reimbursement and commercial royalties is estimated using the expected value method. Variable consideration in the form of development and commercial milestones is estimated using the most likely amount method. All variable consideration is constrained such that it is probable a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Application of the constraint for variable consideration to milestone payments is an area that requires significant judgment. In making this assessment, the Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be managed to achieve the respective milestone and the level of effort and investment required to achieve the respective milestone.

The primary method used to estimate standalone selling price for the R&D service performance obligations is the expected cost plus a margin approach, under which we forecast our expected costs of satisfying each performance obligation and then add an appropriate margin for that distinct good or service. The primary method used to estimate standalone selling price for a commercial availability performance obligation is the adjusted market assessment approach, under which we evaluate the market in which we sell the services and estimate the price that a customer in that market would be willing to pay for those services. The estimation of standalone selling price is an area that requires significant judgment, as it impacts the allocation objective in Step 4 of the model. Revenue will be recognized over time for R&D services and commercial availability services. Specifically, for R&D services we will recognize revenue using an input method to measure progress, utilizing costs incurred to-date relative to total expected costs as our measure of progress. For commercial availability services, we will recognize revenue using an input method to measure progress, resulting in a time-elapsed measure of progress.

The Company performs R&D services as part of its normal activities. The Company records these payments as Pharma research and development services revenue in the Consolidated Statements of Operations and Comprehensive Loss. The R&D costs incurred by the Company under these arrangements are included as Research and development expenses in the Company's Consolidated Statements of Operations and Comprehensive Loss given these costs are related to the development of new services to be owned and offered by the Company to its customers.

Cost of Molecular Information Services Revenue and Operating Expenses

We allocate certain overhead expenses, such as rent, utilities, and depreciation to cost of molecular information services revenue and operating expense categories based on headcount and facility usage. As a result, an overhead expense allocation is reflected in cost of revenue and each operating expense category.

Cost of Molecular Information Services Revenue

Cost of molecular information services revenue generally consists of specific reagents, specific consumable lab supplies, and shared costs that are allocated to our molecular information services – our FoundationOne CDx, FoundationOne, FoundationOneHeme, and FoundationACT tests – either on a direct or indirect basis, resulting in an overall cost for each specific test. The shared costs that are allocated to each test include personnel expenses (comprised of salaries, bonuses, employee benefits and stock-based compensation expenses), depreciation of laboratory equipment and amortization of leasehold improvements, shipping costs, third-party laboratory costs, and certain overhead expenses. Costs associated with performing tests are recorded as tests are processed.

Cost of Related-Party Molecular Information Services Revenue from Roche

Cost of Related-party molecular information services revenue from Roche is generally derived by taking the cost per test described above and applying it to each of the FoundationOne CDx, FoundationOne, FoundationOneHeme and FoundationACT tests processed for Roche. Costs of Related-party molecular information services revenue from Roche are associated with performing molecular information services for Roche under both the (i) molecular information platform program within our R&D Collaboration Agreement with Roche, and (ii) our Ex-U.S. Commercialization Agreement with Roche. Revenues from tests performed by us under the molecular information platform and the Ex-U.S. Commercialization Agreement are recognized in the Related-party molecular information services from Roche caption within our Consolidated Statements of Operations and Comprehensive Loss.

Selling and Marketing Expenses

Our selling and marketing expenses include costs associated with our sales organization, including our direct sales force and sales management, client services, marketing, reimbursement, and business development personnel who are focused on our biopharmaceutical customers. These expenses consist principally of salaries, commissions, bonuses, employee benefits, travel, and stock-based compensation, as well as marketing and educational activities, and allocated overhead expenses. We expense all selling and marketing costs as incurred.

During the three months ended June 30, 2018 and 2017, our selling and marketing expenses represented approximately 30% and 49%, respectively, of our total revenue and during the six months ended June 30, 2018 and 2017, selling and marketing expenses represented approximately 32% and 55%, respectively, of our total revenue. We expect our selling and marketing expenses to continue to increase in absolute dollars as we grow our client service infrastructure, increase our marketing and medical affairs activities to drive further awareness and adoption of our current molecular information services, and any future services we may develop.

General and Administrative Expenses

Our general and administrative expenses include costs for our executive, accounting and finance, legal, corporate information technology, and human resources functions. These expenses consist principally of salaries, bonuses, employee benefits, travel, and stock-based compensation, as well as professional services fees such as consulting, audit, tax, legal and billing fees, general corporate costs, and allocated overhead expenses. We expense all general and administrative expenses as incurred.

We expect that our general and administrative expenses will continue to increase, primarily due to the costs associated with increased infrastructure and headcount. These costs include additional legal and accounting expenses, including ongoing litigation, and an increase in billing costs related to our anticipated increase in revenues.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the development of new and enhanced services, immunotherapy biomarker-testing, companion diagnostic development, significant service improvements, clinical trials to evaluate the clinical utility of our services, the development of our FoundationCore knowledgebase, and various technology applications such as FoundationSmartTrials. Costs to develop our technology capabilities are recorded as research and development unless they meet the criteria to be capitalized as internal-use software costs. Our R&D activities include the following costs:

- personnel-related expenses such as salaries, bonuses, employee benefits, and stock-based compensation;
- fees for contractual and consulting services;
- costs to manage and synthesize our medical data and to expand FoundationCore;
- clinical trials;
- laboratory supplies; and
- allocated overhead expenses.

Costs incurred for the performance of pharma research and development services requested by our biopharmaceutical customers, including non-molecular information services costs incurred under the R&D Collaboration Agreement with Roche, are included as research and development expenses in the Consolidated Statements of Operations and Comprehensive Loss, given these costs are related to the development of new services to be owned and offered by us to our customers. Revenues from these services are recognized in the Pharma research and development services and Related-party pharma research and development services from Roche captions within our Consolidated Statements of Operations and Comprehensive Loss.

Interest (Expense) Income, Net

Interest (expense) income, net includes interest expense and interest income. Interest expense consists primarily of the quarterly commitment fee on the available balance under the Roche Credit Facility and interest expense on outstanding borrowings under the Roche Credit Facility. Interest income is earned on our cash, cash equivalents, and marketable securities.

Other Income

Other income includes the gain equity investments, disposal of certain long-lived assets, and foreign exchange transactions.

Results of Operations

Comparison of Three Months Ended June 30, 2018 and 2017

	Three Months Ended June 30,		Change	
	2018	2017	$	%
	(in thousands, except percentages)			
Statement of Operations Data:				
Revenue:				
Molecular information services	$ 38,702	$ 24,777	$ 13,925	56%
Related-party molecular information services from Roche	12,005	5,520	6,485	117%
Pharma research and development services	3,732	1,215	2,517	207%
Related-party pharma research and development services from Roche	2,567	3,492	(925)	(26)%
Total revenue	57,006	35,004	22,002	63%
Costs and expenses				
Cost of molecular information services	22,676	19,537	3,139	16%
Cost of related-party molecular information services from Roche	4,800	2,045	2,755	135%
Selling and marketing	17,141	17,115	26	0%
General and administrative	19,771	17,648	2,123	12%
Research and development	24,702	22,973	1,729	8%
Total costs and expenses	89,090	79,318	9,772	12%
Loss from operations	(32,084)	(44,314)	12,230	28%
Interest (expense) income, net	(1,477)	56	(1,533)	2738%
Other income	182	—	182	100%
Net loss	$ (33,379)	$ (44,258)	$ 10,879	25%

Revenue

Molecular Information Services

Molecular information services revenue for the three months ended June 30, 2018 and 2017, respectively, were comprised of the following:

	Three Months Ended June 30,		Change	
	2018	2017	$	%
	(in thousands, except percentages)			
Clinical:				
Molecular information services	$ 20,709	$ 11,977	$ 8,732	73%
Related-party molecular information services from Roche	3,089	964	2,125	220%
Total clinical revenue	23,798	12,941	10,857	84%
Pharma:				
Molecular information services	17,993	12,800	5,193	41%
Related-party molecular information services from Roche	8,916	4,556	4,360	96%
Total pharma revenue	26,909	17,356	9,553	55%
Total molecular information services revenue	$ 50,707	$ 30,297	$ 20,410	67%

Molecular information services revenue, including Roche related-party revenue, increased to $50.7 million for the three months ended June 30, 2018 from $30.3 million during the three months ended June 30, 2017. Revenue from tests reported to our ordering physicians increased to $23.8 million for the three months ended June 30, 2018 from $12.9 million for the three months ended June 30, 2017. The increase in revenue was partly driven by the increase in the number of tests reported for patients located in the United States, including the commercial launch of FoundationOne CDx, as well as an increase in revenue recorded under our Roche Ex-U.S. Commercialization Agreement. The change to revenue recognition under ASC 606 was not a reason for the increase in revenue from tests reported to our ordering physicians, as clinical revenue under ASC 605 in the three months ended June 30, 2018 would have been approximately $25.7 million.

Molecular information services revenue from our biopharma customers increased to $26.9 million from $17.4 million for the three months ended June 30, 2018 and 2017, respectively, and was driven by increased testing volume from new and existing customers.

Related-party molecular information services revenue from Roche was $12.0 million and $5.5 million for the three months ended June 30, 2018 and 2017, respectively, the majority of which is revenue earned under the Molecular Information Platform Program and Ex-U.S. Commercialization Agreement.

During the three months ended June 30, 2018, we reported a total of 22,991 CGP tests for clinical use to ordering physicians, including 6,274 FoundationOne CDx tests, 1,984 FoundationOneHeme tests, and 1,937 FoundationACT tests, as compared to 15,924 tests reported during the three months ended June 30, 2017, including 1,608 FoundationOneHeme tests, 1,594 FoundationACT tests, and 280 FoundationFocus CDx *BRCA* tests.

For CGP tests delivered in the US for clinical use during the three months ended June 30, 2018, we estimate we will be paid on approximately 37% of these tests at an average rate of approximately $2,600 when paid. Despite our lack of broad coverage decisions across many commercial third-party payors, we have been partially successful in securing reimbursement from these payors. However, it is difficult to predict future reimbursement as a result of variable reimbursement payments and continuously developing coverage decisions.

We delivered the results of 6,741 and 4,762 tests to our biopharmaceutical customers during the three months ended June 30, 2018 and 2017, respectively, and the average revenue per test sold was approximately $3,200 and $3,400 for the same periods.

Pharma Research and Development Services

Pharma research and development services revenue, including Roche related-party revenue, increased to $6.3 million for the three months ended June 30, 2018 from $4.7 million during the three months ended June 30, 2017. The increase was primarily driven by revenue earned under R&D service agreements with our various biopharma partners. Pharma research and development services revenue under ASC 605 for the three months ended June 30, 2018 would have totaled approximately $10.3 million. The decrease of approximately $4.0 million of revenue recorded under ASC 606 results from achievement of performance-based milestones for companion diagnostic development services performed for a biopharma partner. During the three months ended June 30, 2018, certain milestones were achieved which lifted the ASC 605 limitation on revenue recognition which existed at March 31, 2018 related to our right to invoice upon achievement of milestones. Under ASC 606, revenue for the earned portion of these services, based on our measure of progress of work performed to-date, was previously recognized in the three months ended March 31, 2018, as ASC 606 revenue recognition is not limited by achievement of such milestones.

Related-party pharma research and development services for Roche includes related-party revenue from Roche of $2.6 million and $3.5 million for the three months ended June 30, 2018 and 2017, respectively. The decrease was primarily driven by a decrease in revenue earned under the Companion Diagnostic (CDx) Development Program and was not affected by the adoption of ASC 606.

Cost of Molecular Information Services

Cost of molecular information services revenue, including Roche related-party revenue, increased to $27.5 million for the three months ended June 30, 2018 from $21.6 million for the three months ended June 30, 2017. The increase was driven by a 44% increase in tests reported to our ordering physicians. Additional volume led to higher reagent and consumable costs, additional laboratory personnel-related costs and facilities costs, and higher depreciation expense related to new equipment purchases. During the three months ended June 30, 2018 and 2017, our total cost of molecular information services revenue represented approximately 54% and 71% of our total molecular information services revenue, respectively.

Cost of related-party molecular information services from Roche was $4.8 million and $2.0 million for the three months ended June 30, 2018 and 2017, respectively. The increase was primarily driven by an increase in the number of tests delivered under the Molecular Information Platform Program and Ex-U.S. Commercialization Agreement.

Selling and Marketing Expenses

Selling and marketing expenses were $17.1 million for both the three months ended June 30, 2018 and 2017.

General and Administrative Expenses

General and administrative expenses increased to $19.8 million for the three months ended June 30, 2018 from $17.6 million for the three months ended June 30, 2017. The increase was primarily attributed to a $1.8 million increase in merger-related transaction fees.

Research and Development Expenses

Research and development expenses increased to $24.7 million for the three months ended June 30, 2018 from $23.0 million for the three months ended June 30, 2017. The increase was primarily attributed to a $1.8 million increase in personnel-related costs, a $1.5 million increase in system-related costs, $0.5 million increase in consulting costs, offset by a $1.2 million decrease in lab supplies and a $0.9 million decrease in facility-related costs.

Interest (Expense) Income, Net

Interest expense was $1.7 million and $0.1 million for the three months ended June 30, 2018 and 2017, respectively. The increase was primarily related to interest incurred on the Roche Credit Facility which was first drawn on in the third quarter of 2017. Interest income was $0.2 million for both the three months ended June 30, 2018 and 2017.

Other Income

Other income during the three months ended June 30, 2018 was $0.2 million and related to a gain on an equity investment.

Comparison of Six Months Ended June 30, 2018 and 2017

	Six Months Ended June 30,		Change	
	2018	2017	$	%
	(in thousands, except percentages)			
Statement of Operations Data:				
Revenue:				
Molecular information services	$ 70,478	$ 40,371	$ 30,107	75%
Related-party molecular information services from Roche	26,820	11,024	15,796	143%
Pharma research and development services	8,514	2,302	6,212	270%
Related-party pharma research and development services from Roche	4,034	7,635	(3,601)	(47)%
Total revenue	109,846	61,332	48,514	79%
Costs and expenses				
Cost of molecular information services	43,955	36,654	7,301	20%
Cost of related-party molecular information services from Roche	10,748	2,945	7,803	265%
Selling and marketing	34,621	33,551	1,070	3%
General and administrative	40,466	32,925	7,541	23%
Research and development	48,561	46,258	2,303	5%
Total costs and expenses	178,351	152,333	26,018	17%
Loss from operations	(68,505)	(91,001)	22,496	25%
Interest (expense) income, net	(2,471)	146	(2,617)	(1792)%
Other income	182	144	38	26%
Net loss	$ (70,794)	$ (90,711)	$ 19,917	22%

Revenue

Molecular Information Services

Molecular information services revenue for the six months ended June 30, 2018 and 2017, respectively, were comprised of the following:

	Six Months Ended June 30,		Change	
	2018	2017	$	%
	(in thousands, except percentages)			
Clinical:				
Molecular information services	$ 36,298	$ 22,626	$ 13,672	60%
Related-party molecular information services from Roche	6,287	1,934	4,353	225%
Total clinical revenue	42,585	24,560	18,025	73%
Pharma:				
Molecular information services	34,180	17,745	16,435	93%
Related-party molecular information services from Roche	20,533	9,090	11,443	126%
Total pharma revenue	54,713	26,835	27,878	104%
Total molecular information services revenue	$ 97,298	$ 51,395	$ 45,903	89%

Molecular information services revenue, including Roche related-party revenue, increased to $97.3 million for the six months ended June 30, 2018 from $51.4 million during the six months ended June 30, 2017. Revenue from tests reported to our ordering physicians increased to $42.6 million for the six months ended June 30, 2018 from $24.6 million for the six months ended June 30, 2017. The increase in revenue was partly driven by the increase in the number of tests reported for patients located in the United States, including the commercial launch of FoundationOne CDx, as well as an increase in revenue recorded under our Roche Ex-U.S. Commercialization Agreement. The change to accrual basis revenue under ASC 606 was not a reason for the increase in revenue from tests reported to our ordering physicians, as clinical revenue under ASC 605 in the six months ended June 30, 2018 would have been approximately $47.7 million, inclusive of certain one-time catch up payments.

Molecular information services revenue from our biopharma customers increased to $54.7 million from $26.8 million for the six months ended June 30, 2018 and 2017, respectively, and was driven by increased testing volume from new and existing customers.

Related-party molecular information services revenue from Roche was $26.8 million and $11.0 million for the six months ended June 30, 2018 and 2017, respectively, the majority of which is revenue earned under the Molecular Information Platform Program and Ex-U.S. Commercialization Agreement.

During the six months ended June 30, 2018, we reported a total of 44,852 CGP tests for clinical use to ordering physicians, including 6,274 FoundationOne CDx tests, 3,989 FoundationOneHeme tests, and 4,060 FoundationACT tests, as compared to 29,857 tests reported during the six months ended June 30, 2017, including 2,892 FoundationOneHeme tests, 2,949 FoundationACT tests, and 569 FoundationFocus CDx *BRCA* tests.

For CGP tests delivered in the US for clinical use during the six months ended June 30, 2018, we estimate we will be paid on approximately 33% of these tests at an average rate of approximately $2,600 when paid. Despite our lack of broad coverage decisions across many commercial third-party payors, we have been partially successful in securing reimbursement from these payors. However, it is difficult to predict future reimbursement as a result of variable reimbursement payments and continuously developing coverage decisions.

We delivered the results of 13,925 and 6,564 tests to our biopharmaceutical customers during the six months ended June 30, 2018 and 2017, respectively, and the average revenue per test sold was approximately $3,200 and $3,400 for the same periods.

Pharma Research and Development Services

Pharma research and development services revenue, including Roche related-party revenue, increased to $12.5 million for the six months ended June 30, 2018 from $9.9 million during the six months ended June 30, 2017. The increase was primarily driven by revenue earned under R&D service agreements with our various biopharma partners. Pharma research and development services

revenue under ASC 605 for the six months ended June 30, 2018 would have totaled approximately $12.7 million. The decrease of approximately $0.2 million of revenue recorded under ASC 606 is the result of timing differences between ASC 605 and ASC 606 as it relates to milestone achievement and related revenue recognition.

Related-party pharma research and development services for Roche includes related-party revenue from Roche of $4.0 million and $7.6 million for the six months ended June 30, 2018 and 2017, respectively. The decrease was primarily driven by a decrease in revenue earned under the Companion Diagnostic (CDx) Development Program and was not affected by the adoption of ASC 606.

Cost of Molecular Information Services

Cost of molecular information services revenue, including Roche related-party revenue, increased to $54.7 million for the six months ended June 30, 2018 from $39.6 million for the six months ended June 30, 2017. The increase was driven by a 50% increase in tests reported to our ordering physicians. Additional volume led to higher reagent and consumable costs, additional laboratory personnel-related costs and facilities costs, and higher depreciation expense related to new equipment purchases. During the six months ended June 30, 2018 and 2017, our total cost of molecular information services revenue represented approximately 56% and 77% of our total molecular information services revenue, respectively.

Cost of related-party molecular information services from Roche was $10.7 million and $2.9 million for the six months ended June 30, 2018 and 2017, respectively. The increase was primarily driven by an increase in the number of tests delivered under the Molecular Information Platform Program and Ex-U.S. Commercialization Agreement.

Selling and Marketing Expenses

Selling and marketing expenses increased to $34.6 million for the six months ended June 30, 2018 from $33.5 million for the six months ended June 30, 2017. The increase was primarily due to an increase of $0.8 million in marketing-related costs and $0.3 million increase in facility-related costs.

General and Administrative Expenses

General and administrative expenses increased to $40.5 million for the six months ended June 30, 2018 from $32.9 million for the six months ended June 30, 2017. The increase was primarily due to an increase of $6.2 million in legal costs, which include $1.8 million in merger-related transaction fees, and a $0.5 million increase in other professional services related fees.

Research and Development Expenses

Research and development expenses increased to $48.6 million for the six months ended June 30, 2018 from $46.3 million for the six months ended June 30, 2017. The increase was primarily attributed to a $3.8 million increase in personnel-related costs, a $3.1 million increase in system-related costs, and a $1.9 million increase in consulting-related costs, offset by a $5.0 million decrease in lab supplies, a $0.8 million decrease in clinical-trial costs, and a $0.7 million decrease in facility-related costs.

Interest (Expense) Income, Net

Interest expense was $2.9 million and $0.2 million for the six months ended June 30, 2018 and 2017, respectively. The increase was primarily related to interest incurred on the Roche Credit Facility which was first drawn on in the third quarter of 2017. Interest income was $0.4 million and $0.3 million for the six months ended June 30, 2018 and 2017, respectively.

Other Income

Other income during the six months ended June 30, 2018 was $0.2 million and related to a gain on an equity investment. Other income during the six months ended June 30, 2017 was $0.1 million and related to a gain on disposal of certain long-lived assets and foreign exchange transactions.

Liquidity and Capital Resources

We have incurred losses and negative cash flows from operations since our inception in November 2009, and as of June 30, 2018, we had an accumulated deficit of $558.9 million.

We have funded our operations principally from the sale of common stock, preferred stock, borrowings under our credit facilities, and revenue from molecular information services and pharma research and development services. We have a limited number of coverage decisions for our existing tests from commercial third-party payors and have a limited history of collecting claims. We

will continue to make requests for payment and/or appeal payment decisions made by commercial third-party payors. As of June 30, 2018, we had cash, cash equivalents, and restricted cash of approximately $55.7 million.

Pursuant to the Roche Credit Facility, which was amended on July 31, 2017, during the four-year period ending August 2, 2020, or the Draw Period, we may borrow up to $200 million. As of June 30, 2018, we have $110 million in borrowings outstanding and $90 million currently available under the facility. During the Draw Period, we are paying Roche Finance a quarterly commitment fee of 0.4% on the available balance of the Roche Credit Facility. Loans made under the Roche Credit Facility bear interest at 6.5% per annum. We are obligated to pay Roche Finance, quarterly during the Draw Period and for six months thereafter, accrued interest on the outstanding principal of the loans. Beginning six months after the Draw Period and for five years thereafter, we are obligated to pay Roche Finance quarterly equal payments of principal, with accrued interest, until maturity of the Roche Credit Facility on February 2, 2026.

Cash Flows

The following table sets forth the primary sources and uses of cash for each of the periods set forth below:

	Six Months Ended June 30,	
	2018	2017
	(in thousands)	
Net cash used in operating activities	$ (60,219)	$ (66,093)
Net cash (used in) provided by investing activities	(12,997)	37,689
Net cash provided by financing activities	55,316	2,188
Net decrease in cash, cash equivalents, and restricted cash	(17,900)	(26,216)
Effect of exchange rate changes on cash and cash equivalents	(86)	41
Cash, cash equivalents, and restricted cash at beginning of period	73,709	65,012
Cash, cash equivalents, and restricted cash at end of period	$ 55,723	$ 38,837

Operating Activities

Net cash used in operating activities in all periods resulted primarily from our net losses adjusted for non-cash charges and changes in components of working capital. The net cash used in operating activities was $60.2 million for the six months ended June 30, 2018 compared to $66.1 million for the six months ended June 30, 2017. The decrease in cash used in operating activities was driven primarily by a decrease in net loss of $19.9 million and a $1.9 million increase in depreciation and amortization expense partially offset by an increase of $10.0 million in cash used for working capital and a $5.8 million decrease in stock-based compensation expense.

Investing Activities

Net cash used in investing activities for the six months ended June 30, 2018 was $13.0 million and consisted of purchases of property and equipment. Net cash provided in investing activities for the six months ended June 30, 2017 was $37.7 million and consisted of $49.4 million in proceeds received from maturities of marketable securities, partially offset by $6.7 million in purchases of property and equipment and $5.0 million in purchases of marketable securities and other investments.

Financing Activities

Net cash provided by financing activities was $55.3 million for the six months ended June 30, 2018 and consisted of $50 million in cash borrowings under the Roche Credit Facility and $5.3 million in proceeds received from the exercise of stock options. Net cash provided by financing activities was $2.2 million for the six months ended June 30, 2017 and consisted solely of proceeds received from the exercise of stock options.

Operating Capital Requirements

We expect to incur additional operating losses in the near future and our operating expenses will increase as we seek regulatory approval of certain services, scale our technology infrastructure, expand our sales force, increase our marketing efforts to drive market adoption of our molecular information services, innovate our molecular information platform, and develop new service offerings. Our liquidity requirements have consisted of, and will continue to consist of, selling and marketing expenses, research and development expenses, capital expenditures, working capital and general corporate expenses. If demand for our services continues to increase, we anticipate that our capital expenditure requirements will also increase in order to build additional capacity. We expect that our planned

expenditures will be funded from our ongoing operations, from our existing cash and cash equivalents, and borrowings under the Roche Credit Facility.

In April 2015, the Roche transaction was consummated, and we received $250.0 million in gross proceeds from the sale of 5,000,000 shares of our common stock to Roche at a price of $50.00 per share. On July 31, 2017, we amended the Roche Credit Facility. Pursuant to the Roche Credit Facility, as amended, during the Draw Period, we may borrow up to $200 million. We have currently borrowed $110 million and have immediate access to an additional $90 million. During the Draw Period, we shall pay Roche Finance a quarterly commitment fee of 0.4% on the available balance of the Roche Credit Facility. Loans made under the Roche Credit Facility bear interest at 6.5% per annum. We shall pay Roche Finance, quarterly during the Draw Period and for six months thereafter, accrued interest on the outstanding principal of the loans. Beginning six months after the Draw Period and for five years thereafter, we shall pay Roche Finance quarterly equal payments of principal, with accrued interest, until maturity of the Roche Credit Facility on February 2, 2026. Based on our current business plan, we believe our cash and cash equivalents as of June 30, 2018, the availability of borrowings under the Roche Credit Facility, and anticipated cash flows from operations will be sufficient to meet our anticipated cash requirements for at least the next twelve months. We may consider raising additional capital to pursue strategic investments or for other reasons, subject to certain consent rights of Roche contained in the Investor Rights Agreement and the Roche Credit Facility. In the future, we expect our operating and capital expenditures to increase as we increase our headcount, expand our selling and marketing activities and continue to invest in new service offerings. If sales of our services grow, we expect our accounts receivable balance to increase. Any increase in accounts payable and accrued expenses may not completely offset increases in accounts receivable, which could result in greater working capital requirements.

On June 19, 2018, the Company entered into an Agreement and Plan of Merger, dated as of June 18, 2018, as amended (the "Merger Agreement"), with Roche Holdings, Inc., a Delaware corporation ("Parent" or "Roche Holdings"), and 062018 Merger Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), providing for the acquisition of the Company by Parent in a two-step all-cash transaction, consisting of a tender offer, followed by a subsequent back-end merger of Merger Sub with and into the Company (the "Merger"), with the Company surviving the Merger as an indirect wholly owned subsidiary of Roche Holding Ltd. Pursuant to the Merger Agreement, Parent caused Merger Sub to conduct a tender offer (the "Offer") for all of the issued and outstanding shares of common stock, par value $0.0001 per share (the "Shares"), of the Company at a price of $137.00 per Share (the "Offer Price"), net to the seller in cash, without interest and subject to any applicable withholding of taxes, and on the terms and conditions set forth in the Merger Agreement.

The Offer expired at 12:00 midnight, New York City time, at the end of the day on Monday, July 30, 2018. Citibank, N.A., in its capacity as depositary for the Offer (the "Depositary"), advised that, as of the expiration of the Offer, a total of 12,535,376 Shares (excluding Shares with respect to which notices of guaranteed delivery were delivered and for which certificates were not yet delivered) were validly tendered and not validly withdrawn pursuant to the Offer, representing approximately 77.3% of the Shares outstanding as of the expiration of the Offer (excluding those Shares held by Roche Holdings and its affiliates) and, when taken together with the Shares owned by Roche Holdings and its affiliates, representing approximately 90.1% of the Shares outstanding as of the expiration of the Offer. In addition, the Depositary advised that, as of July 31, 2018, Notices of Guaranteed Delivery were delivered with respect to approximately 1,342,573 Shares that had not yet been tendered, representing approximately 3.6% of the outstanding Shares. Each condition to the Offer was satisfied, and Merger Sub irrevocably accepted for payment all Shares that were validly tendered and not withdrawn.

On July 31, 2018, the Merger was completed pursuant to Section 251(h) of the DGCL, with no vote of the Company's stockholders required to consummate the Merger. Upon the consummation of the Merger, the Company became an indirect wholly owned subsidiary of Roche Holding Ltd. The aggregate consideration paid by Merger Sub in the Offer and Merger to purchase all outstanding Shares (other than the Shares owned by Roche Holdings and its affiliates) and other equity-based interests of the Company pursuant to the Offer and the Merger, was approximately $2.2 billion.

In connection with the consummation of the Merger, the Company (i) notified The Nasdaq Stock Market ("Nasdaq") of the consummation of the Merger and (ii) requested that Nasdaq (x) halt trading in the Shares on the morning of July 31, 2018, prior to market open, and suspend trading of the Shares effective as of the close of business on July 31, 2018 and (y) file with the SEC a Notification of Removal from Listing and/or Registration on Form 25 to delist and deregister the Shares under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Company has filed with the SEC a Certification and Notice of Termination of Registration on Form 15 under the Exchange Act, requesting that the Company's reporting obligations under Sections 13 and 15(d) of the Exchange Act be suspended.

Contractual Obligations and Commitments

The following summarizes our principal contractual obligations as of June 30, 2018 that have changed significantly since December 31, 2017 and the effects such obligations are expected to have on our liquidity and cash flow in future periods. Contractual obligations that were presented in our Annual Report on Form 10-K for the year ended December 31, 2017, but omitted below, represent those that have not changed significantly since that date.

	Total	2018	2019-2020	2021-2022	Thereafter
			(in thousands)		
Long-term debt obligations (1)	110,000	-	-	38,500	71,500
Interest (1)	42,506	5,935	15,157	12,773	8,641
Total	$ 152,506	$ 5,935	$ 15,157	$ 51,273	$ 80,141

(1) We shall pay Roche Finance a quarterly commitment fee of 0.4% on the available balance of the Roche Credit Facility. Loans made under the Roche Credit Facility bear interest at 6.5% per annum. We shall pay Roche Finance, quarterly during the Draw Period and for six months thereafter, accrued interest on the outstanding principal of the loans. Beginning six months after the Draw Period and for five years thereafter, we shall pay Roche Finance quarterly equal payments of principal, with accrued interest, until maturity of the Roche Credit Facility on February 2, 2026. As of June 30, 2018, we had $110 million in borrowings outstanding under the Roche Credit Facility. For further details on the Roche Credit Facility, refer to footnote 11 in the Notes to the Condensed Consolidated Financial Statements.

Off-Balance Sheet Arrangements

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

Application of Critical Accounting Policies

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

There have been no material changes to our critical accounting policies from those described in Part II, Item 7. “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, 2017, beyond the adoption of ASC 606 described in Note 2: Summary of Significant Accounting Policies.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

There were no material changes during the three months ended June 30, 2018, with respect to the information appearing in Part II, Item 7A. “Quantitative and Qualitative Disclosures About Market Risk,” included in our Annual Report on Form 10-K for the year ended December 31, 2017.

Item 4. Controls and Procedures

Management’s Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report. Based on this evaluation, our principal executive officer and principal financial officer have concluded that, as of June 30, 2018, our disclosure controls and procedures were effective at the reasonable assurance level.

We continue to review and document our disclosure controls and procedures, including our internal controls and procedures for financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

Changes in Internal Control Over Financial Reporting

During the quarter ended June 30, 2018, there were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, 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

From time to time, we are a party to litigation arising in the ordinary course of its business. On July 28, 2017, a purported stockholder of the Company filed a putative class action in the U.S. District Court for the District of Massachusetts, against the Company and certain of its current and former executives, captioned *Mahoney v. Foundation Medicine, Inc., et al.*, No. 1:17-cv-11394. The complaint alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 ("the Exchange Act") and Rule 10b-5 thereunder based on allegedly false and misleading statements and omissions when providing 2015 financial guidance. The lawsuit seeks among other things, unspecified compensatory damages in connection with the Company's allegedly inflated stock price between February 26, 2014 and November 3, 2015, interest, attorneys' fees and costs, and unspecified equitable/injunctive relief. On December 22, 2017, the plaintiffs filed an amended class action complaint alleging violations of Sections 10(b) and 20(a) of the Exchange Act and Rule 10b-5 thereunder based on allegedly false and misleading statements and omissions concerning providing 2015 financial guidance and other statements during the class period concerning demand and reimbursement for certain of the Company's tests. On February 20, 2018, the Company moved to dismiss the complaint for failure to state a claim, which plaintiffs opposed on April 23, 2018. On June 7, 2018, defendants filed a reply in further support of their motion to dismiss. The court has not yet scheduled oral argument on defendants' motion to dismiss. We believe this case is without merit and, therefore, continue to vigorously defend ourselves against the allegations.

On July 10, 2018, a putative securities class action complaint, *Wang v. Foundation Medicine, Inc. et al.*, No. 1:18-cv-11435, was filed in the United States District Court for the District of Massachusetts by purported Company shareholder Elaine Wang against the Company and the Company's directors in connection with the offer by Roche to acquire all of the issued and outstanding shares of our common stock (the "Offer"). An amended complaint (the "Wang Complaint") was filed on July 11, 2018 against the Company, the Company's directors and Roche. The Wang Complaint alleged that the Schedule 14D-9 filed on July 2, 2018 in connection with the Offer omitted certain supposedly material information concerning (1) communications regarding the positions of the Company's directors and officers following the transactions, (2) communications regarding compensation to be paid to the Company's directors and officers in connection with the transactions, and (3) compensation received by Goldman Sachs in connection with the Company's initial public offering and Roche Holdings' 2015 investment in the Company. The Wang Complaint asserted claims against all the defendants for violation of Sections 14(d) and 14(e) of the Exchange Act, and against the Company's directors and Roche Holdings for violation of Section 20(a) of the Exchange Act. The Wang Complaint sought declaratory and injunctive relief, as well as damages and attorneys' fees and costs. On July 31, 2018, the plaintiff filed a notice of voluntary dismissal, dismissing the case with prejudice.

On July 11, 2018, a putative securities class action complaint, *Kent v. Foundation Medicine, Inc. et al.*, No. 1:18-cv-01028 (the "Kent Complaint"), was filed in the United States District Court for the District of Delaware by purported Company shareholder Michael Kent against the Company, the Company's directors and Roche in connection with the Offer. The Kent Complaint alleged that the Schedule 14D-9 filed on July 2, 2018 in connection with the Offer omitted certain supposedly material information concerning (1) communications regarding the positions of the Company's directors and officers following the transactions and (2) compensation received by Goldman Sachs in connection with the Company's initial public offering and Roche Holdings' 2015 investment in the Company. The Kent Complaint asserted claims against all the defendants for violation of Sections 14(d) and 14(e) of the Exchange Act, and against the Company's directors and Roche for violation of Section 20(a) of the Exchange Act. The Kent Complaint sought declaratory and injunctive relief, as well as damages and attorneys' fees and costs. On August 2, 2018, the plaintiff filed a notice of voluntary dismissal, dismissing the case without prejudice.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. The risk factors described below pertain to us as of the date hereof and should be read in conjunction with the risk factors included in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017. The risk factors included in this Quarterly Report and our Annual Report should be carefully considered although these risks are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or operating results. If any such risks or uncertainties actually occur, it could adversely affect our business, financial condition or results of operations, and could cause the market price of our common stock to fluctuate or decline.

Reimbursement and Regulatory Risks Relating to Our Business

If commercial third-party payors or government payors fail to provide coverage or adequate reimbursement, or if there is a decrease in the extent of coverage or amount of reimbursement for our existing services or any future services we develop, our revenue and prospects for profitability would be harmed.

Overview

In both domestic and many international markets, sales of our existing and any future services we develop will depend, in large part, upon the availability of adequate reimbursement from third-party payors. These third-party payors include government healthcare programs in various markets, such as Medicare and Medicaid in the United States, managed care providers, accountable care organizations, private health insurers, and other organizations. We believe that obtaining a positive Medicare Local Coverage Determination, or LCD, or National Coverage Determination, or NCD, and a favorable Medicare reimbursement rate, and obtaining the agreement of established commercial third-party payors to provide coverage and adequate payment, for each of our existing services, and any future services we develop, across substantially all medically indicated cancers will be a necessary element in achieving material commercial success. Physicians may not order our services unless commercial third-party payors and government payors authorize coverage and pay for all, or a substantial portion, of the rates established for our services.

Commercial third-party payors and government payors are increasingly attempting to contain healthcare costs by lowering reimbursement rates, limiting coverage of diagnostic services, and creating conditions of reimbursement, such as requiring participation in clinical evidence development involving research studies and the collection of physician decision impact and patient outcomes data. Certain commercial third-party payors may not agree to reimburse our existing services or future services if the Centers for Medicare & Medicaid Services, or CMS, or the Medicare administrative contractors, or MACs, assigned to the jurisdictions in which our operational laboratory facilities are located do not issue positive coverage decisions, and pay for, such services. As a result of these cost-containment trends, commercial third-party payors and government payors that currently provide, or in the future may provide, reimbursement for one or more of our services may propose and/or actually reduce, suspend, revoke, or discontinue payments or coverage at any time. Payors may also create conditions for coverage or may contract with third-party vendors to manage laboratory benefits, in both cases creating administrative hurdles for ordering physicians and patients that may make our services more difficult to sell. The percentage of submitted claims that are ultimately paid, the length of time to receive payment on claims, and the average reimbursement of those paid claims is likely to vary from period to period.

There is significant uncertainty surrounding whether the use of services that incorporate new technology, such as our portfolio of molecular information services, will be eligible for coverage by commercial third-party payors and government payors or, if eligible for coverage, what the reimbursement rates will be for these services. The fact that a diagnostic service has been approved for reimbursement in the past, has received approval from the U.S. Food & Drug Administration, or FDA, or has obtained coverage for any particular indication or in any particular jurisdiction, does not guarantee that such diagnostic service will remain covered and/or reimbursed or that similar or additional diagnostic services and/or clinically indicated tumor types will be covered and/or reimbursed in the future. We have had claims for reimbursement denied by certain commercial third-party payors, in some cases because they have designated some or all of FoundationOne CDx, FoundationOne, FoundationOneHeme, and FoundationACT as experimental and investigational. Reimbursement of next generation sequencing, or NGS, -based cancer tests by commercial third-party payors and government payors may depend on a number of factors, including a payor's determination that our existing and future services are:

- not experimental or investigational;
- medically reasonable and necessary;
- appropriate for the specific patient;
- cost effective;
- supported by peer-reviewed publications;
- included in clinical practice guidelines and pathways; and
- supported by clinical utility and health economic studies demonstrating improved outcomes and cost effectiveness.

As a result, our efforts to pursue coverage on behalf of patients will take a substantial amount of time, and various commercial third-party payors and government payors may never cover or provide adequate payment for our existing and future services. Our strategy to achieve broad reimbursement and coverage is focused on demonstrating the clinical utility and economic benefits of our services, including engagement with key members of the oncology community and increasing physician demand, but there is no assurance that we will succeed in any of these areas or that, even if we do succeed, we will receive favorable coverage and reimbursement decisions. If adequate third-party coverage and reimbursement are unavailable, we may not be able to maintain volume and price levels sufficient to realize an appropriate return on investment in research and development. Furthermore, if a commercial third-party payor or government payor denies coverage and payment, it may be difficult for us to collect from the patient, and we may not be successful in doing so.

Government Payors

In the second quarter of 2016, the FDA and CMS accepted FoundationOne CDx for the Parallel Review program. The Parallel Review program provides concurrent review of a medical device by the FDA for marketing approval and by CMS for an NCD to facilitate patient access to innovative medical devices. In November 2017, the FDA approved FoundationOne CDx for detection of substitutions, insertion and deletion alterations, and copy number alterations in 324 genes and select gene rearrangements, as well as genomic signatures including microsatellite instability, or MSI, and tumor mutational burden, or TMB, using DNA isolated from formalin-fixed paraffin embedded tumor tissue specimens. FoundationOne CDx is intended as a companion diagnostic for patients with metastatic non-small cell lung cancer, or NSCLC, melanoma, colorectal cancer, ovarian cancer, or breast cancer to identify those patients who may benefit from treatment with one of 17 on-label targeted therapies in accordance with FDA-approved therapeutic product labeling. Additionally, FoundationOne CDx is intended to provide tumor mutation profiling to be used by qualified health care professionals in accordance with professional guidelines in oncology for cancer patients with solid malignant neoplasms.

Following the FDA's approval of FoundationOne CDx in November 2017, CMS issued a final NCD in March 2018 that establishes nationwide Medicare coverage for FoundationOne CDx for all solid tumor types when ordered by the patient's treating physician for Medicare beneficiaries with advanced cancer (*i.e.*, either recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer), who either have not been previously tested using FoundationOne CDx for the same primary diagnosis of cancer or are seeking repeat testing with FoundationOne CDx for a new primary cancer diagnosis, and continue to seek further cancer therapy.

For dates of service from the effective date of the final NCD (March 16, 2018) through June 30, 2018, FoundationOne CDx will be reimbursed at a rate established by the local MAC, National Government Services, that processes claims for services furnished by our Cambridge, MA laboratory. During this period, National Government Services established a rate of $2919.60 for FoundationOne CDx. In May 2018, CMS approved FoundationOne CDx for new advanced diagnostic laboratory test, or new ADLT, status. As a result of this designation, Medicare will pay for FoundationOne CDx at the test's "actual list charge" (a term defined under the Protecting Access to Medicare Act of 2014) for dates of service beginning July 1, 2018 through March 31, 2019. The actual list charge for FoundationOne CDx is $3,500. As an ADLT, the Medicare payment rate for FoundationOne CDx for dates of service beginning April 1, 2019 through December 31, 2020, will be the weighted median of private payor rates for the test, as calculated from private payer payment information collected by us from July 1, 2018 through November 30, 2018, and reported by us to CMS by December 31, 2018. We cannot guarantee that the Medicare reimbursement rate established for this test will be favorable beginning April 1, 2019 or at any time thereafter. If the Medicare reimbursement rate is unfavorable at any point, we could experience a negative impact on revenue.

The final NCD establishes nationwide Medicare coverage of NGS tests for advanced cancer that have been approved or cleared by the FDA as a companion diagnostic, and applies to all Medicare fee-for-service and Medicare Advantage plans. For NGS-based tests other than those that have been approved or cleared by the FDA as a companion diagnostic (*i.e.,* tests offered as LDTs or FDA-approved or cleared tests that are not a companion diagnostic), the final NCD allows the local MACs to continue determining coverage for such tests insofar as patients meet the patient criteria outlined in the final NCD (*i.e.*, either recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer, and who either have not been previously tested using the same NGS test for the same primary diagnosis of cancer or are seeking repeat testing with the same NGS test for a new primary cancer diagnosis, and continue to seek further cancer therapy). As such, FoundationOne will continue to be covered by Medicare when provided to patients with NSCLC consistent with the current terms of the LCD issued by Palmetto GBA, or Palmetto. Palmetto is the MAC for the jurisdiction in which our North Carolina laboratory is located. The MolDx Program was developed by Palmetto to serve various functions, including establishing coverage and reimbursement for molecular diagnostic tests that fall under Palmetto's purview. In May 2015, Palmetto's MolDx Program published a final LCD, or the Palmetto LCD, which included reimbursement for comprehensive genomic profiles for highly validated testing in an initial subset of patients diagnosed with NSCLC. The Palmetto website listed FoundationOne as a covered test under this LCD effective October 1, 2015.

For tests we may offer that are not subject to an NCD, local MACs that administer the Medicare program in various regions have discretion in determining coverage for tests, subject to Medicare rules. A MAC assigned to a jurisdiction in which we have an operational laboratory facility may deny a claim submitted by us related to that facility. Even if we do receive coverage from a MAC on appeal of a denied claim, the reimbursement rate may be lower than we expect if the service is not currently priced on the Medicare Clinical Laboratory Fee Schedule, or CLFS, and if such rate is then adopted by commercial third-party payors, it would have an adverse effect on our revenues and results of operations. In addition, a MAC may, insofar as such determination is not inconsistent with an NCD, issue an LCD for one or more of our existing or future services, and/or for one or more clinically indicated tumor types involved with such services that would apply to future claims. Although we would have the opportunity to submit additional materials in support of a positive LCD for our services to the MAC (or to CMS through the Office of Medicare Hearings and Appeals for claims-level appeals), there is no guarantee that the MAC will provide us with any additional positive LCDs or claims decisions, reverse any previously issued negative LCDs or claims decisions, or maintain any previously issued positive LCDs. In circumstances of non-coverage under an NCD or LCD, we may be required to obtain a signed advance beneficiary notice, or ABN, from Medicare patients in order to seek payment directly from the patient for non-covered services.

If CMS issues a negative NCD, or a MAC assigned to the jurisdiction in which one of our operational laboratory facilities is located issues a negative LCD, with respect to one or more of our services and/or clinically indicated tumor types, or if CMS under an

NCD or a MAC under an LCD establishes patient eligibility conditions, data collection obligations or other requirements that are difficult and/or costly to satisfy, or if a MAC denies reimbursement of one or more of these services in claims not covered by an NCD or LCD, our revenue and results of operations would be adversely affected because we may not be able to satisfy such requirements, our costs in meeting reimbursement requirements may increase, or we will not receive revenue or will receive decreased revenue for tests performed. Similarly, if CMS or a MAC withdraws or negatively changes its coverage policies after deciding to cover one or more of our services, our revenue and results of operations would be adversely affected. Physicians may be less likely to order a test for a patient if the test is not subject to a positive coverage determination such that the patient could ultimately be responsible for all or substantially all of the cost of the test. We may also be less likely to receive a positive coverage determination by commercial third-party payors insofar as Medicare identifies one or more of our tests as non-covered in an NCD or LCD.

In September 2016, we began receiving test requisitions and samples from commercial customers at our North Carolina facility and performing components of FoundationOne and FoundationOneHeme testing at the facility. In accordance with CMS guidance, in January 2017, we began submitting an initial set of claims to Palmetto for FoundationOne test requisitions received in our North Carolina facility. We submitted these claims using miscellaneous Current Procedural Terminology, or CPT, codes with unique McKesson Z Code identifiers. In March 2017, we received our first payments for claims under the Palmetto LCD. Payment for all claims processed to date by Palmetto has been made based upon the allowable rate of $3,416 per test. Although we are performing components of our testing services for FoundationOneHeme in our North Carolina facility, Palmetto has provided guidance that comprehensive genomic profiling, or CGP, testing not covered by an LCD is explicitly non-covered, including FoundationOneHeme; therefore, we are seeking to obtain signed ABNs from Medicare patients who receive FoundationOneHeme testing. We are still in the process of determining what other types of services we may conduct at this facility. Such determination will be subject to the existence and limitations of applicable licenses and approvals, our ability to meet laboratory and testing requirements, and our ability to accommodate logistical and commercial needs in the test ordering and fulfillment process.

In parallel, we have been engaged in conversations with Palmetto regarding the potential for coverage and payment by Palmetto for FoundationOne claims submitted by our North Carolina laboratory for Medicare patients having tumor types other than NSCLC. In December 2016, Palmetto originally issued three draft LCDs for the use of CGP to guide treatment in patients with metastatic colorectal cancer, with metastatic melanoma, and with advanced primary peritoneal, fallopian tube and ovarian cancer, respectively. In March 2018, Palmetto re-issued revised versions of these draft LCDs, and accepted public comments on such drafts until May 10, 2018. If finalized as proposed, FoundationOne will be covered by Medicare when provided to patients with these conditions consistent with the terms of these LCDs. However, these draft LCDs may be delayed, may never be finalized, or if the LCDs are finalized, the coverage established by such LCDs may not result in payment for claims submitted by our North Carolina laboratory. There is no certainty that Palmetto will provide coverage for such Medicare patients, and if coverage is provided, that such coverage will result in adequate payment for claims submitted by our North Carolina laboratory. We are also currently seeking to obtain as part of the test order process a signed ABN from Medicare patients for non-covered tumor types in order to allow us to bill Medicare patients directly. The process of procuring signed ABNs may affect the turn-around-time for test report delivery, and may have a negative impact on test utilization, our revenue and our profitability.

Commercial Payors

We are currently considered an "out-of-network provider" by many commercial third-party payors because we have not entered into specific contracts to provide one or more of our existing services for their health plan beneficiaries, and as a result, patients may have higher out-of-pocket costs for our services and be subject to health plan requirements such as prior authorization. Physicians may be less likely to order our tests if patients have higher out-of-pocket costs or administrative hurdles, which would in turn have a negative effect on revenue and results of operations. If we were to become a contracted provider with additional commercial third-party payors in the future, the amount of overall reimbursement we receive may decrease if coverage is furnished for only a limited number of tumor types and/or we are reimbursed less money per test performed at a contracted rate than at a non-contracted rate, which could have a negative impact on our revenue. We may also be unable to collect patient out-of-pocket payment amounts directly from patients, and may experience lost revenue as a result. In addition, a payor's decision to cover our services only in a specific tumor type such as NSCLC could also result in our inability to receive payment for other non-covered tumor types, resulting in lost volume and revenue. Finally, our contracts with current and any additional third-party payors will be subject to renewal, and the renewal process could result in lower reimbursement rates or elimination of reimbursement to us if the parties fail to agree to the terms of renewal and the contract is terminated.

Policy Considerations

The United States and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare. For example, in some foreign markets, the government controls the pricing of many healthcare services. We expect that there will continue to be federal and state proposals to implement governmental controls or impose healthcare requirements. In addition, the Medicare program and increasing emphasis on managed or accountable care in the United States will continue to put pressure on utilization and pricing. Utilization and cost control initiatives could decrease the volume of orders and payment that we would receive for any services in the future, which would limit our revenue and profitability.

Healthcare policy changes, including legislation reforming the United States healthcare system, may have a material adverse effect on our financial condition, results of operations, and cash flows.

Affordable Care Act

In March 2010, legislation collectively referred to as the Affordable Care Act, or ACA, was enacted in the United States. The ACA, as subsequently amended, made a number of substantial changes in the way healthcare is financed by both governmental and private insurers. Among other things, the ACA requires each medical device manufacturer and importer to pay an excise tax equal to 2.3% of the sale price for its taxable medical devices. In 2015, Congress imposed a two-year moratorium on this medical device tax, so that medical device sales during the period between January 1, 2016 and December 31, 2017 were exempt from the tax. In 2018, Congress extended the moratorium to medical device sales made during the period between January 1, 2018 and December 31, 2019. Absent further legislative action, the tax will be automatically reinstated for medical device sales starting on January 1, 2020. If the tax is reinstated, sales of our services that are regulated as medical devices, such as FoundationOne CDx, would be subject to this tax.

On April 1, 2013, cuts to the federal budget were implemented, known as sequestration, resulting in a 2% annual cut in Medicare payments for all services, including clinical laboratory testing. Congress has since extended this 2% Medicare sequester through fiscal year 2025. At this time, it remains uncertain how long the cuts will be continued.

Many CPT procedure codes for molecular pathology tests that we use to bill our services were revised by the American Medical Association, or AMA, effective January 1, 2013. These new CPT codes were developed and implemented for individual genes, or the components of a multi-gene panel. In a final rule for calendar year 2013, CMS announced that it decided to keep the new molecular codes on the CLFS rather than move them to the Physician Fee Schedule. CMS then announced that for 2013, it would price the new codes using a "gap filling" process. Under this approach, CMS referred the CPT codes to the MACs to allow them to determine an appropriate price. CMS then calculated the median of the pricing provided by the MACs to establish and publish a National Limitation Amount, or NLA, by CPT code for 2014.

In 2014, the AMA approved and implemented new CPT codes for genomic sequencing-based panel tests in cancer, effective January 1, 2015. In 2015, CMS used a "gap filling" process to price some of these new codes, which involved referring the new codes to the MACs to allow them to determine and submit to CMS an appropriate price. For 2016, CMS established and published an NLA for some of these codes, including the code associated with testing for 5-50 genes as calculated by determining the median price as provided by the MACs for the applicable code. If CMS reduces reimbursement for the CPT codes for individual genes or fails to price favorably multi-gene panel codes upon which commercial payors may base rates, or if commercial payors who often base pricing on Medicare fee schedules reduce non-contracted payment rates below the NLA amounts for CPT codes corresponding to individual genes, mandate use of the sequencing-based panel CPT codes, or decide to stop payment on specific CPT codes altogether, our revenue could be adversely affected. For 2018, CMS established and published an NLA for the CPT code associated with testing for over 51 genes as calculated based on the weighted median of the payment rates for private payors for such code.

For dates of service effective April 1, 2018, the AMA established a unique Proprietary Laboratory Analysis code, or PLA code, that is specific to our FoundationOne CDx test and can be billed to third-party and government payers. Beginning July 1, 2018 through March 31, 2019, the Medicare payment rate for this PLA code is $3,500. Thereafter, the Medicare payment rate for the code will be based on the calculated weighted median of private payer payment rates, as reported to CMS that is specific to this unique PLA code.

Protecting Access to Medicare Act

In April 2014, the Protecting Access to Medicare Act of 2014, or PAMA, was enacted into law. Section 216 of PAMA reforms the Medicare payment system for clinical laboratory tests paid through the CLFS. PAMA establishes a market-based payment system for Medicare payment for clinical diagnostic laboratory tests. Under this new methodology, CMS will establish Medicare payment for each test based on the weighted median of the private payor rates for the test. PAMA also creates a new class of test called an ADLT, defined as a test offered and furnished only by a single laboratory that is not sold for use by a laboratory other than the original developing laboratory and is either a (1) multi-biomarker test of DNA, RNA or proteins with a unique algorithm yielding a single, patient-specific result, (2) test that is cleared or approved by the FDA, or (3) test meeting other similar criteria established by the United States Secretary of Health and Human Services.

PAMA requires certain clinical laboratories meeting a threshold of Medicare revenues to report private payor rates and corresponding test volumes. We did not meet this threshold during the January 1, 2016 to June 30, 2016 data collection period and therefore were not required to report this data in 2017, however, we anticipate that we will be required to report data during future reporting periods (e.g., during December 2018 for data collected from July 1, 2018 through November 30, 2018 for private payer claims for FoundationOne CDx). In June 2016, CMS issued the Medicare Clinical Diagnostic Laboratory Tests Payment System Final Rule, or the Final Rule, to implement the laboratory test payment provisions of PAMA. As outlined in the Final Rule, CMS implemented the new payment system on January 1, 2018. CMS has issued sub-regulatory guidance on data collection and reporting and on additional topics, including a list of specific billing codes for which laboratories must report data. In March 2018, CMS also published additional sub-regulatory guidance describing an application process for ADLTs. In May 2018, CMS determined that

FoundationOne CDx meets the requirements for classification as a new ADLT. Depending upon if and how commercial payors adopt, or are otherwise influenced by, this new Medicare pricing methodology and the payment rates, our weighted median commercial payor rate for our tests, including FoundationOne CDx, could be adversely affected.

The Center for Medicare and Medicaid Innovation announced in June 2016 the launch of the Oncology Care Model, or OCM, beginning on July 1, 2016. The OCM is a five-year voluntary program that includes 192 physician practices in 32 states, as well as 14 private payors. Under the OCM, participating practices receive performance-based payments on the basis of how their prices for 6-month "episodes" of cancer care triggered by receipt of chemotherapy compare to "benchmark" prices for similar episodes. These benchmarks are based on the historical data for the period of January 2012 through June 2015. The model may impact the utilization of our tests among those practices participating in OCM.

Medicare 14-Day Rule

Certain Medicare billing policy requirements for clinical laboratory tests impact our ability to bill Medicare directly, and under certain circumstances, require us to bill and collect payments from hospitals for tests that we perform for inpatient or outpatient Medicare patients. Prior to January 1, 2018, under the so-called "14-Day Rule," tests performed on specimens collected from hospital inpatients or outpatients, where those tests are ordered less than 14 days following the date of the patient's discharge from the hospital, could not be billed by us to Medicare directly; instead we had to bill the hospital for the test.

In November 2017, CMS finalized the 2018 Hospital Outpatient Prospective Payment System Final Rule, which allows us to directly bill Medicare more frequently. Specifically, under the revised billing rules, a laboratory that performs molecular pathology tests on specimens collected during a hospital outpatient stay may bill Medicare directly for such tests if the test was performed following a hospital outpatient's discharge from the hospital outpatient department. To the extent these revisions to Medicare's billing policy require us to bill Medicare directly for tests previously billed to hospitals under the 14-Day Rule, we will no longer bill hospitals for such tests. CMS announced that it will exercise enforcement discretion until January 2, 2019 for circumstances where, under the revised billing rules, the laboratory is now required to bill Medicare directly where the laboratory was previously required to bill the hospital from which the specimen was collected.

We continue to be subject to the 14-Day Rule, and therefore remain obligated to bill the hospital insofar as we perform tests on specimens collected during a hospital inpatient stay. Hospitals may assert that they are not required to pay these bills, or they may delay in paying these bills. In these cases, for hospitals who disclaim responsibility for our bills or delay payment of our bills under the 14-Day Rule, we may undertake collection activities, and as a result of such efforts, we may accept payments from hospitals that are less than the original invoice or we may be unable to collect from hospitals any payments at all. The management of this collection activity, and the acceptance of payment amounts less than the amount of such bills, involves a number of risks, including our ability to meet the requirements of applicable financial accounting principles and controls and healthcare regulations. If we are not successful in managing this collection activity in a manner that meets our obligations, we could be deemed to be in violation of accounting principles or health care regulation, which in turn, could lead to the assertion of claims against us and a resulting adverse effect on our operating results and reputation.

Finally, the recent presidential and congressional elections in the U.S. could result in significant changes in, and uncertainty with respect to, legislation, regulation and government policy that could significantly impact our business and the healthcare industry. While it is not possible to predict whether and when any such changes will occur, a variety of initiatives to repeal or significantly reform key provisions of the ACA have been introduced in Congress or otherwise proposed. Most notably, Congress enacted legislation in 2017 that eliminates the ACA's "individual mandate" beginning in 2019, which may significantly impact the number of covered lives participating in exchange plans. Other potentially significant changes in policy include the possibility of modifications and elimination of programs and reductions in staffing at the FDA and CMS, and initiatives to contain or reduce governmental spending in the healthcare area, including Medicare and Medicaid reimbursement. We cannot predict what future healthcare initiatives will be introduced or implemented at the federal or state level, or how any future legislation or regulation may affect us. Any taxes imposed by federal legislation and the expansion of the government's role in the U.S. healthcare industry generally, as well as changes to the reimbursement amounts paid by payors for our existing and future services, may reduce our profits and have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index, which is incorporated herein by reference.

Exhibit No.	Exhibit Index
2.1	Agreement and Plan of Merger, by and among Foundation Medicine, Inc., Roche Holdings, Inc. and 062018 Merger Subsidiary, Inc., dated June 18, 2018 (incorporated by reference to Exhibit 2.1 to the Company's Form 8-K filed on June 18, 2018).
10.1*#	Amended and Restated Supply, Service and Support Agreement, by and between the Company and Illumina, Inc., dated June 6, 2018.
10.2*#	China Territory Agreement, by and between the Company and F. Hoffman-La Roche Ltd, dated April 26, 2018.
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	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.
101	Interactive Data Files regarding (a) our Condensed Consolidated Balance Sheets as of June 30, 2018 and December 31, 2017, (b) our Condensed Consolidated Statements of Operations and Comprehensive Loss for the Three and Six Months Ended June 30, 2018 and 2017, (c) our Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2018 and 2017, and (d) the Notes to such Condensed Consolidated Financial Statements.

* Filed herewith.
** Furnished herewith.
# Confidential treatment has been requested or granted for certain information contained in this exhibit. Such information has been omitted and filed separately with the Securities and Exchange Commission.

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 on the date set forth below by the undersigned thereunto duly authorized.

FOUNDATION MEDICINE, INC.

Date: August 9, 2018

By: /s/ Troy Cox
Troy Cox
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 9, 2018

By: /s/ Jason Ryan
Jason Ryan
Chief Financial Officer
(Principal Financial Officer)

Exhibit 10.1

***Text Omitted and Filed Separately with the Securities and Exchange Commission
Confidential Treatment Requested Under
17 C.F.R. Sections 200.80(b)(4) and 240.24b-2

Execution Version

AMENDED AND RESTATED SUPPLY, SERVICE, AND SUPPORT AGREEMENT

This Amended and Restated Supply, Service, and Support Agreement (this "**Agreement**") is effective as of the date of last signature found below (the "**Restatement Date**") between Illumina, Inc., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, CA 92122 ("**Illumina**") and Foundation Medicine, Inc. ("**FMI**") having a place of business at 150 Second Street, Cambridge, MA, 02141, on behalf of itself and its Ordering Affiliates (collectively, "**Customer**"), and amends and restates that certain Supply, Service, and Support Agreement dated July 25, 2013 ("**Effective Date**") between Foundation Medicine, Inc. and Illumina, as amended ("**Prior Agreement**"). Upon execution, the terms of this Agreement shall supersede and control over the terms of the Prior Agreement. Customer and Illumina may be referred to herein as "**Party**" or "**Parties**."

The Parties agree as follows:

1. Definitions. The following terms have these meanings.

"**Affiliate(s)**" means with respect to a Party, any entity that, directly or indirectly, controls, is controlled by or is under common control with such Party for so long as such control exists. For purposes of this definition, an entity has control of another entity if it has the direct or indirect ability or power to direct or cause the direction of management policies of such other entity or otherwise direct the affairs of such other entity, whether through ownership of the voting securities of such other entity, by contract or otherwise. For the avoidance of doubt, with respect to Customer the term "Affiliate" shall in no event include Roche Holding Ltd, Basel, Switzerland ("**Roche**") or Chugai Pharmaceutical Co. Ltd., Tokyo, Japan ("**Chugai**") and their respective subsidiaries, unless the Parties specifically memorialize such inclusion of Roche and/or Chugai and their respective subsidiaries in a signed written amendment to this Agreement. With respect to Illumina, the term "Affiliate" shall not include Helix Holdings I, LLC ("**Helix**"), or GRAIL, Inc., or their respective subsidiaries and members (other than Illumina). Additionally, each Party may exclude any entity that would otherwise qualify as an Affiliate pursuant to the above definition, in each case solely to the extent such entity has not participated and is not then participating in activities under this Agreement (including the grant of any intellectual property or other rights), by providing written notice to the other Party.

"**Affiliate Application Specific IP**" means the Intellectual Property Rights of an Affiliate of Illumina that pertain to the Product (and use thereof) only with regard to specific field(s) or specific application(s). Affiliate Application Specific IP excludes all Core IP. By way of non-limiting example, Intellectual Property Rights for […***…] are examples of Affiliate Application Specific IP. Affiliate Application Specific IP is a subset of Application Specific IP.

"**Application Specific IP**" means the Illumina Intellectual Property Rights, inclusive of Affiliate Application Specific IP, that pertain to the Product (and use thereof) only with regard to specific field(s) or specific application(s). Application Specific IP excludes all Core IP. By way of non-limiting example, Illumina Intellectual Property Rights for […***…] are examples of Application Specific IP.

"**Base Price**" means, on a Country-specific basis, with respect to

(x) any […***…],

(i) for […***…] of the Term after the Restatement Date, the lesser of (A) Illumina's […***…] for such […***…] in the applicable Country […***…], and (B) […***…] in the applicable Country […***…], as set forth in the relevant […***…] Quote, and

(ii) for […***…] of the Term thereafter, the lesser of (A) […***…] in the applicable Country […***…], and (B) […***…] in the applicable Country […***…], as set forth in the relevant […***…] Quote; and

(y) any […***…], Illumina's […***…].

For the avoidance of doubt, Illumina's […***…].

"**Consumable(s)**" means Illumina-Branded reagents and consumable items that are intended by Illumina for use with, and are to be consumed through the use of Illumina Hardware. Consumables are either TG Consumables or Non-TG Consumables (including Temporary Consumables). "**TG Consumables**," which may also be referred to herein as "**Advantage Consumables**," are designated with the pre-fix "TG" in their part number or product description, which prefix indicates that they have the attributes detailed in Sections 10-12. "**Non-TG Consumables**," which may also be referred to herein as "**Non-Advantage Consumables**," are all Consumables other than TG Consumables and includes Replacement Non-TG Consumables. All references in this Agreement to Consumables means both TG Consumables and Non-TG Consumables unless specified otherwise in this Agreement.

"**Consumable Kit(s)**" means individual boxes containing TG Consumables.

"**Core IP**" means Illumina Intellectual Property Rights that pertain to or cover aspects or features of the Product (or use thereof) that are common to the Products in all applications and all fields of use. To avoid any doubt, and without limitation, Core IP specifically excludes any and all Intellectual Property Rights relating to […***…].

"**Country**" or "**Countries**" means in the case of

(i) Foundation Medicine, Inc.: the United States of America, including its territories and possessions, and

(ii) FMI Germany GmbH: Germany

provided that this definition shall automatically be deemed to be updated to include the countries of formation or incorporation, as applicable, of FMI and each of its Affiliates listed on **Exhibit B** attached hereto, as may be updated by in a signed written amendment to this Agreement entered into by the Parties as contemplated in the definition of the term 'Ordering Affiliates'.

"**Customer Use**" means use in the Field, specifically excluding any use that (i) is not in accordance with the Product's Specifications or Documentation, (ii) requires grants of rights or a license to Application Specific IP or Affiliate Application Specific IP, (iii) is a re-use of a previously used Consumable, (iv) is the disassembling, reverse-engineering, reverse-compiling, or reverse-assembling of the Product, (v) is the separation, extraction, or isolation of components of Consumables or other unauthorized analysis of the Consumables, (vi) gains access to or determines the methods of operation of the Product, (vii) is the use of a non-Illumina reagent/consumable with Illumina Hardware (unless the Specifications or Documentation state otherwise), or (viii) is the transfer to a third party of, or sub-licensing of, Software or third-party software.

"**Documentation**" means Illumina's user manual, package insert, and similar documentation, for the Product in effect on the date that the Product ships. Documentation may be provided (including by reference to a website) with the Product at the time of shipment or provided electronically from Illumina.

"**Existing Instruments**" means Illumina Hardware that was purchased by Customer from Illumina or provided by Illumina prior to the Effective Date and that Customer intends to use with the Consumables purchased under this Agreement.

"**Facility**" or "**Facilities**" means laboratories in the Country(ies) that are either owned by or leased by Customer.

"**Field**" means oncology, […***…].

"**Illumina-Branded**" means products that bear Illumina branding or the branding of any Affiliate of Illumina.

"**Illumina Hardware**" means Illumina-Branded instruments, accessories, and peripherals sold by Illumina or its Affiliates, including without limitation the Transferred Equipment (as defined in Section 22.c), accessories, and peripherals referenced in Section 22.c.

"**Illumina Intellectual Property Rights**" means all Intellectual Property Rights owned or controlled by Illumina or Affiliates of Illumina as of the date of shipment of the Product from Illumina. Application Specific IP, inclusive of Affiliate Application Specific IP, and Core IP are separate, non-overlapping, subsets within the Illumina Intellectual Property Rights.

"**Intellectual Property Right(s)**" means all rights in patent, copyrights, trade secrets, know-how, trademark, service mark and trade dress rights and other industrial or intellectual property rights under the laws of any jurisdiction, together with all applications therefor and registrations thereto.

"**Net Price**" means […***…].

"**NIPT**" means non-invasive pre-natal testing.

"**Ordering Affiliates**" means, as of the Restatement Date, the Affiliates of FMI set forth on **Exhibit B** attached hereto. From time to time, the Parties may mutually agree to modify **Exhibit B** by a signed written amendment to this Agreement.

"**OTS TG Consumable**" means a TG Consumable that, on the date that a corresponding Purchase Order is accepted, is listed on the webpage located at: http://www.illumina.com/IAOTS.

"**Product(s)**" means the Consumables, Illumina Hardware, and Software that are offered for sale under, purchased under or otherwise governed by the terms and conditions of this Agreement.

"[…***…] **Agreement**" means the document to be entered into by and between Illumina and Customer that will define the responsibilities of each Party with respect […***…].

"**Research**" means (i) internal research, and (ii) research services provided to third parties. Research Use includes […***…].

"**Research Use**" means use for Research, specifically excluding any use that (i) is not in accordance with the Product's Specifications or Documentation, (ii) requires grant of rights or a license to Application Specific IP or Affiliate Application Specific IP, (iii) is a re-use of a previously used Consumable, (iv) is the disassembling, reverse-engineering, reverse-compiling, or reverse-assembling of the Product, (v) is the separation, extraction, or isolation of components of Consumables or other unauthorized analysis of the Consumables, (vi) gains access to or determines the methods of operation of the Product, (vii) is the use of a non-Illumina reagent/consumable with Illumina Hardware (unless the Specifications or Documentation state otherwise), or (viii) is the transfer to a third party of, or sub-licensing of, Software or third-party software.

"**Sample** […***…]" means […***…]. For clarity, Sample […***…] includes at least the following steps: […***…].

"**Service Contracts**" means the Product maintenance, support, and technical services products that Customer may purchase as set forth in **Exhibit A**. Service Contracts are subject to the separate conditions, limitations, and terms and conditions that are set forth in **Appendix I**.

"**Software**" means Illumina-Branded software (e.g., Illumina Hardware operating software, data analysis software), regardless of whether it is embedded in or installed on Illumina Hardware or provided separately.

"**Specifications**" means Illumina's written specifications for a Product in effect for that Product on the date that the Product ships.

"**Temporary Consumable(s)**" means Non-TG Consumables purchased under this Agreement that (i) Illumina agrees in writing may be used for Customer Use, and (ii) Customer intends to use for Customer Use and for which a TG version of such Consumable is not available from Illumina in the applicable Country. Non-TG Consumables purchased by Customer that Illumina agrees in writing may be used for Customer Use as a result of Illumina's inability to supply TG Consumables, such written authorization not to be unreasonably withheld, are deemed to fall within the definition of Temporary Consumable. As of the Restatement Date, the Parties acknowledge and agree that Non-TG Consumables operable on NovaSeq systems (including NovaSeq S1 Consumables, NovaSeq S2 Consumables and NovaSeq S4 Consumables) are deemed to fall within the definition of Temporary Consumable to the extent Customer uses (and informs Illumina in writing in advance of such use) any such Consumables for Customer Use (and Illumina hereby agrees to such Customer Use in accordance with clause (i) above), until such time that Illumina makes commercially available a TG Version of the applicable Consumable available in the applicable Country in accordance with and subject to Section 2.d.

"**Term**" or "**term of this Agreement**" means the term of this Agreement as defined in Section 19.a.

"**Third Party IP**" means the Intellectual Property Rights of third parties wherein third parties for purposes of this definition specifically exclude Affiliates of Illumina.

2. Applicability of Terms and Conditions.

a. Exclusive Terms. This Agreement exclusively governs the ordering, purchase, supply, and use of Product, and its terms shall override any conflicting, amending and/or additional terms contained in any Purchase Orders, invoices or similar documents, which are hereby rejected and shall be null and void. Failure of Illumina or Customer to object to any such conflicting, amending and/or additional terms shall not constitute a waiver by Illumina or Customer, nor constitute acceptance by Illumina or Customer of such terms. The conditions and restrictions on use and other activities set forth in this Agreement are bargained for conditions of sale and, therefore, control the sale of such Product and the rights in and to Products provided to Customer at purchase. This Agreement may be amended in writing only. For clarity, written amendments to this Agreement must be executed by officers of the Parties.

b. Consumables. The Consumables that may be purchased by Customer under this Agreement are referenced or set forth in **Exhibit A**, as may be amended in writing by the Parties; ***provided that***, Illumina will not unreasonably refuse to amend **Exhibit A** to add additional Consumables or remove existing Consumables.

c. Instruments. The Illumina Hardware that may be purchased by Customer under this Agreement is set forth in **Exhibit A**. Unless otherwise set forth in **Exhibit A**, the purchase price for Illumina Hardware will be agreed to in writing at the time of purchase. Unless expressly set forth otherwise in this Agreement, (i) notification of changes to Illumina Hardware and Software are not provided, and (ii) only Illumina Hardware listed in **Exhibit A**, as may be amended from time-to-time in writing by the Parties, may be purchased under this Agreement; ***provided that***, Illumina will not unreasonably refuse to amend **Exhibit A** to add additional Illumina Hardware or remove existing Illumina Hardware.

d. Temporary Consumables. This provision only applies to Temporary Consumables. In the event Illumina makes commercially available in the applicable Country during the Term a TG version of a Temporary Consumable ("**TG Version**"), Customer must, within […***…] months after the commercial

availability of the TG Version and receipt of notice from Illumina, cease ordering the Temporary Consumable for Customer Use. No later than at expiration of the […***…] month period, and only with respect to Consumables purchased for Customer Use, Illumina will supply Customer with only the TG Version of the applicable Consumable under the terms of this Agreement. The Temporary Consumables shall, solely for the purposes of the Customer Use rights granted to Customer under Section 3, be considered to be TG Consumables until the expiration of the […***…] month period described in the preceding sentence. For the avoidance of doubt, after expiration of the […***…] month period, Customer may use Non-TG Consumables (including former Temporary Consumables) only for Research Use. Except as expressly set forth otherwise in writing by Illumina, notification of changes is not provided for Non-TG Consumables. The […***…] for such new TG Version […***…] for such TG Version.

e. […***…] **Business Review**s. Customer and Illumina agree to have […***…] business review meetings at mutually agreed upon times to discuss […***…] and anything else mutually agreed upon. The outcome of such business review meetings will not be binding unless documented in an amendment to this Agreement.

f. **Minimum TG Consumable Purchases**. Subject to the terms and conditions of this Agreement, Customer shall, purchase a minimum quantity of TG Consumables every […***…] calendar months during the Term beginning […***…], which shall be the greater of (i) […***…]% of the quantity of TG Consumables forecasted for such […***…] calendar month period as determined by Forecasts submitted by Customer that cover that time period, or (ii) $[…***…] ("**Minimum Purchase Obligation**"); ***provided that***

(w) purchases of TG Consumables in each such […***…] calendar month period by Customer under (1) this Agreement, (2) that certain Quotation for Supply of Genetic Analysis Products […***…], as may be amended (Quotation # […***…]), (3) Purchase Order […***…], (4) Purchase Order […***…], and (5) any other agreement entered into during the Term pursuant to which Customer purchases Consumables from Illumina to the extent the Parties expressly and mutually agree in such other agreement that such purchases shall be applied toward the Minimum Purchase Obligation, in each case ((1) – (5)) shall be deemed a purchase of TG Consumables by Customer for the purpose of determining whether Customer has met the Minimum Purchase Obligation for the applicable […***…] calendar month period, and

(x) if Customer does not meet its Minimum Purchase Obligation, (A) […***…] shall immediately become null and void and of no further effect, and (B) all Product prices shall revert to the Base Price, regardless of Customer's volume of purchases.

3. Rights Accompanying Purchase.

a. **Consumables**. Subject to the terms and conditions of this Agreement (including without limitation the restrictions in Section 5), Customer's purchase of TG Consumables, Temporary Consumables, and Non-TG Consumables under this Agreement confers upon Customer […***…]. The Parties agree that the first sentence of this Section 3(a) is designed to and does alter the effect of the exhaustion of patent rights that would otherwise result if the sale was made without restriction. Except as expressly stated in this Section 3(a) with respect to Core IP, no right or license under any Illumina Intellectual Property Rights is or are granted, expressly, by implication, or by estoppel, to Customer under this Agreement. Any use of the Consumables recited in subparts (i) and (ii) herein outside the scope of rights expressly granted to Customer in this Section 3(a) is a prohibited use and is a breach of this Agreement. Customer agrees that it will not use any such Consumable for a prohibited use. Product recited in subparts (i) and (ii) herein may be covered by one or more U.S. or foreign patents.

b. **Illumina Hardware and Software**. Subject to the terms and conditions of this Agreement (including without limitation the restrictions in Section 5), Customer's purchase of Illumina Hardware and Software

under this Agreement confers upon Customer […***…]. The Parties agree that the first sentence of this Section 3(b) is designed to and does alter the effect of the exhaustion of patent rights that would otherwise result if the sale was made without restriction. Except as expressly stated in this Section with respect to Core IP, no right or license under any Illumina Intellectual Property Rights is or are granted, expressly, by implication, or by estoppel, to Customer under this Agreement. Any use of the Illumina Hardware or Software outside the scope of the rights expressly granted to Customer in this Section 3(b) is a prohibited use and is a breach of this Agreement. Customer agrees that it will not use any such Illumina Hardware for a prohibited use. Illumina Hardware may be covered by one or more U.S. or foreign patents.

c. **Existing Instruments**. Subject to the terms and conditions of this Agreement, including without limitation, all restrictions and all Customer representations and warranties hereunder with respect to Products, Customer (i), during the Term, has the right to use Existing Instruments for Customer Use, and (ii) during the Term and thereafter, has the right to use Existing Instruments for Research Use in accordance with the scope of rights in Section 3b (Illumina Hardware). Customer agrees that Customer's use of and disposition of the Existing Instruments is subject to the terms and conditions of this Agreement in addition to the original terms and conditions under which the Existing Instruments were purchased from Illumina (the "**Instrument Terms**"). In the event of any conflict between the Instrument Terms and the terms and conditions of this Agreement with respect to the Existing Instruments, the terms and conditions of this Agreement shall supersede and govern Customer's use of and disposition of the Existing Instruments. Any use of the Existing Instruments outside of the scope of the rights expressly granted to Customer in Section 3(b) is a prohibited use and is a breach of this Agreement. Customer agrees that it will not use any such Existing Instrument for a prohibited use. Existing Instruments may be covered by one or more U.S. or foreign patents

d. **Software**. All Software is licensed, not sold, to Customer, is non-transferable, non-sublicensable, and may be subject to additional terms found in the Software's end user license agreement ("**EULA**"). Subject to the terms and conditions of the EULA and the terms and conditions of this Agreement (including without limitation, all restrictions in Section 5 and all Customer representations and warranties hereunder with respect to Products) Customer is expressly authorized to use Software provided by Illumina under this Agreement and provided by Illumina with Existing Instruments, as applicable, for Customer Use and Research Use, as applicable, when used with the Consumables and Illumina Hardware. For clarity, Software may be used for Customer Use and Research Use when used with Consumables and Illumina Hardware for Customer Use and Research Use as authorized by this Agreement.

e. […***…] **Agreement**. To the extent required and if applicable, the Parties shall work in good faith to amend that certain […***…] Agreement by between FMI and Illumina entered into shortly after the Effective Date and which references this Agreement (such agreement, including as may be amended from time to time, the "[…***…] **Agreement**") within […***…] following the Restatement Date. Subject to the terms and conditions of this Agreement, Customer and Illumina agree to comply with the terms of the […***…] Agreement during the Term (as defined herein). The Parties agree that the terms and conditions of the […***…] Agreement may be amended from time-to-time by representatives of the Parties' respective […***…] departments; ***provided that***, such amendments are done in writing and signed by such representatives.

f. **Service Contract**. During the Term, Illumina shall offer and Customer shall purchase and maintain a Service Contract for all Illumina Hardware that Customer uses, even if Illumina has determined to discontinue/phase out a given piece of Illumina Hardware (but in such event, only for a period of […***…] following the date of obsolescence notification from Illumina to Customer for the applicable Illumina Hardware) or if there is a new version of such Illumina Hardware. Existing service contracts that Customer has will terminate on the Effective Date and Illumina shall issue Customer a credit for any unused portion. Subject to the terms of the Service Contract and the terms and conditions of this Agreement, Illumina will, […***…]:

i. […***…] **Spare Parts**. Illumina will […***…] parts for the Illumina Hardware used at […***…], including […***…] for […***…] HiSeq and other Illumina Hardware and Software, within […***…] of when the Parties determine […***…]a given unit or piece of Illumina Hardware or Software.

ii. […***…]

iii. Qualification Services. Installation Qualification, Operational Qualification and Instrument Performance Verification are available upon the Customer's request at any time during the term of this Agreement. The Base Price for such services shall be set forth in the […***…] Quotes to Customer, and verifiable on Illumina's eCommerce platform (MyIllumina). The descriptions of these services are listed below:

- Installation Qualification: documentation that facilities in which the instrument has been installed are in accordance with requirements and safety regulations of the original manufacturer.
- Operational Qualification: evaluates the correct functionality of the equipment under test by examining and quantifying the specifications after installation.
- Instrument Performance Verification: ensures the accuracy of the instrument after a major service event or replacement of specific modules.
- Feedback from the Customer on any of these procedures will be considered and may be incorporated into future releases. Customer and Illumina will agree upon the format for such feedback.

4. Additional Rights; Application Specific IP.

a. Additional Rights.

i. Customer's intended use of Products for Customer Use or Research Use during the Term may require that it obtain from third parties or from Illumina (or its Affiliates) additional rights or licenses above and beyond the rights under Core IP conferred in Section 3, including without limitation, rights to Application Specific IP, Affiliate Application Specific IP, and Third Party IP. Illumina does not guarantee or warrant that Customer's intended use of Product will not infringe Application Specific IP, Affiliate Application Specific IP, or Third Party IP.

ii. Customer, not Illumina, is responsible for identifying and ensuring that it has rights or licenses to all Intellectual Property, including without limitation, Application Specific IP, Third Party IP, and Affiliate Application Specific IP that are required for Customer to use the Products as intended by Customer for Customer Use and Research Use without infringing such third party and Illumina Intellectual Property Rights, including the Intellectual Property Rights of Illumina's Affiliates. Customer will obtain required rights to Third Party IP from a third party or required rights to Application Specific IP from Illumina or Affiliate Application Specific IP from Illumina's Affiliate, or Customer will discontinue use of Products in a manner that infringes Third Party IP, Affiliate Application Specific IP, or Application Specific IP, as applicable.

iii. Notwithstanding the foregoing, any future grant by Illumina to Customer of rights to Application Specific IP or Affiliate Application Specific IP will be […***…] granted, if at all, under a separate written agreement.

iv. Customer's breach of any term or condition of this Section 4(a) is a breach of this Agreement.

5. Limitations on Use.

a. Limitations on Use.

i. Customer agrees: (1) to use each Consumable only one time, (2) not to use non-Illumina reagents with Illumina Hardware, (3) to use the Products only within the scope of the rights expressly granted to Customer in Section 3 (Rights Accompanying Purchase) and (4) to only use Products in Customer's Facilities. The limitations in (1)-(2) do not apply if the Specifications or Documentation for the applicable Consumable expressly states otherwise. […***…].

ii. Customer agrees it will not, and it will not authorize any third party to, engage in any of the following activities: (1) disassemble, reverse-engineer, reverse-compile, or reverse-assemble the Product, (2) separate, extract, or isolate components of Product or subject Product or components thereof to any analysis not authorized in the Specifications or Documentation, (3) gain access to or attempt to determine the methods of operation of the Product, (4) grant a sub-license to any rights received hereunder, including to grant a sublicense to any Software or to any third-party software, or (5) transfer any Software to a third party. […***…].

iii. Customer agrees it will not (1) use the Products for any use outside of Customer Use or Research Use, (2) use the Products in any manner that infringes, or is within the scope of, Application Specific IP including Affiliate Application Specific IP, unless it has received prior express written permission from Illumina under a separate written agreement or amendment to this Agreement to use the Products in a manner addressed in (1) or (2).

b. **Illumina Proprietary Information**. Customer agrees that it shall only use the Illumina proprietary sequences […***…] for its own internal use with the Products. Customer agrees that the contents of and methods of operation of the Products are proprietary to Illumina and/or its Affiliates and contain or embody trade secrets of Illumina and/or its Affiliates.

c. **Unauthorized Uses**. Customer agrees that (i) the activities described in Section 5a.i and Section 5a.ii (Limitations on Use) (A) are, without limitation, part of the bargained for conditions of sale of the Products, (B) are not included within the Customer Use or the Research Use or otherwise within the rights expressly provided to Customer pursuant to Section 3 (Rights Accompanying Purchase), and (C) each, including restrictions against the use of the Product to perform any of those activities, is an unauthorized use, may infringe Illumina Intellectual Property Rights, and is part of the bargained for conditions of sale of the Products; and (ii) any violation of or breach of any provision of this Section 5 or any use of the Products outside the scope of the rights expressly granted to Customer in Section 3 (Rights Accompanying Purchase) is a breach of this Agreement.

6. Forecasts for TG Consumables; Initial Shipment Date.

a. **Forecast**. Customer shall, […***…] being a "**Forecast Due Date**"), provide a written forecast detailing the quantity of TG Consumables, on a TG Consumable-by-TG Consumable basis, that Customer requires during […***…] following that Forecast Due Date (each a "**Forecast**"). For clarity, each Forecast starts with the […***…] Forecast Due Date. For the avoidance of doubt, Illumina has no obligation to provide TG Consumables during any Forecast period ([…***…]) if Customer has not provided a Forecast for that period as required by the terms of this Agreement, including by Forecast Due Date.

i. **One Forecast per Calendar Month Only**. Customer may only provide *one* Forecast per […***…]. If Customer provides more than one Forecast in any […***…] Illumina may elect to use any of the Forecasts provided in that […***…] and the one used by Illumina shall be binding on the Customer. Customer must provide a […***…] Forecast. If Customer does not provide a Forecast by the Forecast Due Date then Illumina, in its sole discretion, may consider the previously provided Forecast as the Forecast that is then due.

ii. **Initial Shipment Date**. Notwithstanding anything in this Agreement to the contrary, Illumina makes no guarantee that it can ship TG Consumables earlier than […***…] from the Effective Date. For

clarity, each Product has a unique catalog number (e.g., TG Consumables have a different catalog number than its corresponding Non-TG Consumable) and therefore Customer will only be required to pay the price associated with the TG Consumable when Customer is purchasing a TG Consumable. Notwithstanding the foregoing, the shipment dates set forth in this Section 6.a.ii shall not apply to OTS TG Consumables, which shall be shipped as such OTS TG Consumables are available using commercially reasonable efforts and no later than […***…] after Customer submits a Purchase Order requesting the applicable OTS TG Consumable.

b. Binding Commitments; Flexibility. The […***…] provided under this Agreement is a binding commitment by Customer to take receipt of and pay for that quantity and type of TG Consumables found in such […***…] (the "**Binding Consumable** […***…]"); ***provided that***, the quantity of each TG Consumable (on a TG Consumable-by-TG Consumable basis) to be delivered in such […***…] may vary from the quantity of each TG Consumable (on a TG Consumable-by-TG Consumable basis) that were forecasted to be required in the same […***…] as found in prior Forecast ([…***…] of that prior Forecast) only by up to […***…]%. ILMN shall use good faith efforts to accommodate any changes to Forecasts or Purchase Orders reasonably requested by Customer, including any such requests to modify Product quantities or replace a Product with a different Product in a given Forecast or Purchase Order.

c. New TG Consumables. Any TG Consumables that are newly added to this Agreement shall initially be forecasted so that the quantities for purchase and delivery in the first […***…] are […***…].

7. Pricing; Purchase Orders.

a. Pricing. Customer shall pay the Net Price for Product. Unless expressly stated otherwise in this Agreement, (i) all prices are in the applicable currency set forth on the invoice (which shall be the same currency set forth on the […***…] Quote for the applicable Product), and (ii) all payments for such Products shall be in the applicable currency set forth on the invoice. For any invoiced amounts that were not in US dollars, the Parties shall use the average daily exchange rate on OANDA (e.g., available as of the Restatement Date at https://www.oanda.com/currency/converter/) for the calendar month in which the invoice date occurs to convert the total invoiced amount that is not in US dollars in such calendar month to a US dollar amount for the purpose of determining the applicable amounts in US dollars under this Agreement (e.g., in order to determine if Customer has met the Minimum Purchase Obligation and to determine the […***…].)

b. Purchase Orders.

i. Purchase Orders and Acceptance. Customer shall order Product using written purchase orders ("**Purchase Order(s)**"). Purchase Orders shall state, at a minimum, the Illumina part number, the Illumina provided quote number (or other reference provided by Illumina), the quantity ordered, price, requested delivery date, and address for delivery. All Purchase Orders shall be sent to the attention of Illumina Customer Solutions or to any other person or department designated by Illumina in writing. Acceptance of a Purchase Order occurs when Illumina provides Customer a Sales Order Confirmation ("**Order Confirmation**"). Purchase Orders submitted in accordance with this Agreement will not be unreasonably rejected by Illumina.

ii. TG Consumable Purchase Orders. The first Purchase Order for TG Consumables must be provided with the first Forecast. Subsequent Purchase Orders for TG Consumables must be provided on the Forecast Due Date and must be for a quantity of and type of TG-Consumables as found in the Binding Consumable […***…]. For the avoidance of doubt, Illumina has no obligation to provide TG Consumables found in the Binding Consumable […***…] if Customer has not provided a Purchase Order by the Forecast Due Date and the failure to provide a Purchase Order will not relieve Customer of any of its obligations arising from Forecasts and such failure may, among other things, result in a delay in delivery of Products to Customer. Each Purchase Order for TG Consumables must include a

ship schedule, to be agreed to between Illumina and Customer, that details the quantity of and type of TG Consumables (on a TG Consumable-by-TG Consumable basis) that Customer requires in each calendar month that is covered by the Purchase Order ("**Ship Schedule**"). Illumina has no obligation to accept Purchase Orders that contain TG Consumables or quantities of TG Consumables that exceed what was forecasted by Customer ("**Excess Orders**"); ***provided that***, Illumina […***…] reject such Excess Orders that do not […***…]% of the quantity forecasted unless Illumina agreeing to supply such excess quantity of TG Consumables (i) requires Illumina exercising anything […***…], or (ii) would impair Illumina's ability to honor supply commitments to other customers. Such additional quantities of TG Consumables must be ordered by using Additional Purchase Orders (set forth below).

iii. **Additional Purchase Orders for TG Consumables**. Illumina will, in its reasonable discretion, accept additional Purchase Orders for additional quantities of TG Consumables that were not within a given Forecast ("**Additional Purchase Orders**"). Ship dates and quantities of TG Consumables on any Additional Purchase Orders will be mutually agreed to in writing.

c. **Payment Instead of TG Consumables.** Illumina reserves the right to invoice Customer for […***…]% of the purchase price for any TG Consumables that (a) Customer has a binding commitment to purchase under this Agreement under a Forecast, but for which Customer never provides a Purchase Order therefore or (b) Customer provides a Purchase Order for, but subsequently cancels the order or delivery thereof. […***…] failure to purchase TG Consumables under a binding commitment under this Agreement (whether under Forecast or a Purchase Order).

d. **Inability to Supply due to Force Majeure;** […***…].

i. **Inability to Supply due to Force Majeure**. Subject to the terms and conditions of this Agreement, in the event Illumina is unable to perform its obligations under this Agreement due to a Force Majeure Event (defined in Section 22(j)), […***…].

ii. […***…]. Subject to the terms and conditions of this Agreement, Illumina shall promptly notify Customer if Illumina reasonably believes that Illumina will not have sufficient capacity to supply Customer with the quantity of Products set forth in Customer's most recent Forecast. In the event such capacity constraint exists, Illumina shall […***…].

e. **On Time Deliveries (Applicable to TG Consumables Only)**. The "**Promised Delivery Date**" for a TG Consumable shipped from Illumina's facilities located in (i) the same country as Customer's Facility shall be the date that is […***…], and (ii) a different country than Customer's Facility shall be the date that is […***…] after the shipment date for such TG Consumable stated in the Order Confirmation; ***provided that***, Customer and Illumina agree that the shipment date found in the Order Confirmation may be adjusted by mutual agreement of representatives of the Parties, such mutual agreement may be made via email, fax, or in a written and signed agreement. "[…***…]" means […***…] and no later than […***…] after the […***…]. Customer shall earn a credit in an amount equal to […***…]% of the Net Price for each […***…] that does not meet […***…]; ***provided that,*** […***…]. This Section 7.e provides […***…] in a timely manner under this Agreement. For the avoidance of doubt […***…]. Illumina shall provide Customer with […***…].

i. **Reporting Late Deliveries**. Within […***…] of the end of each calendar quarter of this Agreement and within […***…] of termination or expiration of this Agreement (the "**Due Date**"), Customer will submit a written report to Illumina detailing […***…], and in the case of termination or expiration of this Agreement since the end of the last reporting period, for which Customer is seeking […***…] pursuant to Section 7e (the "**Late Delivery Report**"). The Late Delivery Report shall be sent in writing to: […***…]. The Late Delivery Report must include the following: […***…]

f. […***…]. Illumina will review the Late Delivery Report. In the event of any discrepancies the Parties will negotiate in good-faith to resolve the matter. Illumina will […***…] within […***…] of the Late Delivery Report; ***provided that***, […***…].

8. Invoices; Payment; Taxes.

a. Invoices and Payment. Illumina shall issue invoices upon shipment of Products. Invoices shall be sent to Customer's accounts payable department, or any other address designated by Customer in writing. All payments by Customer on such invoices are due within […***…] after (1) receipt of the invoice by Customer for Consumables, and (2) receipt by Customer of the corresponding Installation Certification for Illumina Hardware. Any amounts not paid when due under this Agreement (other than amounts disputed by Customer in good-faith) will accrue interest at the rate of […***…]% per month, or the maximum amount allowed by law, if lower. In the event that any payment is not made within […***…] after receiving notice of the delinquency, Customer will be in breach of this Agreement and Illumina shall have the right to take any action allowed in law and in equity in addition to any rights under this Agreement, including without limitation, revoke the rights conferred and/or licenses given hereunder and suspend performance, including shipment, until all payments are made current. Customer shall pay for all costs (including reasonable attorneys' fees) incurred by Illumina in connection with the collection of late payments. Each Purchase Order is a separate, independent transaction under this Agreement, and Customer has no right of set-off against other Purchase Orders or other transactions with Illumina. Customer agrees to pay for Products supplied hereunder in accordance with the terms and conditions of this Agreement. Illumina Hardware shall be deemed accepted by Customer following (a) delivery and installation of the applicable Illumina Hardware by Illumina and (b) receipt by Customer of an installation certification in a form mutually agreed to by the Parties and specifically including the results of a PhiX control sequencing run ("**Installation Certification**").

b. Taxes. All prices and other amounts payable to Illumina hereunder are exclusive of and are payable without deduction for taxes, GST, VAT, customs duties, tariffs or charges now or hereafter claimed or imposed by any governmental authority upon the sale of the Product, all of which will be added to the purchase price or subsequently invoiced to the Customer. With respect to New Zealand Customers only, Customer and Illumina agree that subsection 8(4) Goods and Services Tax Act 1985 does not apply.

9. Shipping Terms; Title and Risk of Loss. Illumina agrees that Customer may choose the carrier for shipments. Unless otherwise agreed upon in writing, all shipments are made DAP (Incoterms 2010) at Customer's address on the Purchase Order and Customer is responsible for freight and insurance which will be added to the invoice and paid by Customer, except that all shipments to member countries of the E.U. are made DDP (Incoterms 2010) at Customer's address on the Purchase Order. In all cases title (except for Software and third-party software) and risk of loss transfers to Customer when Product is delivered to such address.

10. Consumable Shelf-life for TG Consumables. The TG Consumables shall have no less than […***…] shelf life at the time of shipment. Shelf-life will be pre-printed on the TG Consumable packaging.

11. Single Lot Shipments/ Kit Lot Testing for TG Consumables.

a. Single Lot Shipments. Illumina shall ensure (i) each shipment of a given TG Consumable includes only such TG Consumable manufactured from the same lot, (ii) each lot of TG Consumables and lot of kits containing TG Consumables is assigned a unique manufacturing lot number, which is displayed on each component, and (iii) each kit in a kit lot is comprised of component of TG Consumables manufactured from the same lots.

b. Kit Lot Testing. Illumina shall test each component reagent that comprises a given TG Consumable together with the other component reagents of that TG Consumable to ensure their functionality, unless

sufficient data are available to demonstrate that a given component reagent, or component reagents, if quality tested independently, does not affect performance of the TG Consumable.

c. **Certificates of Analysis**. Illumina shall, once made available for all TG Consumables as part of Illumina's standard commercial offering for TG Consumables, provide a Certificate of Analysis for each lot of TG Consumables sold to Customer under this Agreement.

12. Changes to Certain Product; Discontinuations

a. […***…]. In cases where […***…] purchased under this Agreement is being […***…] out or there is a […***…] of such […***…] that results in a change to […***…], Illumina shall make […***…] to provide Customer with a […***…] advance notice […***…] to the […***…]. Illumina will notify Customer of the […***…] options available should Customer desire to replace such […***…]. This change notice will not apply to changes necessitated by causes beyond Illumina's control or for changes necessary for safety which changes shall be communicated to Customer as soon as practicable after Illumina learns of the need for the changes through Illumina's normal communication channels for changes.

b. **Discontinued/Changed TG Consumables**. TG Consumables will not be manufactured in their current configurations indefinitely as a result of product life cycle or other business considerations. Accordingly, a given Consumable Kit may be phased out of production and no longer available and/or there may be a new, reconfigured, or repackaged version of such Consumable Kit that embodies a material change to form, fit or function of such TG Consumable (such discontinued or materially changed Consumable is referred to as a "**Discontinued Consumable**"). Any product or combination of products that is intended by Illumina to replace such Discontinued Consumable shall be referred to as a "**Substitute Consumable**." In some instances a Substitute Consumable may differ from the Discontinued Consumable through changes in one or more components that comprised the Discontinued Consumable ("**Changed Components**"). In other instances the Substitute Consumable may represent a complete change from the Discontinued Consumable ("**Complete Change**"). In the case of a Discontinued Consumable that will have Changed Components, Illumina will provide Customer at least […***…] prior written notice thereof and will use […***…], but no later than […***…] prior to the date that the Discontinued Consumable will no longer be available for purchase. Illumina will provide […***…]. In the case of a Discontinued Consumable that will have a Complete Change, Illumina will provide Customer at […***…] prior written notice thereof and will make the Substitute Consumable available for purchase by Customer […***…] no later than […***…] prior to the date that the Discontinued Consumable will no longer be available for purchase. Illumina will provide […***…] free of charge […***…]. Once a Discontinued Consumable is no longer available for purchase (either in the instance of a Complete Change or Changed Component), the Substitute Consumable will automatically be added to this Agreement as a Consumable and the Discontinued Consumable will be removed. The price for a Substitute Consumable will be […***…] for the Substitute Consumable. Use of Substitute Consumables shall be subject to the terms and conditions of this Agreement. Notwithstanding anything to the contrary in this Agreement, if Illumina offers a product or combination of products that, […***…], Illumina may require Customer to begin purchasing such product in lieu of the Product and the Parties will work together […***…] to coordinate such transition and to modify the terms of this Agreement to reflect such change.

13. Regulatory; Quality Audits.

a. **Research Use**. Customer acknowledges that, unless expressly stated otherwise in writing by Illumina, the Products have not been subjected to regulatory review or approved or cleared by the United States Food and Drug Administration or any other regulatory entity whether foreign or domestic, or otherwise reviewed, cleared or approved under any statute, law, rule or regulation for any purpose, whether research, commercial, diagnostic or otherwise. The Products are labeled For Research Use Only. Illumina does not make any representation, warranty or covenant that pertains in any way to the regulatory status of the Products and Customer's intended use for Customer Use.

b. **Regulatory Approvals**. Customer, and not Illumina, is responsible for obtaining any and all regulatory approvals, licenses, and/or certifications necessary for Customer to use the Products as intended by Customer, including without limitation, for Customer Use or Research Use ("**Regulatory Approvals**"). Customer will ensure it has any regulatory approvals that are necessary for Customer's intended use of the Products. Accordingly, Customer agrees to (i) diligently investigate and identify which Regulatory Approvals apply to Customer's use of the Products, (ii) obtain and maintain all Regulatory Approvals throughout the time that Customer uses the Products, and (iii) use the Products in compliance with all applicable laws and regulations. Customer agrees to promptly disclose to Illumina any communication that it receives from a government body, agency, or other regulatory or accrediting body pertaining to the Products or Customer's use of the Products.

c. **Quality Audits**. Illumina agrees to allow Customer to audit Illumina's operations that pertain to […***…], upon […***…] prior written notice, during normal business hours, no more often than […***…], and at […***…], in order to satisfy its obligations under applicable law. The locations, times, dates, scope, and goals for such audits will be mutually agreed upon in writing between the Parties. The confidentiality provisions of Section 16 shall apply to any such audits, and if requested by Illumina, the Parties shall enter into a confidentiality agreement in a form to be agreed by the Parties prior to Customer conducting any such audit. […***…]

14. Limitation of Liability.

EXCEPT WITH RESPECT TO ANY CLAIM OR LIABILITY ARISING OUT OF A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS HEREUNDER, TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL EITHER PARTY OR THEIR RESPECTIVE AFFILIATES BE LIABLE TO THE OTHER PARTY OR ANY THIRD PARTY FOR COSTS OF PROCUREMENT OF SUBSTITUTE PRODUCTS OR SERVICES, LOST PROFITS, DATA OR BUSINESS, OR FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY, CONSEQUENTIAL, OR PUNITIVE DAMAGES OF ANY KIND ARISING OUT OF OR IN CONNECTION WITH, WITHOUT LIMITATION, THE PURCHASE OR SALE OF THE PRODUCTS, THEIR USE, SUCH PARTY'S PERFORMANCE HEREUNDER OR ANY OF THESE TERMS AND CONDITIONS, HOWEVER ARISING OR CAUSED AND ON ANY THEORY OF LIABILITY (WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE).

EXCEPT WITH RESPECT TO THE PARTY'S INDEMNIFICATION OBLIGATIONS AND ANY CLAIM OR LIABILITY ARISING OUT OF A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS HEREUNDER, EACH PARTY'S TOTAL AND CUMULATIVE LIABILITY ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, SHALL IN NO EVENT EXCEED AN AMOUNT EQUAL TO […***…].

THE LIMITATION OF LIABILITY IN THIS SECTION SHALL APPLY EVEN IF A PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

NOTWITHSTANDING ANYTHING IN THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, THIS SECTION 14, TO THE CONTRARY, NOTHING IN THIS AGREEMENT SHALL LIMIT EITHER PARTY'S LIABILITY TO THE OTHER PARTY OR ITS AFFILIATES FOR […***…].

15. Limited Warranties. TO THE EXTENT PERMITTED BY LAW AND EXCEPT FOR THE EXPRESS LIMITED PRODUCT WARRANTIES SET FORTH IN SECTION 18 OF THIS AGREEMENT, ILLUMINA MAKES NO (AND EXPRESSLY DISCLAIMS ALL) WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT TO THE PRODUCTS OR ANY SERVICES PROVIDED IN CONNECTION WITH THIS AGREEMENT, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR ARISING

FROM COURSE OF PERFORMANCE, DEALING, USAGE OR TRADE. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ILLUMINA MAKES NO CLAIM, REPRESENTATION, OR WARRANTY OF ANY KIND AS TO THE UTILITY OF THE PRODUCTS FOR CUSTOMER'S INTENDED USES.

16. Confidentiality.

a. Confidential Information. The Parties acknowledge that a Party (the "**Recipient Party**") may have access to confidential or proprietary information ("**Confidential Information**") of the other Party (the "**Disclosing Party**") under this Agreement. In order to be protected as Confidential Information, information must be disclosed with a confidential or other similar proprietary legend and in the case of orally or visually disclosed Confidential Information, the Disclosing Party shall notify the Recipient Party of its confidential nature at the time of disclosure and provide a written summary that is marked with a confidential or other similar proprietary legend to the Recipient Party within […***…] (email acceptable). Confidential Information may include, but shall not be limited to, inventions, designs, formulas, algorithms, trade secrets, know-how, customer lists, demand forecasts, cost and pricing information, business and marketing plans, and other business, regulatory, manufacturing and financial information. This Agreement, including its terms and conditions is Confidential Information. During the term of this Agreement or […***…], whichever is longer, the Recipient Party shall hold the Disclosing Party's Confidential Information in confidence using at least the degree of care that is used by the Recipient Party with respect to its own Confidential Information, but no less than reasonable care. The Recipient Party shall disclose the Confidential Information of the Disclosing Party solely on a need to know basis to its employees, contractors, officers, directors, representatives, and Affiliates under written nondisclosure and restricted use terms consistent with this Agreement. The Recipient Party shall not use the Disclosing Party's Confidential Information for any purpose other than exercising its rights and fulfilling its obligations under this Agreement. The Confidential Information shall at all times remains the property of the Disclosing Party. Upon the termination or expiration of this Agreement, the Recipient Party shall, upon written request of the Disclosing Party, return to the Disclosing Party or destroy the Confidential Information of the Disclosing Party. Notwithstanding the foregoing, the Recipient Party may maintain one copy of the Disclosing Party's Confidential Information to be retained by the Recipient Party's Legal Department for archival purposes only.

b. Exceptions. Notwithstanding any provision contained in this Agreement to the contrary, neither Party shall be required to maintain in confidence or be restricted in its use of any of the following: (i) information that, at the time of disclosure to the Recipient Party, is in the public domain through no breach of this Agreement or another obligation of confidentiality owed to the Disclosing Party or its Affiliates by the Receiving Party; (ii) information that, after disclosure hereunder, becomes part of the public domain by publication or otherwise, except by breach of this Agreement or breach of another obligation of confidentiality owed to the Disclosing Party or Affiliate by the Receiving Party; (iii) information that was in the Recipient Party's or its Affiliate's possession at the time of disclosure hereunder by the Disclosing Party unless subject to an obligation of confidentiality or restricted use owed to the Disclosing Party or its Affiliate; (iv) information that is independently developed by or for the Recipient Party or its Affiliates without use of or reliance on Confidential Information of the Disclosing Party; or (v) information that the Recipient Party receives from a third party where Recipient Party reasonably believes such third party was under no obligation of confidentiality to the Disclosing Party or its Affiliate with respect to such information.

c. Disclosures Required by Law. The Recipient Party may disclose Confidential Information of the Disclosing Party as required by court order, operation of law, or government regulation, including in connection with submissions to regulatory authorities with respect to the Products; ***provided that***, the Recipient Party promptly notifies the Disclosing Party of the specifics of such requirement prior to the actual disclosure, or promptly thereafter if prior disclosure is impractical under the circumstances, uses diligent efforts to limit the scope of such disclosure or obtain confidential treatment of the Confidential

Information if available, and allows the Disclosing Party to participate in the process undertaken to protect the confidentiality of the Disclosing Party's Confidential Information including, without limitation, cooperating with the Disclosing Party in order to comply with the requirements of such order, law, or regulation in a manner that discloses the least amount necessary, if any, of the Confidential Information of the Disclosing Party.

d. **Injunctive Relief**. Each Party acknowledges that any use or disclosure of the other Party's Confidential Information other than in accordance with this Agreement may cause irreparable damage to the other Party. Therefore, in the event of any such use or disclosure or threatened use or threatened disclosure of the Confidential Information of either Party hereto, the non-breaching Party shall be entitled, in addition to all other rights and remedies available at law or in equity, to seek injunctive relief against the breach or threatened breach of any obligations under this Section.

e. **Disclosure of Agreement**. Except as expressly provided otherwise in this Agreement, neither Party may disclose this Agreement, the terms of this Agreement, including any financial terms thereof, and the subject matter of this Agreement to any third party without the prior written consent of the other Party, which consent shall not be unreasonably withheld. Notwithstanding anything in this Agreement to the contrary, each Party acknowledges and agrees that either Party may, to the extent required by applicable healthcare disclosure law, disclose this Agreement, its terms, its subject matter, including financial terms (e.g., Illumina's compliance with the Sunshine Act).

17. Indemnity; Insurance.

a. **Infringement**. Subject to the terms and conditions of this Agreement, including without limitation, the Exclusions to Indemnification Obligation (Section 17(b) below), Indemnification by Customer (Section 17(c) below), Conditions of Indemnification Obligation (Section 17(e) below), and Customer's obligations to obtain rights to Third Party IP pursuant to Section 4 (Additional Rights), Illumina shall (i) defend, indemnify and hold harmless Customer and their respective officers, directors, representatives and employees (each a "**Customer Indemnitee**"), against any claim or action brought by a third party (who is not an Affiliate of Customer or an Affiliate of Illumina) as a result of the (A) Products when used for Research Use, and (B) Illumina Hardware, Software, TG Consumables, Replacement Non-TG Consumables and Temporary Consumables when used for Customer Use, in accordance with the terms and conditions of this Agreement, infringing the valid and enforceable Intellectual Property Rights of a third party (who is not an Affiliate of Customer or an Affiliate of Illumina) ("**Illumina Infringement Claim**"), and (ii) pay all settlements entered into, and all final judgments and costs (including reasonable attorneys' fees) awarded against such Customer Indemnitee in connection with such Illumina Infringement Claim. If the Products or any part thereof, become, or in Illumina's opinion may become, the subject of an Illumina Infringement Claim against Illumina (including its Affiliates) or Customer, Illumina shall have the right, at its option, to (A) procure for Customer the right to continue using such Products, (B) modify or replace such Products with substantially equivalent noninfringing substitutes, or (C) require the return of such Products that are or may become the subject of an Illumina Infringement Claim and terminate the rights, license, and any other permissions given hereunder with respect thereto and refund to Customer the depreciated value (as shown in Customer's official records) of the returned Product at the time of such required return; ***provided that***, no refund will be given for used-up or expired Consumables. This Section states the entire liability of Illumina for any infringement of third-party Intellectual Property Rights.

b. **Exclusions to Indemnification Obligation**. Illumina shall have no obligation under Section 17(a), including to defend, indemnify or hold harmless Customer or pay any settlements with respect to any Illumina Infringement Claim, to the extent such Illumina Infringement Claim arises from: (i) the use of the Products in any manner or for any purpose outside the scope of the rights, license(s), or permissions granted by Illumina to Customer with respect to the Products under Section 3 (Rights Accompanying

Purchase), (ii) the use of the Products in any manner or for any purpose not in accordance with the Specifications or Documentation, (iii) the use of the Products in combination with any other products, materials, or services not supplied by Illumina, (iv) the use of the Products to perform any assay or other process not supplied by Illumina, (v) Illumina's compliance with specifications or instructions for such Products furnished to Illumina by Customer or by a third party on behalf of Customer (e.g., custom goods), (vi) the use of the Products in any manner or for any purpose that requires rights to Application Specific IP, Affiliate Application Specific IP […***…] or (vii) Customer's breach of any term or condition, including breach of a representation or warranty, made hereunder or included in this Agreement, wherein any use specified in (i), (ii), (iii) (iv) or (vi) is a use performed by Customer, or a party to whom Customer transfers Product (regardless of whether transfer is permitted under this Agreement) (each of (i) – (vii), are referred to as an "**Excluded Claim**").

c. **Indemnification by Customer**. Subject to the terms and conditions of this Agreement, including without limitation the Conditions of Indemnification provision below (Section 17e), Customer shall defend, indemnify and hold harmless Illumina, its Affiliates, their collaborators and development partners that contributed to the development of the Products, and their respective officers, directors, representatives and employees ("**Illumina Indemnitee**(s)"), against any third party claims, causes of action, and all liabilities, damages, fines, penalties, causes of action, and losses of any and every kind ("**Claim**"), including without limitation, claims relating to or arising out of personal injury or death, and claims relating to or arising out of infringement of a third party's Intellectual Property Rights, to the extent a Claim results from, relates to, or arises out of (i) Customer's breach of any term or condition, including breach of a representation or warranty made hereunder or included in this Agreement, (ii) Customer's use of the Product outside of the scope of the rights, license(s), and permissions expressly granted to Customer with respect to such Product pursuant to Section 3 (Rights Accompanying Purchase), (iii) Customer's use of a Product not in accordance with its Documentation or Specifications, (iv) any of the activities in (i) through (vii) of Excluded Claim, (v) Customer's failure to obtain and maintain Regulatory Approvals, or (vi) any unauthorized use of the Products in any manner, or for any purpose that requires rights to Affiliate Application Specific IP, Application Specific IP, or Third Party IP.

d. **Further Indemnification by Illumina**. In addition to and without limiting the obligations set forth under Section 17a and subject to the terms and conditions of this Agreement, including without limitation, the Conditions of Indemnification provision below (Section 17e), Illumina shall defend, indemnify and hold harmless each Customer Indemnitee against any Claims relating to or arising out of personal injury or death that results from Customer's use of a defective Product purchased by Customer under this Agreement ("**Personal Injuries**"), specifically excluding any Personal Injuries (i) arising from or in any way relating to any actions (or inactions) taken by individuals or healthcare providers (e.g., persons, patients, physicians, healthcare providers) who receive results from Customer's use of Products, and (ii) that could have been avoided by Customer using reasonable measures.

e. **Conditions of Indemnification**. The Parties' indemnification obligations under this Section 17 are subject to the Party seeking indemnification (i) notifying the other, indemnifying Party promptly in writing of an Illumina Infringement Claim or Third Party Claim, as the case may be, (provided that a delay in providing shall not relieve the other Party of its indemnification obligations except to the extent it is prejudiced by such delay) (ii) giving indemnifying Party exclusive control and authority over the defense of such Claim, (iii) not admitting infringement of any Intellectual Property Right without prior written consent of the indemnifying Party, (iv) not entering into any settlement or compromise of any such action without the indemnifying Party's prior written consent not to be unreasonably withheld, conditioned, or delayed, and (v) providing all reasonable assistance to the indemnifying Party that the indemnifying Party requests and ensuring that its officers, directors, representatives and employees and other indemnitees likewise provide assistance (provided that indemnifying Party reimburses the indemnified Party(ies) for its/their reasonable out-of-pocket expenses incurred in providing such assistance). An indemnifying Party will not enter into or otherwise consent to an adverse judgment or order, or make any admission as to liability or fault that would adversely affect the indemnified Party, or settle a dispute without the prior

written consent of the indemnified Party, which consent not to be unreasonably withheld, conditioned, or delayed.

f. **Third-Party Goods**. Notwithstanding anything in this Agreement to the contrary, Illumina shall have no indemnification obligations with respect to any goods or software originating from a third party and supplied to Customer under this Agreement. Third-party goods are those that are labeled or branded with a third-party's name. Customer's sole right to indemnification with respect to such third-party goods or software shall be pursuant to the original manufacturer's or licensor's indemnity, if any, to Customer, to the extent provided by the original manufacturer or licensor.

g. **Insurance**. Customer shall obtain and maintain insurance coverage as follows: (i) a policy for liability (including professional and errors & omissions) in the amount of no less than […***…] per occurrence, and (ii) separately a policy for commercial general liability and public liability insurance (that excludes product liability) in the amount of no less than […***…], in the case of each of (i) and (ii) to protect the Illumina Indemnitees under the indemnification provided hereunder. Illumina shall be an additional insured on Customer's insurance policy or policies and, upon request, Illumina shall be provided appropriate certificates of insurance. Such policies shall provide a waiver of subrogation against Illumina as an additional insured and contain no cross-liability exclusion. Customer agrees that the Parties intend that Customer's insurance coverage will be primary over any other potentially applicable insurance. Customer shall ensure that any umbrella or excess liability coverage shall not treat the naming of Illumina as an additional insured as a coverage change that voids or terminates such coverage. The policies may not be cancelled or amended without […***…] prior written notice to Illumina, and the policies should so state. Customer shall maintain such insurance at all times during this Agreement and for a period of […***…].

18. Warranty for Products. All warranties are personal to Customer and may not be transferred or assigned to a third party. All warranties for Products are Facility-specific and do not transfer if the Product is moved to another Facility of Customer, unless Illumina conducts or consents in writing to such move. These warranties only apply to Products purchased under this Agreement.

a. **Warranty for Consumables**. Illumina warrants that TG Consumables, other than custom TG Consumables, will have no less than […***…] shelf-life at the time of shipment from Illumina and conform to their Specifications until the later of (i) […***…] from the date of shipment from Illumina, and (ii) […***…] by Illumina, but in no event later than […***…] from the date of shipment. Illumina warrants that Non- TG Consumables, other than custom Non-TG Consumables, will conform to their Specifications until the later of (i) […***…] from Illumina, and (ii) any expiration date or the end of the shelf-life pre-printed on such Non-TG Consumable by Illumina, but in no event later than […***…]. With respect to custom Consumables (i.e., Consumables, whether they are TG Consumables or Non-TG Consumables) made to specifications or designs made by Customer or provided to Illumina by, or on behalf of, Customer, Illumina only warrants that the custom Consumables will be made and tested in accordance with Illumina's standard manufacturing and quality control processes. Illumina makes no warranty that custom Consumables will work as intended by Customer or for Customer's intended uses.

b. **Warranty for Illumina Hardware**. Illumina warrants that Illumina Hardware, other than Upgraded Components, will conform to its Specifications for a period of […***…] from Illumina unless the Illumina Hardware includes Illumina-provided installation in which case the warranty period begins on the date of installation or […***…], whichever occurs first (such warranty to be known as the "**Base Hardware Warranty**"); ***provided that***, the Base Hardware Warranty period for Illumina Hardware that requires Customer's signature of document after passing certain testing criteria starts on the date that the Illumina Hardware passed such testing criteria. "**Upgraded Components**" means Illumina-provided components, modifications, or enhancements to Illumina Hardware that was acquired by Customer prior to the date Illumina provides these Upgraded Components. Illumina warrants that Upgraded Components will conform to their Specifications for a period of […***…]. Upgraded Components do not extend the

warranty for the Illumina Hardware unless the upgrade was conducted by Illumina at Illumina's facilities in which case the upgraded Illumina Hardware shipped to Customer comes with a Base Hardware Warranty.

c. **Exclusions from Warranty Coverage**. The foregoing warranties in Section 18(a) and (b) shall not apply to the extent a non-conformance is due to (i) abuse, misuse, neglect, negligence, accident, improper storage, or use contrary to the Documentation (misuse includes use of a Consumable more than one time), (ii) improper handling, installation, maintenance, or repair (other than by Illumina personnel), (iii) unauthorized alteration, (iv) acts of God, including without limitation, fire, flood, tornado, earthquake, hurricane, lightning, threat of or actual acts of terrorism or war, or (v) use with a third party's good not provided by Illumina (unless its Documentation or Specifications expressly state such third party's good is for use with it).

d. **Sole Remedy**. In the event Product does not conform to warranty, Illumina will repair, replace or provide a credit for the Product, as set forth below. The following states Customer's sole remedy and Illumina's sole obligations under the foregoing warranties.

i. Consumables. Replaced Consumables come with the same warranty as a new Consumable. For any Consumables that Customer claims fail to conform to the applicable warranty and for which Illumina is able to reasonably confirm such non-conformance ("**Non-Conforming Consumables**"), Illumina will issue to Customer a credit of […***…]%) of the invoice price of the Non-Conforming Consumables, ***provided that*** on a case-by-case basis and to the extent Customer requests in writing, Illumina shall provide Customer Non-TG Consumables as a replacement for any Non-Conforming Consumables that are TG Consumables (any such replacement Non-TG Consumables, "**Replacement Non-TG Consumables**") and shall issue to Customer a credit for […***…]. Further, if Customer did not require Illumina to use a specific carrier for a given Product shipment and to the extent that Customer provides an initial notification to Illumina in writing within […***…] following receipt of the applicable shipment that any Consumables in such shipment are Non-Conforming Consumables due to damage to the applicable Consumables during shipment (and provides a second notification within […***…] following Customer's receipt of such shipment, confirming that Customer believes such Consumables to be Non-Conforming Consumables due to damage to the applicable Consumables during shipment), then in addition to all other remedies set forth in this Section 18.d.ii (including any credits), Illumina shall issue to Customer a credit of […***…]%) of the invoice price of the Non-Conforming Consumables. Illumina shall promptly credit Customer's account for any credits issued pursuant to this Section 18.d.ii.

ii. Illumina Hardware. Illumina will repair or replace the Illumina Hardware in its discretion; ***provided that*** Illumina will repair or replace such Illumina Hardware in Customer's sole discretion if (1) a given piece of Illumina Hardware has been previously repaired […***…] for the same or similar defect that caused such Illumina Hardware to fail to meet the applicable Illumina Hardware warranty, including any defect resulting from Illumina's (or Illumina's agent's) failure to fully correct a previously repaired defect or (2) within […***…], Customer determines that such given piece of Illumina Hardware fails to meet Customer's validation requirements. Illumina Hardware may be repaired or replaced with functionally equivalent, reconditioned, or new Illumina Hardware or components (if only a component of Illumina Hardware is non-conforming). If the Illumina Hardware is replaced in its entirety, the warranty period for the replacement Illumina Hardware shall be the later of (a) […***…] and (b) […***…]; provided that if Customer unreasonably prohibits Illumina from delivering and installing a given piece of replacement Illumina Hardware for more than […***…], the time period specified in clause (a) of this sentence shall be […***…]. If only a component is being repaired or replaced, the warranty period for such component is […***…] (and Illumina shall provide […***…], or […***…], whichever is longer.

e. **Procedure**. In order to be eligible for repair or replacement under this warranty Customer must (i) promptly contact Illumina's customer support department to report the non-conformance, (ii) cooperate with Illumina in the diagnosis of the non-conformance, and (iii) return the Product, transportation charges prepaid, to Illumina following Illumina's instructions or, if agreed by Illumina, grant Illumina's authorized repair personnel access to this Product in order to confirm the non-conformance and make repairs.

f. **Third-Party Goods**. Illumina has no warranty obligations with respect to any goods or software originating from a third party and supplied to Customer under this Agreement. Third-party goods or software are those that are labeled or branded with a third-party's name. The warranty for third-party goods or software, if any, are provided by the original manufacturer. Illumina will cooperate with Customer in filing any warranty claims with such third parties.

19. Term; Cancellation; Termination.

a. **Term**. This Agreement shall commence on the Effective Date and terminate on the […***…] anniversary of the Restatement Date (the "**Term**") unless otherwise terminated early as provided hereunder.

b. **Termination**. Without limiting any other rights to terminate expressly provided in this Agreement or under law, this Agreement may be terminated early as follows:

i. Breach of Agreement. If either Party materially breaches this Agreement and fails to cure such breach within […***…] after receiving written notice of the breach, the non-breaching Party shall have the right to terminate this Agreement by providing written notice to the other Party. The Parties agree that a material breach of Section 3.a (Rights Accompanying Purchase – Consumables), 3.b (Rights Accompanying Purchase – Illumina Hardware and Software), 3.c (Existing Instruments), 5 (Limitation on Use), 17.g (Insurance), 22.g (Assignment) or 22.h (Export) is a material breach of this Agreement.

ii. Bankruptcy. Either Party may terminate this Agreement, effective immediately upon written notice, if the other Party becomes the subject of a voluntary or involuntary petition in bankruptcy or any proceeding relating to insolvency, receivership, liquidation or composition for the benefit of creditors that is not dismissed within […***…]. In the event of any bankruptcy or insolvency proceeding commenced by or against Customer, Illumina shall be entitled to cancel any Purchase Order then outstanding and not accept any further Purchase Order until bankruptcy or insolvency proceeding is resolved.

iii. Continuous Supply Failure. Subject to the terms and conditions of this Agreement, Customer may terminate this Agreement early by providing […***…] prior written notice in the event Illumina does not provide TG Consumables or Temporary Consumables for valid Purchase Orders accepted by Illumina for a period of […***…].

c. **Right to Cease Delivery**. In addition to any other remedies available to Illumina under this Agreement, in equity, or at law, Illumina reserves the right to cease shipping Product to Customer immediately if Customer (1) uses the Product outside the scope of the rights expressly conferred to Customer pursuant to Section 3 (Rights Accompanying Purchase) of this Agreement, (2) fails to pay undisputed invoices that are […***…] past due, (3) materially breaches any provision of Section 5, or (4) materially breaches any Customer representation or warranty made hereunder.

20. Survival of Obligations All provisions of this Agreement that by their nature should survive termination or expiration of this Agreement shall survive termination or expiration, including without limitation, Sections 1 (Definitions),2.a (Applicability of Terms and Conditions – Exclusive Terms), 3.a (Rights Accompanying Purchase – Consumables), 3.b (Rights Accompanying Purchase – Illumina Hardware and Software), 3.d (Rights Accompanying Purchase – Software), 4.a. (Additional Rights), 5 (Limitations on Use), 7.a (Pricing; Purchase

Orders – Pricing), 7.c (Pricing; Purchase Orders – Payment Instead of Taking TG Consumable), 7.e (Pricing; Purchase Orders – On Time Deliveries), 8 (Invoices; Payment; Taxes), 9 (Shipping Terms; Title and Risk Loss), 13.a (Regulatory; Quality Audits – Research Use), 13.b (Regulatory; Quality Audits – Regulatory Approvals), 14 (Limitation of Liability), 15 (Limited Warranties), 16 (Confidentiality), 17 (Indemnity; Insurance), 18 (Warranty for Products), 19 (Term; Cancellation; Termination), 20 (Survival of Obligations), 21 (Governing Law), and 22 (Miscellaneous), and all payment obligations incurred hereunder. Termination or expiration of this Agreement shall not relieve the Parties of any liability or obligation which accrued hereunder prior to the effective date of such termination or expiration nor preclude either Party from pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach of this Agreement, nor prejudice either Party's right to obtain performance of any obligation.

21. Governing Law. This Agreement and performance by the Parties hereunder shall be construed in accordance with the laws of the State of New York, U.S.A., without regard to provisions on the conflicts of laws.

22. Miscellaneous.

a. Representations and Warranties.

i. Customer. Customer represents and warrants that (i) it owns or leases the Facilities; (ii) it has the right and authority to enter into this Agreement; (ii) it has all rights and licenses necessary to purchase and use the Products; (iii) it does not require a license to any Illumina Application Specific IP, including without limitation, any Affiliate Application Specific IP in order to use the Products; (iv) when performing Customer Use, it will only use the TG Consumables and Temporary Consumables; (v) it will use the Non-TG Consumables only for Research Use; and (vi) the person(s) signing this Agreement on its behalf has the right and authority to bind Customer to the terms and conditions of this Agreement. Further, in the case of Foundation Medicine, Inc., Foundation Medicine, Inc. represents and warrants that (i) the person(s) signing this Agreement on its behalf has the right and authority to bind FMI Germany GmbH to the terms and conditions of this Agreement, (ii) FMI Germany GmbH is a wholly-owned subsidiary of Foundation Medicine, Inc., and (iii) Foundation Medicine, Inc. is jointly and severally liable for the acts or omissions of FMI Germany GmbH.

ii. Illumina. Illumina represents and warrants that (i) it has the right and authority to enter into this Agreement, (ii) it has all rights and licenses necessary to sell the Products in accordance with the terms and conditions of this Agreement, and (iii) the person signing this Agreement on its behalf has the right and authority to bind Illumina to the terms and conditions of this Agreement.

b. Illumina Affiliates. Customer agrees that Illumina may delegate its performance under this Agreement to one or more of its Affiliates. Illumina invoices and other documentation may come from an Illumina Affiliate and Customer shall honor those just as if they came directly from Illumina.

c. Transferred Illumina Hardware. In accordance with that certain letter agreement dated […***…], by and among Customer, Illumina and Sequenom, Inc. (the "**Letter Agreement**"), the equipment set forth on Exhibit A to the Letter Agreement ("**Transferred Equipment**") shall be deemed Illumina Hardware under this Agreement, and all of the terms and conditions of this Agreement shall apply to such Transferred Equipment except Section 9 (Shipping Terms; Title and Risk of Loss), Section 12.a (Illumina Hardware), and Section 18 (Warranty).

d. Legal Compliance. Nothing in this Agreement is intended, or should be interpreted, to prevent either Party from complying with all applicable laws, regulations, or governmental orders.

e. Documentation; Hierarchy of Documents. Customer agrees that it shall use the Documentation in accordance with the restrictions set forth therein (e.g., restrictions against altering, modifying or copying, or removing the Documentation from Customer's facility), and further agrees that it will use Products in accordance with the Product Documentation. Notwithstanding anything to the contrary in the

Documentation, Specifications, or EULA in the event of inconsistency between the terms and conditions of this Agreement and the term of such documents, the terms and conditions of this Agreement shall supersede and control. In no event will any such documents […***…] when such use otherwise complies with this Agreement. Permitted copies of the Documentation shall include Illumina's copyright and other proprietary notices.

f. **Severability; No Waiver**. If any provision of this Agreement is held invalid or unenforceable, such provision shall be enforced to the maximum extent permissible so as to effect the intent of the Parties, and the remainder of this Agreement will continue in full force and effect. The failure of either Party to exercise any right granted herein or to require any performance of any term of this Agreement or the waiver by either Party of any breach of this Agreement shall not prevent a subsequent exercise or enforcement of, or be deemed a waiver of any subsequent breach of, the same or any other term of this Agreement.

g. **Assignment**. Neither Party may assign or transfer this Agreement or any rights or obligations under this Agreement, whether voluntary, by operation of law or otherwise, without the prior written consent of the other Party; ***provided, however***, that no consent shall be required for any assignment in connection with any merger, acquisition or the sale of all or substantially all of the stock or assets of a Party to a party that agrees in writing to be bound by the terms and conditions of this Agreement, and Illumina may assign this Agreement to any Affiliate without Customer's written consent. Any assignment or transfer of this Agreement made in contravention of the terms hereof shall be null and void. Subject to the foregoing, this Agreement shall be binding on and inure to the benefit of the Parties' respective successors and permitted assigns.

h. **Export**. Customer agrees that the Consumables, or any related technology provided under this Agreement may be subject to restrictions and controls imposed by the United States Export Administration Act and the regulations thereunder (or the regulations and laws of another country). Customer agrees not to export or re-export the Consumables, or any related technology into any country in violation of such controls or any other laws, rules or regulations of any country, state or jurisdiction.

i. **Notices**. All notices required or permitted under this Agreement shall be in writing and shall be deemed received when (i) delivered personally; (ii) 5 days after having been sent by registered or certified mail, return receipt requested, postage prepaid (or 10 days for international mail); or (iii) 1 day after deposit with a commercial express courier specifying next day delivery or, for international courier packages, 2 days after deposit with a commercial express courier specifying 2-day delivery, with written verification of receipt. All notices shall be sent to the following or any other address designated by a Party using the procedures set forth in this Sub-Section:

If to Illumina:	If to Customer:
Legalnotices@illumina.com	Foundation Medicine, Inc. 150 Second Street Cambridge, MA 02141 Attn: President and Chief Operating Officer With a copy to: Foundation Medicine, Inc. 150 Second Street Cambridge, MA 02141 Attn: General Counsel

j. **Force Majeure**. Neither Party shall be responsible for any failure to perform or delay in the performance of this Agreement attributable in whole or in part to any cause beyond its reasonable control, including but not limited to acts of God, fire, flood, tornado, earthquake, hurricane, lightning, government actions, actual or threatened acts of war, terrorism, civil disturbance or insurrection, sabotage, labor shortages or disputes […***…], failure or delay in delivery by Illumina's suppliers or subcontractors, transportation difficulties, shortage of energy, raw materials or equipment, or the other Party's fault or negligence (a "**Force Majeure Event**"). In the event of any delay caused by a Force Majeure Event, the delivery date for performance shall be deferred for a period equal to the time lost by reason of the delay. Notwithstanding anything in this Agreement to the contrary, Customer's payment obligations are not affected by this provision.

k. **Entire Agreement; Amendment; Waiver**. This Agreement represents the entire agreement between the Parties regarding the subject matter hereof and supersedes all prior discussions, communications, agreements, and understandings of any kind and nature between the Parties. No amendment to this Agreement will be effective unless in writing and signed by both Parties. No waiver of any right, condition, or breach of this Agreement will be effective unless in writing and signed by the Party who has the right to waive the right, condition or breach and delivered to the other Party. Customer agrees that (i) actual knowledge by Illumina, Illumina's Affiliates, or their respective directors, officers, employees, or agents that Customer is using Product in any manner or for any purpose outside the scope of the rights expressly granted to Customer in Section 3 (Rights Accompanying Purchase) does not (A) waive or otherwise limit any rights that Illumina, or Illumina's Affiliates, may have as a result of such use of the Product, including without limitation, any rights or remedies available under the terms and conditions of this Agreement, and any rights or remedies available at law or in equity, (B) grant Customer a license to any intellectual property owned or controlled by Illumina or Illumina's Affiliates whether by implication, estoppel, or otherwise with respect to such use of the Product, and (ii) any trade usage, and any course of performance or course of dealing between Illumina and Customer, will not be used to interpret the terms and conditions of this Agreement, including without limitation, the scope of the rights for Product conferred under Section 3 (Rights Accompanying Purchase).

l. **Relationship of the Parties; No Third-Party Beneficiaries**. The Parties are independent contractors under this Agreement and nothing contained in this Agreement shall be construed as creating a partnership, joint venture or agency relationship between the Parties or, as granting either Party the authority to bind or contract any obligation in the name of the other Party, or to make any statements, representations, warranties or commitments on behalf of the other Party.

m. **Publicity; Use of Names or Trademarks; Disclosure of Agreement**. Each Party shall obtain the prior written consent of the other on all press releases or other public announcements relating to this Agreement, including its existence or its terms; ***provided that***, Customer may issue a press release relating to the execution of this Agreement promptly following the Effective Date, the form and substance of which shall be mutually agreed upon by the Parties. Notwithstanding any of the foregoing, if required by law, including without limitation by the U.S. Securities and Exchange Commission or any stock exchange or Nasdaq, then a Party may issue a press release or other public statement regarding this Agreement or file a copy of this Agreement as an exhibit to a public filing; ***provided that***, the other Party has received prior written notice of such intended press release, public statement or disclosure and an opportunity to seek a protective order or confidentiality treatment if practicable under the circumstances and the right to propose redactions to this Agreement if it is to be filed as an exhibit to a public filing and such proposals not to be unreasonably refused, and the Party subject to the requirement cooperates with the other Party to limit the disclosure and includes in such press release, public statement or disclosure only to the minimum amount of information relating to this Agreement as is required by such law. Except as required by applicable law or regulations, neither Party shall use the name or trademarks of the other Party without the express prior written consent of the other Party.

n. **Headings; Interpretation; Miscellaneous**. Sections, titles and headings in this Agreement are for convenience only and are not intended to affect the meaning or interpretation hereof. This Agreement has been negotiated in the English language. Any translation is for convenience only. Only the English language version shall control. Whenever required by the context, the singular term shall include the plural, the plural term shall include the singular, and the gender of any pronoun shall include all genders. As used in this Agreement except as the context may otherwise require, "include", "includes", "including", and "such as" are deemed to be followed by "without limitation", whether or not they are in fact followed by such words or words of like import, and "will" and "shall" are used synonymously. Except as expressly stated, any reference to "days" shall be to calendar days, and "business day" shall mean all days other than Saturdays, Sundays or a national or local holiday recognized in the United States, and any reference to "calendar month" shall be to the month and not a 30 day period, and any reference to "calendar quarter" shall mean the first 3 calendar months of the year, the 4-6th calendar months of the year, the 7-9th calendar months of the year, and the last 3 calendar months of the year. Whenever the last day for the exercise of any privilege or the discharge of any duty hereunder shall fall on a Saturday, Sunday, or national holiday, the Party having such privilege or duty shall have until 5:00 pm PST on the next succeeding business day to exercise such privilege or to discharge such duty. It is further agreed that no usage of trade or other regular practice between the Parties hereto shall be used to interpret or alter the terms of this Agreement. Ambiguities, if any, in this Agreement shall not be construed against any particular Party, irrespective of which Party may be deemed to have authored the ambiguous provision. Illumina is constantly innovating and developing new products or new versions of products. If specific products are listed in this Agreement, Illumina is not guaranteeing that the specific products will be manufactured throughout the Term.

o. **Counterparts**. This Agreement may be executed in one or more counterparts, and each of which shall be deemed to be an original, and all of which shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective duly authorized representatives.

Customer:	**Illumina:**
By: /s/ Jason Ryan	By: /s/ Jeffrey S. Eidel
Name: Jason Ryan	Name: Jeffrey S. Eidel
Title: Chief Financial Officer	Title: VP, Corporate & Business Development
Date: June 6, 2018	Date: June 6, 2018

Exhibit A
[…***…]

[…***…]

[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]
[…***…]	[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]			
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

Exhibit A-1
[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]

[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]

[…***…]

[…***…][…***…][…***…][…***…][…***…][…***…][…***…][…***…][…***…][…***…]
[…***…][…***…][…***…][…***…]

Appendix I
Service Contract Terms and Conditions

Illumina's Service Contracts are subject to the following terms, conditions, and limitations.

1. **Definitions**. "**Covered Hardware**" means those portions of the Hardware that are covered by a Service Contract purchased by Purchaser hereunder. "**Current Specifications**" means Seller's written specifications for the Covered Hardware that apply to such Covered Hardware as provided in the Service Contract that is purchased hereunder, but only if the purchased Service Contract provides that the Covered Hardware will conform to current specifications rather than the Original Specifications. "**Purchaser**" means the person or entity acquiring the Service Contract from Seller (i.e., 'Customer' as defined in the Agreement to which this **Appendix I** is attached). "**Documentation**" means Seller's user manual, package insert, and similar documentation, for the Covered Hardware in effect on the date that such Covered Hardware shipped from Seller. Documentation may have contained additional terms and conditions that are hereby incorporated herein by reference. Documentation may have been provided (including by reference to a website) with the Covered Hardware at time of shipment or provided electronically from Seller. "**EULA**" means the end user license agreement for Software. "**Facility**" means the physical address where Covered Hardware is located. "**Hardware**" means Seller branded instruments, accessories, or peripherals. "**Original Specifications**" means Seller's written specifications for the Covered Hardware in effect on the date that such Covered Hardware shipped from Seller. "**Original Terms**" means the Seller terms and conditions of sale in effect on the date the Covered Hardware was shipped from Seller setting forth the terms and conditions of Purchaser's purchase and use of such Covered Hardware, components thereof, and Software. "**Quotation**" means a written quotation provided by Seller to Purchaser for the Service Contract. "**Seller**" means Illumina. The Selling entity is identified on the quotation, order acknowledgment or similar communication, or Seller website if the order is being placed electronically at Seller's website. "**Specifications**" means the Current Specifications or the Original Specifications, as applicable; ***provided that***, Specifications shall in all cases refer to the Original Specifications unless otherwise set forth in the Service Contract. "**Site**" means the smallest definable room that contains the Covered Hardware. "**Software**" means Seller branded software provided by Seller with the Covered Hardware. All Software is licensed and not sold and may be subject to additional terms found in the Software's end user license agreement. "**Term**" means the length of the term of the Service Contract.
2. **Term**. All Service Contracts are for a period of 12 months, unless otherwise agreed to in writing by Seller or as set forth in the relevant Quotation.
3. **Response Time and On-site Support.** Seller will use commercially reasonable efforts to respond to Purchaser's requests for service within the time period specified in the Service Contract. All requests for service must be made through Seller's customer support organization ("**Purchaser Solutions**"). Please refer to Seller's website for Purchaser Solutions contact information. Seller reserves the right to provide service and support by any method in its sole discretion, including but not limited to, remote instruction via telephone, Internet or email, mailing to Purchaser replacement parts or test equipment, exchanging Purchaser's component equipment with loaner equipment while repairs are being made, and deploying service or applications personnel for on-site services. Other than installation and preventative maintenance visits, Seller shall determine in its sole discretion whether and when any personnel or replacement parts or equipment are to be sent to Purchaser's site. Seller shall respond to Purchaser's request for support in accordance with the average response time specified in the Service Contract. Seller will provide a minimum number of on-site support visits as specified in the Service Contract if the Purchaser has identified a specific need that can be fulfilled by the visit and if the Purchaser has made reasonable accommodation for scheduling the visit. If no need is identified and the timing of any visit cannot be scheduled at a mutually-agreeable date and time, Seller may provide fewer visits than prescribed in the Service Contract.
4. **Software Support.** During the Term, Seller shall use commercially reasonable efforts to provide all Software updates and qualified Software upgrades in accordance with the terms of the Service Contract as such materials become commercially available for distribution. Purchaser's use of all Software, updates,

and upgrades of Software shall be subject to this Agreement, the Original Terms, and the applicable EULA.

5. **Hardware Support.** During the Term, Seller shall use commercially reasonable efforts to install mandatory Hardware updates in accordance with the terms of the Service Contract as such materials become available for distribution. Whether a Hardware update is mandatory shall be determined by Seller in its sole discretion. Seller shall reschedule Hardware updates to coincide with preventive maintenance visits. If Purchaser requests that such Hardware updates occur at a time or date other than during preventive maintenance visits, Seller may, at its sole discretion, charge Purchaser for any costs and expenses incurred in connection with such Hardware update visit. All updated Hardware and components thereof and Purchaser's use of the same shall be subject to this Agreement and the Original Terms.
6. **Hardware Repairs.** Seller shall use commercially reasonable efforts to repair Covered Hardware reported by Purchaser and deemed inoperable by Seller's Purchaser Solutions personnel. Seller's sole obligation hereunder is to provide parts and labor according to the terms of the Service Contract and is limited to only repair or replacement of Seller branded parts originally provided by Seller to Purchaser. All repaired or replaced items and Purchaser's use of the Covered Hardware including the repaired or replaced components shall be subject to this Agreement and the Original Terms. For clarity, repaired or replaced items will be warranted to conform to the Specifications for 90 days from the date of installation or repair of such repaired or replaced item.
7. **Documentation Updates.** Seller shall use commercially reasonable efforts to provide updates to Documentation according to the terms of the Service Contract as they become available for distribution. Whether a Documentation update is mandatory shall be determined by Seller in its sole discretion. All updates to Documentation and Purchaser's use of the Documentation shall be subject to this Agreement and the Original Terms.
8. **Replacement Parts.** All replacement parts and components provided by Seller will be new or refurbished, in Seller's sole discretion, and shall be furnished on an exchange basis. All Hardware or components thereof or other parts removed for replacement shall become the property of Seller. All replaced parts and components and Purchaser's use of the Covered Hardware including the replaced parts and components shall be subject to this Agreement and the Original Terms. For clarity, repaired or replaced items will be warranted to conform to the Specifications for […***…] from the date of installation or repair of such repaired or replaced item.
9. **Loaner Hardware.** Seller may choose to provide, in its sole discretion, loaner hardware or components to Purchaser to substitute for the Covered Hardware or a component thereof, while service is being provided. Seller will be responsible for all costs associated with the shipment of such loaner hardware or components to Purchaser's Site, exclusive of any taxes or duties, which are the sole responsibility of Purchaser. Loaner hardware or components shall be certified by Seller's Purchaser Solutions using the same criteria as used for new hardware or components. Loaner hardware or components shall remain the sole property of Seller, and must be returned within 30 days of Seller's request. Purchaser's use of loaner hardware or components shall be subject to Seller's current terms and conditions of sale that apply to such loaner hardware or component.
10. **Preventative Maintenance Visits.** Seller will provide a preventative maintenance on-site visit according to the terms of the Service Contract, which may result in two to three days of system down time to Purchaser. Seller shall cooperate with Purchaser to schedule such preventative maintenance visits at a time that is mutually convenient for both Parties. All such preventative maintenance services will be provided by Seller designated service personnel. All travel, labor and parts/materials expenses associated with prescribed preventative maintenance visits, visits to service, repair or replace covered items, and applications support visits as provided for in the Service Contract are included in the price set forth for such Service Contract. Preventative maintenance services include testing and adjusting the Covered Hardware to the Specifications. If any preventative maintenance visit within the Term is precluded due to Purchaser's inability to provide a sufficient time period for such services and down time, Seller shall not be obligated to provide a substitute preventative maintenance visit. Seller shall not be liable for any economic, consequential, incidental, special or other damages or losses of any kind resulting from the down time during such preventative maintenance visits.
11. **Purchaser Responsibilities**.

a. Proper Use: The performance of Covered Hardware when operated in corrosive environments, or in conditions, or in a manner, outside of the Specifications including Seller's site requirements found in the Documentation or not in accordance with its Documentation may have their performance adversely affected, and are therefore not guaranteed hereunder. The Purchaser agrees to use the Covered Hardware in a safe and reasonable manner pursuant to the Documentation and the Original Terms.
b. Access: The Purchaser will provide Seller with access to the Covered Hardware along with adequate working space and facilities within a reasonable distance of the Covered Hardware. Access will also be provided to all information and facilities that are reasonably necessary for Seller to service the Covered Hardware.
c. Data Back-up and Security: The Purchaser is responsible for maintaining a procedure to reconstruct any lost or altered files, data, or programs, as well as for the security of all confidential, proprietary, and classified information.
d. Networking: The Purchaser is responsible for maintaining all computer networking as it relates to the integration of any components of the Covered Hardware outside of such system and within the Purchaser's network.
e. Representative: A representative of Purchaser will be present on-site at all times service is being performed by Seller's designated service personnel.
f. Toxic/BioHazardous Substances: The Purchaser will notify Seller in writing if any Covered Hardware is used for analysis of toxic, hazardous or dangerous substances. Such Covered Hardware must be decontaminated by Purchaser in accordance with Seller's decontamination procedures and Purchaser shall fax a completed and executed Decontamination Certificate to Purchaser Solutions before any service may be performed on the Covered Hardware.
g. Environment: The Purchaser agrees to provide Seller's designated service personnel with a safe environment for their work.
h. Disposal of Waste Products: The Purchaser is responsible for the proper disposal of waste products that result from maintenance and service work on the Covered Hardware.
i. Facilities: The Purchaser is responsible for ensuring that the Site will adhere to Seller's site requirements found in the Documentation or Specifications. Any material deviation from Seller's site requirements affecting the proper functioning of the Covered Hardware shall relieve Seller of its obligations under this Agreement, including without limitation, under the Service Contract.

12. **Exclusions and Restrictions**. The terms of this Agreement cover maintenance and repair for conditions that result from normal use and operation as described in the Documentation for the Covered Hardware. Seller will not be obligated to perform maintenance or repair on any Covered Hardware which, in its reasonable judgment:
    a. Has been subjected to abuse, misuse, neglect, negligence, accident, improper testing, improper installation other than installation performed by Seller authorized personnel, improper storage, improper handling, or use contrary to any instructions issued by Seller or has been used in any manner inconsistent with its Documentation:
    b. Has been repaired, altered, disassembled, reassembled, or damaged as a result of modifications made to the Covered Hardware that were not authorized in writing by Seller;
    c. Has been damaged by environmental conditions at the Site;
    d. Has not been installed, operated, repaired and maintained in accordance with its Documentation or has been damaged due to operators failing to perform standard operating procedures or routine maintenance as prescribed in the applicable Documentation;
    e. Has been moved from the Site by persons not expressly authorized in writing by Seller;
    f. Has been used with any third-party software, hardware, or item including, without limitation, reagent which has not been previously approved in writing by Seller;
    g. Has been exposed to Bio-safety Level 3 or 4 agents (as defined by The Occupational Safety and Health Administration);
    h. Has been exposed to radioactivity, and has not been decontaminated to below exempt levels; or
    i. Has been damaged due to an act of Force Majeure as defined herein.
13. **Services by Third Parties on Seller' Behalf**. Seller reserves the right to retain or contract outside vendors of its choosing to provide service and support hereunder. In any instance where the terms and

conditions of such vendor's service, support, and warranty agreement conflicts with the terms and conditions of this Agreement, the terms and conditions of this Agreement shall govern; ***provided, however*** that any exclusions on coverage contained in an OEM vendor's terms and conditions shall remain in full force and effect.

14. **Relocation of Hardware**. All Service Contracts terminate automatically with immediate effect and without the need for notice to Purchaser if Covered Hardware is moved to a different Facility. Upon such termination, Seller will credit Purchaser's account with Seller an amount equal to the unused portion of the Service Contract; ***provided that***, Purchaser pre-paid for the Service Contract in full. If Seller (or a third party acting on behalf of Seller) conducts the move of the Covered Hardware on Purchaser's behalf then Seller and Purchaser will enter into a new Service Contract for such Covered Hardware at the new Facility.
15. **Export of Hardware**. Purchaser agrees not to move or relocate Covered Hardware outside of the country to which Seller originally shipped it without the express written authorization of an officer of Seller; provided that a conduct of the move or relocation of the Covered Hardware by Seller (or a third party acting on behalf of Seller) shall be deemed such express written authorization.
16. **Recertification Requirement**. Hardware not under an existing Service Contract is only eligible for a Service Contract if Seller has inspected the Hardware and its ancillary equipment and provided a written notice to Purchaser that the Hardware is eligible for a Service Contract ("**Recertification Requirement**"). Purchaser acknowledges that Hardware may have to be repaired, at Purchaser's sole expense, prior to being eligible for a Service Contract. Accordingly, Seller recommends that Purchaser renew its existing Service Contracts prior to their expiration.
17. **Renewal of Service Contract**. If Purchaser renews the Service Contract on a piece of Covered Hardware prior to the expiration of the Service Contract Seller will waive the Recertification Requirement.
18. **Early Termination of Service Contract**. Purchaser or Seller may, in their sole discretion, terminate the Service Contract early by providing 30 days prior written notice to the other. Upon such termination, Seller will credit Purchaser's account with Seller an amount equal to the unused portion of the Service Contract; provided that, Purchaser pre-paid for the Service Contract in full; and provided further that, the amount of such credit will be reduced by the amount of any discount Seller provided Purchaser as a result of Seller purchasing a multi-year Service Contract ("**Unearned Discount**"). In the event Purchaser's Unearned Discount exceeds the amount of credit that Seller would provide under this provision, Seller will invoice Purchaser the difference and such invoice shall be paid within 30 days.
19. **Non-Transferable**. All Service Contracts are personal to the original Purchaser of the Covered Hardware and may not be transferred or assigned to any third party.
20. **Force Majeure**. Seller is not responsible for any failure to perform or delay attributable in whole or in part to any cause beyond its reasonable control, including but not limited to acts of God, fire, flood, tornado, earthquake, hurricane, lightning, government actions, actual or threatened acts of war, terrorism, civil disturbance or insurrection, sabotage, labor shortages or disputes, failure or delay in delivery by Seller's suppliers or subcontractors, transportation difficulties, shortage of energy, raw materials or equipment, or Purchaser's fault or negligence. In the event of any such delay the delivery date shall be deferred for a period equal to the time lost by reason of the delay.
21. **Unauthorized Activities**. Purchaser agrees not to, nor authorize any third party to, engage in any of the following activities: (i) disassemble, reverse-engineer, reverse-compile, or reverse-assemble the Covered Hardware or an items provided hereunder (collectively "**Materials**"), (ii) separate, extract, or isolate components of the Materials or subject the Materials or components thereof to any analysis not expressly authorized in the Documentation, (iii) gain access to or attempt to determine the methods of operation of the Materials, or (iv) transfer to a third party, or grant a sublicense to, any Software or any third-party software provided hereunder. Purchaser further agrees that the contents of and methods of operation of the Materials are proprietary to Seller and the Materials contains or embodies trade secrets of Seller.
22. **Limited Liability**. **TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SELLER OR ITS SUPPLIERS BE LIABLE TO PURCHASER OR ANY THIRD PARTY FOR COSTS OF PROCUREMENT OF SUBSTITUTE PRODUCTS OR SERVICES, LOST PROFITS, DATA OR BUSINESS, OR FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY, CONSEQUENTIAL, OR PUNITIVE DAMAGES OF ANY KIND ARISING OUT OF OR IN CONNECTION WITH, WITHOUT LIMITATION, THE SALE OF THE COVERED**

HARDWARE OR SERVICE CONTRACT, THE USE OF THE COVERED HARDWARE, THE ITEMS AND SERVICES PROVIDED HEREUNDER, SELLER'S PERFORMANCE HEREUNDER OR ANY OF THESE TERMS AND CONDITIONS, HOWEVER ARISING OR CAUSED AND ON ANY THEORY OF LIABILITY (WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE).

TO THE EXTENT PERMITTED BY LAW, SELLER'S TOTAL AND CUMULATIVE LIABILITY TO PURCHASER OR ANY THIRD PARTY ARISING OUT OF OR IN CONNECTION WITH THESE TERMS AND CONDITIONS, INCLUDING WITHOUT LIMITATION, THE COVERED HARDWARE OR ITEMS PROVIDED HEREUNDER (INCLUDING USE THEREOF), THE SERVICE CONTRACT, THE SERVICES PROVIDED HEREUNDER, AND SELLER'S PERFORMANCE HEREUNDER, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, SHALL IN NO EVENT EXCEED […***…]**.**

23. **Limitations on Warranties**. **TO THE EXTENT PERMITTED BY LAW AND SUBJECT TO THE EXPRESS WARRANTIES MADE IN THESE TERMS AND CONDITIONS SELLER MAKES NO (AND EXPRESSLY DISCLAIMS ALL) WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT TO THE COVERED HARDWARE, THE ITEMS PROVIDED HEREUNDER, THE SERVICE CONTRACTS, AND THE SERVICES PROVIDED HEREUNDER, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR ARISING FROM COURSE OF PERFORMANCE, DEALING, USAGE OR TRADE.**

Exhibit B
Ordering Affiliates

FMI Germany GmbH

Confidential Treatment Requested

Exhibit 10.2

***Text Omitted and Filed Separately with the Securities and Exchange Commission
Confidential Treatment Requested Under
17 C.F.R. Sections 200.80(b)(4) and 240.24b-2

Execution Version

CHINA TERRITORY AGREEMENT

This China Territory Agreement ("Agreement") is entered into by and between F. Hoffmann-La Roche Ltd, with an office and place of business at Grenzacherstrasse 124, 4070, Basel, Switzerland ("Roche"), on the one hand, and Foundation Medicine, Inc. with an office and place of business at 150 Second Street, Cambridge, MA 02141, U.S.A. ("FMI"), on the other hand (each a "Party," and collectively, the "Parties") and shall take effect as of April 26, 2018 (the "Effective Date"). Capitalized terms used in this Agreement and not otherwise defined herein are used with the meanings ascribed to them in the Ex-US Commercialization Agreement (as defined below).

WHEREAS, the Parties have entered into the Amended and Restated Ex-US Commercialization Agreement, dated as of February 28, 2018 (as it may be amended from time to time, the "Ex-US Commercialization Agreement"), pursuant to which FMI has agreed to perform certain Service Activities to support Roche's commercialization of the First Year Products in the Territory; and

WHEREAS, in recognition of certain legal and regulatory considerations applicable to the People's Republic of China, excluding Hong Kong, Taiwan, and Macau (the "China Territory"), which is included in the Territory, the Parties intend to modify the terms and conditions of the Ex-US Commercialization Agreement as-applied to the China Territory and agree upon certain additional terms and conditions for the purpose of establishing a collaboration with DiAn Diagnostics Group Co., Ltd. ("DiAn") for the purpose of implementing such Ex-US Commercialization Agreement in the China Territory (the "Collaboration");

NOW, THEREFORE, in consideration of the above, and of the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Purpose of this Agreement. For the purpose of implementing the Ex-US Commercialization Agreement in the China Territory, according to that certain Commercialization and Services Agreement by and between Roche and DiAn, dated as of the Effective Date (as it may be amended from time to time, the "Commercialization and Services Agreement"), and that certain Technology License and Laboratory Services Agreement entered into by and between FMI and DiAn, dated as of the Effective Date (as it may be amended from time to time, the "Laboratory Services Agreement"), the Parties agree that DiAn shall perform (A) certain commercialization activities in the China Territory for First Year Products on Roche's behalf for the purpose of implementing the

Collaboration in accordance with the Commercialization and Services Agreement, and (B) all Service Activities specified by FMI in the China Territory for the First Year Products on FMI's behalf for the purpose of implementing the Collaboration in accordance with the Laboratory Services Agreement.

2. Terms Specific to Commercialization and Services Agreement.

2.1. FMI Consent to Sublicense. FMI hereby consents to the grant by Roche of the sublicense to DiAn as set forth in the Commercialization and Services Agreement, subject to Sections 2.1.2 (Sublicenses) and 19.15 (Subcontractors) of the Ex-US Commercialization Agreement, in order for DiAn to conduct the services contemplated thereby in order to commercialize the First Year Products in the China Territory. In addition, FMI hereby agrees that the […***…] audit provision in Section 11.4 (Duration of Audit Rights) of the Commercialization and Services Agreement shall limit FMI's audit rights under Sections 11.4 (Duration of Audit Rights) and 11.1 (Right to Audit) of the Ex-US Commercialization Agreement, solely to the extent set forth in Section 11.4 of the Commercialization and Services Agreement in effect as of the Effective Date. To the extent that there are any other conflicts between any term or condition of the Commercialization and Services Agreement and any term or condition of the Ex-US Commercialization Agreement such that both cannot be given effect, the relevant term or condition of the Commercialization and Services Agreement shall prevail solely with regard to matters relating to the China Territory. Notwithstanding the foregoing: (a) the preceding sentence shall not apply to any amendments, waivers, or other modifications to the Commercialization and Services Agreement following the Effective Date of this Agreement that FMI has not approved in advance in writing; (b) the preceding sentence shall not apply to the definition of "Product" as set forth in the Commercialization and Services Agreement (i.e., each "Product" definition shall be interpreted as it is used in the relevant agreement); and (c) nothing in this Agreement or in the Commercialization and Services Agreement shall limit any of Roche's obligations or FMI's rights under Article 4 (Governance), Section 7.4.1 (Roche Responsibilities), Section 7.5 (Branding and Pricing) as it applies to branding (pricing in the China Territory is determined by […***…]), Section 7.6 (Product Promotional Materials and Promotional Obligations), Article 12 (Intellectual Property), Article 14 (Indemnification), or Article 15 (Liability) of the Ex-US Commercialization Agreement, except as may otherwise be expressly agreed upon by FMI and Roche in writing.

2.2. Grant of Rights. Roche hereby grants to FMI a non-exclusive, worldwide, royalty-free, sublicensable license under Roche's interest in any DiAn-Licensed IP solely for the purpose of making, having made, using, selling, offering for sale or importing Products. For the purpose of this Section 2.2, "DiAn-Licensed IP" shall mean any Patent Rights (as defined in the Commercialization and Services Agreement) and Know-How (as defined in the Commercialization and Services Agreement) generated by DiAn in the performance of its activities under the Commercialization and Services Agreement that is licensed to Roche pursuant to Section 2.1.1. thereof.

2.3. Effect of Termination.

(A) In the event that either (i) Roche exercises any of its termination rights under the Commercialization and Services Agreement prior to the expiration of the term thereof other than following DiAn's termination of the Laboratory Services Agreement upon FMI's material breach thereof (either in whole, or with respect to a particular First Year Product); or (ii) DiAn terminates the Commercialization and Services Agreement due to Roche's material breach thereof (each of (A)(i) and (A)(ii), a "Territory Reduction Event"), then upon FMI's delivery of written notice that the relevant Territory Reduction Event has taken place (the "Territory Reduction Notice"), the Territory shall be revised to remove the China Territory in its entirety from the Territory or to remove a particular First Year Product (as applicable) from the China Territory, as the case may be, and the China Territory shall be deemed to be included in the FMI Territory, either in whole or with respect to the particular First Year Product in question (as applicable). For clarity, upon removal of the China Territory from the Territory pursuant to FMI's delivery of the Territory Reduction Notice to Roche following the occurrence of a Territory Reduction Event, the relevant licenses and rights granted to Roche under the Ex-US Commercialization Agreement shall automatically terminate on the effective date of termination and with respect to any applicable First Year Products, and FMI shall have the sole right to commercialize any such Product in the China Territory.

(B) Notwithstanding anything to the contrary in the Ex-US Commercialization Agreement, Roche will:

(i) following (a) the occurrence of a Territory Reduction Event or (b) the expiration or termination (whether in whole, with respect to the China Territory, or with respect to each particular First Year Product in question, as applicable) of the Ex-US Commercialization Agreement (each of (B)(i)(a) and (B)(i)(b) of this Section 2.3, a "Termination Event"), continue to provide the Roche Services as set forth in the Commercialization and Services Agreement for a period of […***…] months (either for all First Year Products, or with respect to each particular First Year Product in question, as the case may be);

(ii) perform the activities described in Sections 17.3.1(b)-(d) and 17.3.4.1 of the Ex-US Commercialization Agreement for a period of […***…] months following the occurrence of a Termination Event (either for all First Year Products, or with respect to each First Year Product in question, as the case may be);

(iii) the occurrence of a Termination Event shall not excuse either Party from any of its obligations under this Agreement or the Ex-US Commercialization Agreement (as it relates to the China Territory), in each case, which were in existence prior to such Termination Event;

(iv) without limiting the generality of clause (iii) immediately above, Roche's obligations pursuant to Section 3.2 (Defense Against Third-Party Infringement Claims) shall survive the occurrence of a Termination Event with respect to any Third-Party Infringement Suits (as defined below) commenced prior to such Termination Event; and

(v) (a) to the extent that such Termination Event results in the termination of the Commercialization and Services Agreement with respect to the FoundationOne Product, Roche shall make a payment of […***…] United States dollars (US$[…***…]) to FMI, (b) to the extent that such Termination Event results in the termination of the Commercialization and Services Agreement with respect to FoundationOne Heme Roche shall make a payment of […***…] United States dollars (US$[…***…]) to FMI, and (c) to the extent that such Termination Event results in the termination of the Commercialization and Services Agreement with respect to FACT, Roche shall make a payment of […***…] United States dollars (US$[…***…]) to FMI, in each case of (a)-(c), within […***…] days following Roche's receipt of notice from FMI stating that the relevant Termination Event has occurred.

(vi) For clarity, to the extent that a Termination Event results in the termination of the Commercialization and Services Agreement with respect to all First Year Products, Roche shall make a payment of […***…] United States Dollars (US$[…***…]) to FMI within […***…] days following Roche's receipt of notice from FMI stating that the relevant Termination Event has occurred; provided, however, if Roche at the time of the Termination Event is selling Product in the China Territory, then no payment shall be payable under Section 2.3(B)(v) or this Section 2.3(B)(vi).

2.4. Non-Commercial Clinical Reports. The JSC (as defined in the Laboratory Services Agreement and the Commercialization and Services Agreement) will make express determinations as to circumstances under which Non-Commercial Clinical Reports (as defined in the Laboratory Services Agreement and the Commercialization and Services Agreement) may be issued by DiAn in the China Territory at Roche's request, provided that: (A) Roche will have final decision-making authority (upon reasonable consultation with FMI) with respect to any such determinations that have not been expressly reviewed and approved by the JOC (as defined under the Ex-US Commercialization Agreement) in accordance with Article 6 of the Laboratory Services Agreement and Article 4 (Governance) of the Commercialization and Services Agreement; and (B) Roche shall account for each Non-Commercial Clinical Report issued in the China Territory as set forth under Section 3.5 (Royalties for the China Territory) below. Notwithstanding anything to the contrary in the Ex-US Commercialization Agreement, FMI shall have no financial obligations to Roche or DiAn with respect to any Non-Commercial Clinical Reports issued by

DiAn in accordance with this Agreement and any guidance or policies for such Non-Commercial Clinical Reports established by the JSC.

3. Implementation of the Ex-US Commercialization Agreement in the China Territory.

3.1. Roche Assistance with FMI Intellectual Property Matters in China.

(A) Enforcement of FMI's Intellectual Property Rights. During the Agreement Term, to the extent that Roche is commercializing any First Year Products in the China Territory, (A) FMI shall have the right, but not the obligation, to request that Roche enforce FMI's intellectual property rights in the China Territory for any such First Year Products (collectively, "FMI China IP") at […***…] sole cost and (B) to the extent Roche has knowledge of any infringement or misappropriation of FMI China IP, Roche shall promptly provide written notice of such infringement or misappropriation to FMI. To the extent that FMI exercises such right with respect to the enforcement of any FMI China IP, Roche will use reasonable efforts to enforce the relevant FMI China IP in a timely manner. Notwithstanding the foregoing, for clarity, FMI shall always have the right to enforce any FMI China IP at its own discretion […***…].

(B) Challenges to Third Party Intellectual Property Rights. During the Agreement Term, to the extent that Roche is commercializing any First Year Products in the China Territory, […***…] will, upon […***…] request and at […***…], provide reasonable assistance with any […***…] that […***…] initiates, whether at […***…] request or at […***…] sole discretion. In addition, […***…] will be permitted to initiate an […***…] at its own discretion; *provided that* […***…] shall be required to provide […***…] with reasonable advance notice of its intention to initiate any such […***…] and will consider in good faith […***…] reasonable comments regarding the advisability of such […***…] prior to […***…] initiation thereof, as well as the general strategy associated with such […***…] (including which Party initiates and controls such […***…]) if applicable. Subject to the preceding sentence, […***…] if an […***…] is initiated at […***…] request or discretion, […***…] shall be solely responsible for […***…] (excluding any […***…]) associated therewith; *provided, however*, that, where […***…]: (a) […***…] shall only be responsible for up to […***…] United States dollars (US$[…***…]) (the "[…***…] Cap") in aggregate costs and expenses associated with all […***…] during the Collaboration Term (as defined under Section 3.3(A) below); and (b) […***…] will be solely responsible for any costs or expenses in excess of the […***…] Cap associated with […***…] during the Collaboration Term. Notwithstanding anything in this Agreement to the contrary, the term […***…] shall not include any […***…], to the extent that such proceeding or

process is initiated after a Third Party commences (y) any Third-Party Infringement Suit (as defined under Section 3.2(A) below) against either Party in connection with such patent(s) or (z) any Third-Party Infringement Suit (as defined under Section 11.6 of the Laboratory Services Agreement) against […***…] in connection with such patent(s), and any such proceeding or process, if applicable, shall be governed by the terms and provisions of Section 3.2 (Defense Against Third-Party Infringement Claims) below.

3.2. Defense Against Third-Party Infringement Claims.

(A) Defense Procedure. If an action for infringement is commenced against either Party or any of its Affiliates asserting that such Party's performance of its obligations arising out of or relating to this Agreement or the Collaboration infringes the intellectual property rights of a Third Party (a "Third-Party Infringement Suit"), such Party or its Affiliate (as a "Defending Party") shall defend such Third-Party Infringement Suit at its own expense, and the other Party shall reasonably assist and cooperate with the Defending Party, at its own expense, to the extent necessary in the defense of such Third-Party Infringement Suit. The Defending Party shall have the right to settle such Third-Party Infringement Suit or consent to a judgment thereto, in its sole discretion, so long as such settlement or judgment does not adversely affect the rights of the other Party or its Affiliates (including any patent rights Controlled by any of them), including by entering into a settlement agreement or consenting to a judgment constituting an admission of the invalidity of any patent rights Controlled by any of them (including, in the case of FMI, any FMI Patent Rights or any of FMI's patent rights outside of the Territory). Where a settlement or judgment to any such Third-Party Infringement Suit would adversely affect the rights of the other Party or its Affiliates (including any patent rights Controlled by any of them), the Defending Party shall not settle such Third-Party Infringement Suit or consent to an adverse judgment thereto without the other Party's prior written consent. The Defending Party shall incorporate the other Party's reasonable comments into any filings made by the Defending Party in connection with the defense of any such Third-Party Infringement Suit. The Defending Party shall assume full responsibility for the payment of any award for damages, or any amount due pursuant to any settlement entered into by it and the Third Party that commenced the relevant Third-Party Infringement Suit against it. If a Third-Party Infringement Suit is commenced against all of FMI, Roche, and DiAn (or, in each case, any of its respective Affiliates) in connection with the Parties' performance of their respective obligations relating to this Agreement or the Collaboration, and DiAn's performance of its obligations under the Collaboration, the Laboratory Services Agreement, or the Commercialization and Services Agreement, then the Parties and DiAn, through the JSC, shall discuss in good faith how control of the defense of any such Third-Party Infringement Suit shall be handled.

(B) Allocation of IP Losses. Notwithstanding anything to the contrary in this Agreement or the Ex-US Commercialization Agreement, the Parties agree to allocate any and all IP Losses (as defined below) in accordance with *Table 1- IP Loss Tiers* below.

Table 1- IP Loss Tiers

IP Loss Tier	FMI Cost Share	Roche Cost Share
Tier 1 Aggregate IP Losses up to and including US$[…***…]	[…***…]%	[…***…]%
Tier 2 Aggregate IP Losses from US$[…***…] to US$[…***…]	[…***…]%	[…***…]%
Tier 3 Aggregate IP Losses from US$[…***…] to US$[…***…]	[…***…]%	[…***…]%
Tier 4 Aggregate IP Losses in excess of US$[…***…]	[…***…]%	[…***…]%

With respect to any IP Losses within a given IP Loss Tier, Roche shall reimburse FMI for Roche's share of such IP Losses in accordance with the Roche Cost Share applicable to such IP Loss Tier (as set forth in *Table 1- IP Loss Tiers*).

For example, if FMI were to incur US$[…***…] in IP Losses during a Calendar Quarter, and had not incurred any IP Losses prior to such Calendar Quarter, Roche's reimbursement to FMI for IP Losses incurred by FMI during such Calendar Quarter would be calculated as follows:

[US$[…***…]] + [US$[…***…]] = US$[…***…].

If FMI were to incur US$[…***…] in IP Losses during a Calendar Quarter, and had incurred US$[…***…] in aggregate IP Losses prior to such Calendar Quarter, Roche's reimbursement to FMI for IP Losses incurred by FMI during such Calendar Quarter would be calculated as follows:

[US$[…***…]] + [US$[…***…]] = US$[…***…].

If FMI were to incur US$[…***…] in IP Losses during a Calendar Quarter, and had incurred US$[…***…] in aggregate IP Losses prior to such Calendar Quarter, Roche's reimbursement

to FMI for IP Losses incurred by FMI during such Calendar Quarter would be calculated as follows:

[US$[…***…]] = US$[…***…].

Promptly following the end of each Calendar Quarter, FMI shall invoice Roche for Roche's share of any IP Losses to be reimbursed by Roche (if any) in connection with IP Losses incurred by FMI during such Calendar Quarter. Each invoice shall include reasonable supporting documentation relating to the IP Losses. Roche shall make payment on each such invoice within […***…] calendar days following its receipt thereof.

"IP Losses" shall mean any and all costs, liabilities, fees, expenses, fines, damages, judgments, penalties, and other out of pocket amounts incurred by FMI (excluding any internal FMI costs): (i) in connection with FMI's defense (whether sole or joint) against Third-Party Infringement Suits; or (ii) pursuant to FMI's obligation to indemnify DiAn and other "DIAN Indemnitees" (as defined in the Laboratory Services Agreement) against Indemnifiable Losses (as defined in the Laboratory Services Agreement) arising from Third-Party Infringement Claims (as defined in the Laboratory Services Agreement) under Section 15.1.2 of the Laboratory Services Agreement.

3.3. Obligations of FMI Satisfied by DiAn. Notwithstanding anything to the contrary in the Ex-US Commercialization Agreement:

(A) FMI's delivery to DIAN in full compliance with the terms and conditions of the Laboratory Services Agreement of (i) the Initial FMI Information Technology deliverables and the FMI Technology Deliverables for the FoundationOne Product (in each case, as defined in the Laboratory Services Agreement), (ii) the FMI Technology Deliverables for the FoundationOne Heme Product (as defined in the Laboratory Services Agreement), and (iii) the FMI Technology Deliverables for the FoundationACT Product will, in each case of 3.3(A)(i)-(iii), satisfy FMI's obligations to conduct or have conducted genomic sequencing locally for each applicable First Year Product in […***…] pursuant to Section 7.4.2.3 of the Ex-US Commercialization Agreement;

(B) During the term of the Collaboration (the "Collaboration Term"), FMI has satisfied its remaining obligations applicable to the China Territory under Section 7.4.2.3 of the Ex-US Commercialization Agreement (other than the obligations specified in clause 3.3(A) above, which are subject to the terms set forth therein); and

(C) During the Collaboration Term, FMI's obligations with respect to preparing, submitting and obtaining any Regulatory Approvals required to market, import, have imported, sell and have sold the First Year Products in the China Territory pursuant to Section 6.1.1

(Responsibility for Products Other than F1CDx) of the Ex-US Commercialization Agreement shall be satisfied.

3.4. Gross Margin Calculation for the China Territory. Notwithstanding anything to the contrary in the Ex-US Commercialization Agreement, the Gross Margin on Sales of First Year Products in the China Territory (collectively, " China Sales") for the purpose of calculating the royalty payments payable to FMI pursuant to Section 8.3 of the Ex-US Commercialization Agreement for each Calendar Quarter during the Collaboration Term shall be determined as follows:

(A) The aggregate Gross Margin on Sales of the FoundationOne Product in the China Territory (the "China F1 GM") shall be calculated as the greater of: (a) […***…] and (b) […***…] (the "China Minimum F1 GM");

(B) The aggregate Gross Margin on Sales of FoundationOne Heme in the China Territory (the "China F1H GM") shall be calculated as the greater of: (a) […***…], and (b) […***…] (the "China Minimum F1H GM");

(C) The aggregate Gross Margin on Sales of FACT in the China Territory (the "China FACT GM") shall be calculated as the greater of: (a) […***…], and (b) […***…] (the "China Minimum FACT GM"); and

(D) Finally, the aggregate Gross Margin on all China Sales ("China GM") during such Calendar Quarter (which shall be the basis of the calculation of the royalty payment to FMI for Sales in the China Territory during such Calendar Quarter) shall be calculated as the sum of the China F1 GM, the China F1H GM, and the China FACT GM for such Calendar Quarter.

For clarity, "Clinical Reports," as used in this Section 3.4, shall exclude Non-Commercial Clinical Reports.

3.5. Royalties for the China Territory.

(A) Royalty Enhancement. With respect to China Sales only, the royalty tiers applicable to such China Sales shall be adjusted as follows: (a) a […***…]% incremental increase will apply to the relevant royalty rate set forth in the Ex-US Commercialization Agreement for each of the […***…]% and […***…]% royalty tiers, and (b) a […***…]% incremental increase will apply to the relevant royalty rate for each of the […***…]% and […***…]% royalty tiers. Accordingly, the royalty rates applicable to China Sales will be as follows:

Tier of Calendar Year Gross Margin (on an Aggregated Basis, for Sales in the Territory	Percent (%) of Gross Margin of China Sales for Calculation of Royalty on China Sales
Up to and including US$[…***…]	[…***…]
Greater than US$[…***…] and up to and including US$[…***…]	[…***…]
Greater than US$[…***…] and up to and including US$[…***…]	[…***…]
Greater than US$[…***…]	[…***…]

For example, if Gross Margin on all Sales in the Territory (the "Global GM") during the first Calendar Quarter of a given Calendar Year was US$[…***…] and Gross Margin on China Sales was US$[…***…], then the payment for the first Calendar Quarter based on Sales in the China Territory would be calculated as follows:

[…***…].

If the Global GM during the second Calendar Quarter of the same Calendar Year was US$20 million, and Gross Margin on China Sales was US$1 million, then the payment for the second Calendar Quarter based on China Sales would be calculated as follows:

[…***…].

(B) Royalty Tier Adjustment for Non-Commercial Clinical Reports. Additionally, notwithstanding anything to the contrary in the Ex-US Commercialization Agreement, the Non-Commercial Report GM Adjustment (as defined below) shall be added to the Global GM for the determination of royalty rate based on the "Tier of Calendar Year Gross Margin" under Section 8.3.2 of the Ex-US Commercialization Agreement. For clarity, the royalty rate applicable to the Global GM shall be determined based on the sum of (X) the Non-Commercial Report GM Adjustment, (Y) the China GM (as calculated in accordance with Section 3.4 (Gross Margin Calculation for the China Territory), and (Z) the Global GM exclusive of China GM. Nevertheless, the Non-Commercial Report GM Adjustment shall be excluded from Global GM in royalty calculation, i.e. Roche shall have no obligation under the Ex-US Commercialization Agreement and China Territory Agreement to pay to FMI royalties associated with the Non-Commercial Report GM Adjustment.

"Non-Commercial Report GM Adjustment" shall mean the sum of (i) […***…], (ii) […***…], and (iii) […***…].

4. Integral Part of the Ex-US Commercialization Agreement. Section 19 (Miscellaneous) of the Ex-US Commercialization Agreement is herein incorporated by reference. Except as otherwise expressly modified hereby, all of the terms and conditions in the Ex-US Commercialization Agreement remain in force and effect.

[Signature page follows.]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the Effective Date.

Foundation Medicine, Inc.

/s/ Troy M. Cox

_____

Name: Troy M. Cox

Title: President & CEO

Date: April 26, 2018

F. Hoffmann-La Roche Ltd

/s/ Stefan Arnold

_____

Name: Stefan Arnold

Title: Head Legal Pharma

Date: April 26, 2018

/s/ Dr. Urs Schleuniger

_____

Name: Dr. Urs. Schleuniger

Title: Head Chugai and Basel Alliance & Asset Management

Exhibit 31.1

CERTIFICATIONS

I, Troy Cox, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Foundation Medicine, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such 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 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 9, 2018

/s/ Troy Cox
Troy Cox
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Jason Ryan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Foundation Medicine, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such 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 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 9, 2018

/s/ Jason Ryan

Jason Ryan
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Each of the undersigned officers of Foundation Medicine, Inc. (the "Company") hereby certifies to his knowledge that the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2018 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 9, 2018

/s/ Troy Cox
Troy Cox
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 9, 2018

/s/ Jason Ryan
Jason Ryan
Chief Financial Officer
(Principal Financial Officer)