

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2017

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: 001-34705

Codexis, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

71-0872999

(I.R.S. Employer
Identification No.)

200 Penobscot Drive, Redwood City, California

(Address of principal executive offices)

94063

(Zip Code)

(650) 421-8100

(Registrant's telephone number, including area code)

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

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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the 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 31, 2017, there were 48,324,407 shares of the registrant's Common Stock, par value \$0.0001 per share, outstanding.

Codexis, Inc.
Quarterly Report on Form 10-Q
For the Quarter Ended June 30, 2017

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Codexis, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In Thousands, Except Per Share Amounts)

	June 30, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 28,817	\$ 19,240
Accounts receivable, net of allowances of \$421 at June 30, 2017 and December 31, 2016	7,802	5,924
Inventories	806	825
Prepaid expenses and other current assets	2,965	1,238
Total current assets	40,390	27,227
Restricted cash	1,576	1,624
Marketable securities	1,305	1,142
Property and equipment, net	2,969	2,155
Goodwill	3,241	3,241
Other non-current assets	303	259
Total assets	\$ 49,784	\$ 35,648
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 3,633	\$ 4,232
Accrued compensation	2,920	4,314
Other accrued liabilities	2,647	2,111
Deferred revenue	4,027	1,710
Total current liabilities	13,227	12,367
Deferred revenue, net of current portion	2,653	1,066
Financing obligation, net of current portion	419	—
Other long-term liabilities	2,848	3,116
Total liabilities	19,147	16,549
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, \$0.0001 par value per share; 5,000 shares authorized; none issued and outstanding	—	—
Common stock, \$0.0001 par value per share; 100,000 shares authorized; 48,324 shares and 41,255 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	5	4
Additional paid-in capital	336,339	311,164
Accumulated other comprehensive income (loss)	102	—
Accumulated deficit	(305,809)	(292,069)
Total stockholders' equity	30,637	19,099
Total liabilities and stockholders' equity	\$ 49,784	\$ 35,648

See accompanying notes to the unaudited condensed consolidated financial statements

Codexis, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)
(In Thousands, Except Per Share Amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Revenues:				
Product sales	\$ 6,600	\$ 3,280	\$ 12,186	\$ 7,020
Research and development revenues	3,391	12,064	5,391	15,598
Revenue sharing arrangement	356	658	740	1,380
Total revenues	10,347	16,002	18,317	23,998
Costs and operating expenses:				
Cost of product sales	3,790	2,221	6,792	4,710
Research and development	6,348	5,112	12,187	10,798
Selling, general and administrative	6,546	6,420	13,152	13,222
Total costs and operating expenses	16,684	13,753	32,131	28,730
Income (loss) from operations	(6,337)	2,249	(13,814)	(4,732)
Interest income	49	13	68	28
Other expenses, net	(34)	(49)	(12)	(46)
Income (loss) before income taxes	(6,322)	2,213	(13,758)	(4,750)
Benefit from income taxes	(42)	(26)	(18)	(15)
Net income (loss)	\$ (6,280)	\$ 2,239	\$ (13,740)	\$ (4,735)
Net income (loss) per share, basic	\$ (0.13)	\$ 0.06	\$ (0.31)	\$ (0.12)
Net income (loss) per share, diluted	\$ (0.13)	\$ 0.05	\$ (0.31)	\$ (0.12)
Weighted average common stock shares used in computing net income (loss) per share, basic	47,232	40,495	44,258	40,283
Weighted average common stock shares used in computing net income (loss) per share, diluted	47,232	41,568	44,258	40,283

See accompanying notes to the unaudited condensed consolidated financial statements

Codexis, Inc.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(Unaudited)
(In Thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net income (loss)	\$ (6,280)	\$ 2,239	\$ (13,740)	\$ (4,735)
Other comprehensive income (loss)				
Unrealized gain (loss) on marketable securities, net of tax benefit of \$60 for the three and six months ended June 30, 2017, and zero for the three and six months ended June 30, 2016, respectively	194	(344)	102	(434)
Other comprehensive income (loss)	194	(344)	102	(434)
Total comprehensive income (loss)	\$ (6,086)	\$ 1,895	\$ (13,638)	\$ (5,169)

See accompanying notes to the unaudited condensed consolidated financial statements

Codexis, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In Thousands)

	Six Months Ended June 30,	
	2017	2016
Operating activities:		
Net loss	\$ (13,740)	\$ (4,735)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Amortization of intangible assets	—	1,687
Depreciation and amortization of property and equipment	554	924
Gain on disposal of property and equipment	(3)	(27)
Income tax benefit related to marketable securities	(60)	—
Stock-based compensation	3,379	2,631
Changes in operating assets and liabilities:		
Accounts receivable, net	(1,879)	3,989
Inventories, net	19	(163)
Prepaid expenses and other current assets	(1,824)	190
Restricted cash	(27)	—
Other assets	(44)	27
Accounts payable	(446)	(492)
Accrued compensation	(1,394)	(488)
Other accrued liabilities	271	601
Long term lease incentive	(212)	(212)
Other long term liabilities	(56)	—
Deferred revenue	3,904	(3,745)
Net cash provided by (used in) operating activities	<u>(11,558)</u>	<u>187</u>
Investing activities:		
Purchase of property and equipment	(680)	(474)
Proceeds from disposal of property and equipment	3	27
Changes in restricted cash	75	—
Net cash used in investing activities	<u>(602)</u>	<u>(447)</u>
Financing activities:		
Proceeds from exercises of stock options	142	837
Proceeds from issuance of common stock, net of issuance costs	23,291	—
Principal payments on capital lease obligations	(60)	—
Taxes paid related to net share settlement of equity awards	(1,636)	(1,498)
Net cash provided by (used in) financing activities	<u>21,737</u>	<u>(661)</u>
Net increase (decrease) in cash and cash equivalents	9,577	(921)
Cash and cash equivalents at the beginning of the period	19,240	23,273
Cash and cash equivalents at the end of the period	<u>\$ 28,817</u>	<u>\$ 22,352</u>
Supplemental disclosure of cash flow information:		
Interest paid	\$ 117	\$ —
Supplemental noncash financing activities:		
Equipment acquired under capital leases	\$ 840	\$ —

See accompanying notes to the unaudited condensed consolidated financial statements

**Notes to Condensed Consolidated Financial Statements
(Unaudited)**

Note 1. Description of Business

In these notes to the consolidated financial statements, the “Company,” “we,” “us,” and “our” refers to Codexis, Inc. and its subsidiaries on a consolidated basis.

We discover, develop and sell proteins that deliver value to our clients in a growing set of industries. We view proteins as a vast untapped source of value-creating materials, and we are using our proven technologies, which we have been continuously improving over our fifteen-year history, to commercialize an increasing number of novel proteins, both as proprietary Codexis products and in partnership with our customers.

Many companies have historically used naturally occurring proteins to produce or enhance goods used in everyday life. Despite the growing number of commercial applications of naturally occurring proteins across many industries, the inherent limitations of naturally-occurring proteins frequently restrict their commercial use. Through the application of our proprietary CodeEvolver® protein engineering technology platform, we are able to engineer novel proteins to overcome these restrictions, thereby adding value or opening up new prospects for our existing and potential customers’ products, processes or businesses. We have developed new proteins that are significantly more stable and/or active in our customers’ commercial applications than proteins derived from nature.

We are a pioneer in the harnessing of computational technologies to drive biology advancements. Over the last fifteen years, we have made substantial investments in the development of our CodeEvolver® protein engineering technology platform, the primary source of our competitive advantage. Our technology platform is powered by proprietary, artificial intelligence-based, computational algorithms that rapidly mine our large and continuously growing library of protein variants’ performance attributes. These computational outputs enable increasingly reliable predictions for next generation protein variants to be engineered, enabling delivery of targeted performance enhancements in a time-efficient manner. In addition to its computational prowess, our CodeEvolver® protein engineering technology platform integrates additional modular competencies, including robotic high-throughput screening and genomic sequencing, organic chemistry and process development, which are all coordinated to create our novel protein innovations.

We use our CodeEvolver® protein engineering technology platform to engineer custom enzymes. Most of our custom enzymes are intended for use as biocatalysts or protein catalysts. In simple terms, our protein catalysts can accelerate and/or improve yields of chemical reactions. We use our CodeEvolver® protein engineering technology platform to develop novel enzymes that enable industrial biocatalytic reactions and fermentations. Our technology platform has enabled commercially viable products and processes for the manufacture of pharmaceutical intermediates and active ingredients and fine chemicals.

Our approach to develop commercially viable biocatalytic manufacturing processes begins by conceptually designing the most cost-effective and practical process for a targeted product. We then develop optimized protein catalysts to enable that process design, using our CodeEvolver® protein engineering platform technology. Engineered protein catalyst candidates, many thousands for each protein engineering project, are then rapidly screened and validated in high throughput under relevant manufacturing operating conditions. This approach results in an optimized protein catalyst enabling cost-efficient processes that typically are relatively simple to run in conventional manufacturing equipment. This also allows for the efficient technical transfer of our process to our manufacturing partners.

The successful embodiment of our CodeEvolver® protein engineering technology platform in commercial manufacturing processes requires well-integrated expertise in a number of technical disciplines. In addition to those directly involved in practicing our CodeEvolver® protein engineering platform technology, such as molecular biology, enzymology, microbiology, cellular engineering, metabolic engineering, bioinformatics, biochemistry and high throughput analytical chemistry, our process development projects also involve integrated expertise in organic chemistry, chemical process development, chemical engineering, fermentation process development and fermentation engineering. Our integrated, multi-disciplinary approach to biocatalyst and process development is a critical success factor for our company.

We initially commercialized our CodeEvolver® protein engineering technology platform and products in the pharmaceuticals market, which remains our primary business focus. Our customers, which include several large global pharmaceutical companies, use our technology, products and services in their manufacturing processes and process development.

We have also used the technology to develop protein catalysts for use in the fine chemicals market. The fine chemicals market consists of several large market verticals, including food and food ingredients, animal feed, flavors, fragrances and agricultural chemicals.

More recently, we are also using the CodeEvolver® protein engineering technology platform to develop early stage, novel biotherapeutic product candidates, both for our customers and for our own business, most notably our lead program for the potential treatment of phenylketonuria ("PKU") disease in humans. PKU is an inherited metabolic disorder in which the enzyme that converts the essential amino acid phenylalanine into tyrosine is deficient.

We have also used our technology to develop an enzyme for customers using next generation sequencing ("NGS") and polymerase chain reaction ("PCR/qPCR") for *in vitro* molecular diagnostic and genomic research applications. Beta testing for the enzyme was initiated in the second quarter of 2017.

Note 2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") and the applicable rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial information. Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. These interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2016. The condensed consolidated balance sheet at December 31, 2016 has been derived from the audited consolidated financial statements at that date, but does not include all disclosures, including notes, required by GAAP for complete financial statements.

The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly our financial position as of June 30, 2017 and results of our operations and comprehensive income (loss) for the three and six months ended June 30, 2017 and 2016, and cash flows for the six months ended June 30, 2017 and 2016. The interim results are not necessarily indicative of the results for any future interim period or for the entire year. Certain prior period amounts have been reclassified to conform to current period presentation.

The unaudited interim condensed consolidated financial statements include Codexis, Inc. and its wholly owned subsidiaries in the United States, India and the Netherlands. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent liabilities at the date of the condensed consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. We regularly assess these estimates which primarily affect revenue recognition, accounts receivable, inventories, the valuation of investment securities and marketable securities, goodwill arising out of business acquisitions, accrued liabilities, stock awards and the valuation allowances associated with deferred tax assets. Actual results could differ from those estimates and such differences may be material to the condensed consolidated financial statements.

Segment Reporting

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our Chief Executive Officer. The Chief Executive Officer reviews financial information presented on a consolidated basis for purposes of evaluating financial performance. We have one business activity and there are no segment managers who are held accountable for operations, operating results beyond revenue goals or plans for levels or components below the consolidated unit level. Accordingly, we have a single reportable segment.

Revenue Recognition

We recognize revenues from the sale of our products, research and development agreements and revenue sharing arrangements. Revenue is recognized when the related costs are incurred and the four basic criteria of revenue recognition are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is

fixed or determinable; and (4) collectability is reasonably assured. Where the revenue recognition criteria are not met, we defer the recognition of revenue by recording deferred revenue until such time that all criteria of revenue recognition are met.

We account for revenues from multiple element arrangements, such as license and platform technology transfer agreements and collaborative arrangements in which a licensee may purchase several deliverables, in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Subtopic 605-25, "Multiple Element Arrangements." For new or materially amended multiple element arrangements, we identify the deliverables at the inception of the arrangement and each deliverable within a multiple deliverable revenue arrangement is accounted for as a separate unit of accounting if both of the following criteria are met: (1) the delivered item or items have value to the customer on a standalone basis and (2) for an arrangement that includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Revenue allocated to each element is then recognized based on when the basic four revenue recognition criteria are met for each element.

Where a portion of non-refundable up-front fees or other payments received are allocated to continuing performance obligations under the terms of a collaborative arrangement, they are recorded as deferred revenue and recognized as revenue ratably over the term of our estimated performance period under the agreement. We determine the estimated performance periods, and they are periodically reviewed based on the progress of the related program. The effect of any change made to an estimated performance period and, therefore, to revenue recognized, would occur on a prospective basis in the period that the change was made.

Product Sales

Product sales consist of sales of protein catalysts, pharmaceutical intermediates, and Codex[®] Biocatalyst Panels and Kits. Product sales are recognized once passage of title and risk of loss has occurred and contractually specified acceptance criteria, if any, have been met, provided all other revenue recognition criteria have also been met. Shipping and handling costs charged to customers are recorded as revenue.

Research and Development

Research and development agreements typically provide us with multiple revenue streams, including research services fees for full time employee ("FTE") research services, up-front licensing fees, technology access fees, contingent payments upon achievement of contractual criteria, and royalty fees based on the licensees' product sales or cost savings achieved by our customers. We perform research and development activities as specified in each respective customer agreement. Payments for services received are not refundable. Certain research agreements are based on a contractual reimbursement rate per FTE working on the project. We recognize revenues from research services as those services are performed over the contractual performance periods. When up-front payments are combined with FTE services in a single unit of accounting, we recognize the up-front payments as revenue using the proportionate performance method of revenue recognition based upon the actual amount of research labor hours incurred relative to the amount of the total expected labor hours to be incurred by us, up to the amount of cash received. In cases where the planned levels of research services fluctuate substantially over the research term, we are required to make estimates of the total hours required to perform our obligations.

We recognize revenues from non-refundable, up-front license fees or technology access payments that are not dependent on any future performance by us when such amounts are earned. If we have continuing obligations to perform under the arrangement, such fees are recorded as deferred revenues and recognized over the estimated period of performance. Estimated performance periods are periodically reviewed based on the progress of the related program. The effect of any change made to an estimated performance period, and therefore to revenue recognized, would occur on a prospective basis in the period that the change was made.

A payment that is contingent upon the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is an event (i) that can only be achieved based in whole or in part on either our performance or on the occurrence of a specific outcome resulting from our performance, (ii) for which there is, as of the date the arrangement is entered into, substantive uncertainty that the event will be achieved and (iii) results in additional payments being due to us. Milestones are considered substantive when the consideration earned from the achievement of the milestone (i) is commensurate with either our performance to achieve the milestone or the enhancement of the value of the item delivered as a result of a specific outcome resulting from its performance, (ii) relates solely to past performance and (iii) is reasonable relative to all deliverable and payment terms in the arrangement.

We recognize revenues from other contingent payments based on the passage of time or when earned as the result of a customer's performance in accordance with contractual terms and when such payments can be reasonably estimated and collectability of such payments is reasonably assured.

We recognize revenues from royalties based on licensees' sales of our products or products using our technologies. Royalties are recognized as earned in accordance with the contractual terms when royalties from licensees can be reasonably estimated and collectability is reasonably assured. For the majority of our royalty revenue, estimates are made using notification of the sale of licensed products from the licensees.

Revenue Sharing Arrangement

We recognize revenues from a revenue sharing arrangement based upon sales of licensed products by our revenue sharing partner Exela PharmSci, Inc. ("Exela") (see Note 11, "Related Party Transactions"). We recognize revenues net of product and selling costs upon notification from our revenue sharing partner of our portion of net profit based on the contractual percentage from the sale of licensed product.

Sales Allowances

Sales allowances primarily relate to product returns and prompt pay sales discounts and are recorded in the same period that the related revenues are recognized, resulting in a reduction in product sales.

Cost of Product Sales

Cost of product sales comprises both internal and third party fixed and variable costs including materials and supplies, labor, facilities and other overhead costs associated with our product sales. Shipping costs are included in our cost of product sales. Such charges were not significant in any of the periods presented.

Cost of Research and Development Services

Cost of research and development services related to FTE services under research and development agreements approximate the research funding over the term of the respective agreements and are included in research and development expense. Costs of services provided under license and platform technology transfer agreements are included in research and development expenses and are expensed in the periods in which such costs are incurred.

Research and Development Expenses

Research and development expenses consist of costs incurred for internal projects, partner-funded collaborative research and development activities, as well as license and platform technology transfer agreements, as mentioned above. These costs include our direct and research-related overhead expenses, which include salaries and other personnel-related expenses (including stock-based compensation), occupancy-related costs, supplies, depreciation of facilities and laboratory equipment and amortization of acquired technologies, as well as external costs, and are expensed as incurred. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred.

Stock-Based Compensation

We use the Black-Scholes-Merton option pricing model to estimate the fair value of options granted under our equity incentive plans. The Black-Scholes-Merton option pricing model requires the use of assumptions, including the expected term of the award and the expected stock price volatility. The expected term is based on historical exercise behavior on similar awards, giving consideration to the contractual terms, vesting schedules and expectations of future employee behavior. We use historical volatility to estimate expected stock price volatility. The risk-free rate assumption is based on United States Treasury instruments whose terms are consistent with the expected term of the stock options. The expected dividend assumption is based on our history and expectation of dividend payouts.

Restricted Stock Units ("RSUs"), Restricted Stock Awards ("RSAs"), performance vesting options ("PBOs"), and performance-contingent restricted stock units ("PSUs") are measured based on the fair market values of the underlying stock on the dates of grant. The vesting of PBOs and PSUs awarded is conditioned upon the attainment of one or more performance objectives over a specified period and upon continued employment through the applicable vesting date. At the end of the performance period, shares of stock subject to the PBOs and PSUs vest based upon both the level of achievement of performance objectives within the performance period and continued employment through the applicable vesting date.

Stock-based compensation expense is calculated based on awards ultimately expected to vest and is reduced for estimated forfeitures at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The estimated annual forfeiture rates for stock options, RSUs, PSUs, PBOs, and RSAs are based on historical forfeiture experience.

The estimated fair value of stock options, RSUs and RSAs are expensed on a straight-line basis over the vesting term of the grant and the estimated fair value of PSUs and PBOs are expensed using an accelerated method over the term of the award once management has determined that it is probable that the performance objective will be achieved. Compensation expense is recorded over the requisite service period based on management's best estimate as to whether it is probable that the shares awarded are expected to vest. Management assesses the probability of the performance milestones being met on a continuous basis.

We have not recognized, and do not expect to recognize in the near future, any excess income tax benefits related to employee stock-based compensation expense as a result of the full valuation allowance on our deferred tax assets including deferred tax assets related to net operating loss carryforwards.

Foreign Currency Translation

The United States dollar is the functional currency for our operations outside the United States. Accordingly, nonmonetary assets and liabilities originally acquired or assumed in other currencies are recorded in United States dollars at the exchange rates in effect at the date they were acquired or assumed. Monetary assets and liabilities denominated in other currencies are translated into United States dollars at the exchange rates in effect at the balance sheet date. Translation adjustments are recorded in other expense in the accompanying condensed consolidated statements of operations. Gains and losses realized from non-U.S. dollar transactions, including intercompany balances not considered as permanent investments, denominated in currencies other than an entity's functional currency are included in other expense in the accompanying condensed consolidated statements of operations.

Cash and Cash Equivalents

We consider all highly liquid investments with maturity dates of three months or less at the date of purchase to be cash equivalents. Our cash and cash equivalents consist of cash on deposit with banks and money market funds. The majority of cash and cash equivalents is maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits. Cash and cash equivalents totaled \$28.8 million at June 30, 2017 and were comprised of cash of \$18.1 million and money market funds of \$10.7 million. At December 31, 2016, cash and cash equivalents totaled \$19.2 million and were comprised of cash of \$8.0 million and money market funds of \$11.2 million.

Restricted Cash

In 2016, we began the process of liquidating our Indian subsidiary. The local legal requirements for liquidation required us to maintain our subsidiary's cash balance in an account managed by a legal trustee to satisfy our financial obligations. This balance is recorded as non-current restricted cash on the consolidated balance sheets and totaled \$0.9 million at June 30, 2017 and \$0.8 million at December 31, 2016.

In addition, pursuant to the terms of the lease agreement for our Redwood City, CA facilities, our letters of credit are collateralized by deposit balances of \$0.7 million as of June 30, 2017 and \$0.8 million as of December 31, 2016, which is recorded as non-current restricted cash on the consolidated balance sheets (see Note 10, "Commitments and Contingencies" for details).

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using a weighted-average approach, assuming full absorption of direct and indirect manufacturing costs, or based on cost of purchasing from our vendors. If inventory costs exceed expected net realizable value due to obsolescence or lack of demand, valuation adjustments are recorded for the difference between the cost and the expected net realizable value. These valuation adjustments are determined based on significant estimates.

Marketable Securities

We invest in equity securities and we classify those investments as available-for-sale. These securities are carried at estimated fair value (see Note 5, "Cash Equivalents and Marketable Securities") with unrealized gains and losses included in accumulated other comprehensive income in stockholders' equity. Available-for-sale equity securities with remaining maturities of greater than one year or which we currently do not intend to sell are classified as long-term.

We review several factors to determine whether a loss is other-than-temporary. These factors include, but are not limited to, the intent and ability to retain the investment in the issuer for a period of time sufficient to allow for any anticipated recovery in market value, the length of time and the extent to which the market value of the investment has been less than cost and the

financial condition and near-term prospects of the issuer. Unrealized losses are charged against "Other expense" when a decline in fair value is determined to be other-than-temporary. No charge for the other-than-temporary impairment has been recorded in any of the periods presented.

Amortization of purchase premiums and accretion of purchase discounts and realized gains and losses of debt securities are included in interest income. The cost of securities sold is based on the specific identification method.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, we utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible and we consider counterparty credit risk in our assessment of fair value. Carrying amounts of financial instruments, including cash and cash equivalents, accounts receivable, prepaid expenses and other current assets, restricted cash, marketable securities, accounts payable, accrued compensation, deferred revenue, and other accrued liabilities, approximate their fair values as of the balance sheet dates because of their generally short maturities.

The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, giving the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1: Inputs that are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.
- Level 2: Inputs (other than quoted prices included in Level 1) that are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities and which reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date.

Concentrations of Credit Risk

Financial instruments that potentially subject us to significant concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable, marketable securities, and restricted cash. Cash that is not required for immediate operating needs is invested principally in money market funds. Cash and cash equivalents are invested through banks and other financial institutions in the United States, India and Netherlands. Such deposits in those countries may be in excess of insured limits.

Impairment of Long-Lived Assets

Our long-lived assets consist of property and fully amortized acquired technology. We test property for recoverability when events or changes in circumstances indicate that its carrying value may not be recoverable. Factors we consider in deciding when to perform an impairment review include significant under-performance of our products in relation to expectations combined with a history of losses or a forecast of continuing losses associated with the use of that property, significant adverse changes in the business climate or legal factors, trends, and significant changes accumulation of costs in excess of the amount originally expected for the acquisition or construction of the property; loss of significant customers or partners; or the current expectation that the property will more likely than not be sold or disposed of significantly before the end its estimated useful life.

We measure the recoverability of property by comparing its carrying value to estimated future undiscounted net cash flows arising from that property. If the property's carrying value is not recoverable through the related undiscounted cash flows, it is considered to be impaired. We measure the impairment by comparing the difference between the property's carrying value and its estimated fair value. During the year ended December 31, 2016 and the six months ended June 30, 2017, we did not identify any indicators of potential impairment of our property and concluded that there was no impairment.

Goodwill

We determined that we operate in one segment and reporting unit under the criteria in ASC 280, "Segment Reporting." Accordingly, our review of goodwill impairment indicators is performed at the consolidated level. We review goodwill impairment annually in the fourth quarter of each fiscal year and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable.

The goodwill impairment test consists of a two-step process. The first step of the goodwill impairment test used to identify potential impairment compares the fair value of the reporting unit to carrying value. If the fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired, and the second step of the impairment test is not required.

We use our market capitalization as an indicator of fair value. We believe that because our reporting unit is publicly traded, the ability of a controlling stockholder to benefit from synergies and other intangible assets that arise from control might cause the fair value of our reporting unit as a whole to exceed its market capitalization. Therefore, we believe that the fair value measurement need not be based solely on the quoted market price of an individual share of our common stock, but also can consider the impact of a control premium in measuring the fair value of its reporting unit.

If we were to use an income approach, it would establish a fair value by estimating the present value of our projected future cash flows expected to be generated from our business. The discount rate applied to the projected future cash flows to arrive at the present value would be intended to reflect all risks of ownership and the associated risks of realizing the stream of projected future cash flows. Our discounted cash flow methodology would consider projections of financial performance for a period of several years combined with an estimated residual value. The most significant assumptions we would use in a discounted cash flow methodology are the discount rate, the residual value and expected future revenue, gross margins and operating costs, along with considering any implied control premium.

Should our market capitalization be less than total stockholders' equity as of our annual test date or as of any interim impairment testing date, we would also consider market comparables, recent trends in our stock price over a reasonable period and, if appropriate, use an income approach to determine whether the fair value of our reporting unit is greater than the carrying amount.

The second step, if required, compares the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. If the carrying amount of the reporting unit's goodwill exceeds its implied fair value, an impairment charge is recognized in an amount equal to that excess. Implied fair value is the excess of the fair value of the reporting unit over the fair value of all identified assets and liabilities. We base our fair value estimates on assumptions we believe to be reasonable. Actual future results may differ from those estimates.

Goodwill was tested for impairment in the fourth quarter of 2016. We determined that the fair value of the reporting unit exceeded the carrying value and no impairment existed. Based on the results obtained, we concluded there was no impairment of our goodwill as of December 31, 2016. During the six months ended June 30, 2017, we did not identify any indicators of potential impairment of goodwill or new information that would have a material impact on the forecast or the impairment analysis prepared as of December 31, 2016.

Income Taxes

We account for income taxes using the asset and liability approach. Under this approach, deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements using enacted tax rates and tax laws in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are provided against deferred tax assets that are not likely to be realized.

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of tax credits, benefits and deductions and in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expenses for tax and financial statement purposes. Significant changes to these estimates may result in an increase or decrease to our tax provision in a subsequent period.

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will be realized on a jurisdiction by jurisdiction basis. The ultimate realization of deferred tax assets is dependent upon the generation of taxable income in the future. We have recorded a deferred tax asset in jurisdictions where ultimate realization of deferred tax assets is more likely than not to occur.

We make estimates and judgments about future taxable income that are based on assumptions that are consistent with our plans and estimates. Should the actual amounts differ from our estimates, the amount of our valuation allowance could be materially impacted. Any adjustment to the deferred tax asset valuation allowance would be recorded in the income statement for the periods in which the adjustment is determined to be required.

We account for uncertainty in income taxes as required by the provisions of ASC Topic 740, "Income Taxes," which clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to estimate and measure the tax benefit as the largest amount that is more than 50% likely of being realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as this requires us to determine the probability of various possible outcomes. We consider many factors when evaluating and estimating our tax positions and tax benefits, which may require periodic adjustments and may not accurately anticipate actual outcomes. We recognize interest and penalties as a component of our income tax expense.

The Tax Reform Act of 1986 and similar state provisions limit the use of net operating loss carryforwards in certain situations where equity transactions result in a change of ownership as defined by Internal Revenue Code Section 382. In the event we should experience such a change of ownership, utilization of our federal and state net operating loss carryforwards could be limited. We maintain a full valuation allowance against net deferred tax assets as we believe that it is more likely than not that the majority of deferred tax assets will not be realized.

Benefit from income taxes was \$42,000 and \$18,000 for the three and six months ended June 30, 2017, respectively. Benefit from income taxes was \$26,000 and \$15,000 for the three and six months ended June 30, 2016, respectively.

Recently Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standards setting bodies that are adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on our consolidated financial statements upon adoption.

In May 2014, the FASB issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." The standard outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either the retrospective or cumulative effect transition method. The guidance supersedes our existing revenue recognition standard and requires revenue to be recognized when promised goods or services are transferred to customers in amounts that reflect the consideration we expect to be entitled to in exchange for those goods or services. The guidance requires expanded disclosures regarding revenue and contracts with customers. The guidance permits two implementation approaches: (i) retrospective application of the standard with restatement of prior years and (ii) retrospective application of the standard with application of certain practical expedient provisions. We intend to elect a modified retrospective method on adoption of this guidance with the initial application in January 2018. The modified retrospective method requires us to apply the new revenue guidance to the financial results in the year of adoption, concurrently recording a cumulative-effect adjustment to the opening balance of retained earnings. The opening adjustment to retained earnings will be determined on the basis of the impact of the new guidance's application on contracts that were not completed as of the date of initial application.

We are reviewing the impact of this guidance across our revenue-related activities and are in the processing of determining the impact of the new guidance on our revenue recognition practices, business process and internal controls, and on our consolidated financial statements. We enter into research and development agreements which may contain multiple performance obligations. Under the new guidance, an agreement's transaction price will be allocated to all separately identifiable performance obligations in the arrangement and revenue will be recognized as we satisfy each performance obligation according to our evaluation of the timing our customer obtained control of deliverables according to the terms of the agreement. Revenue recognition related to product sales will be recognized once passage of title and risk of loss has occurred, contractually specified acceptance criteria are met, and collectability is probable. Variable revenue from revenue sharing arrangements will be recognized when the consideration becomes probable based on notification from our revenue sharing partners. The adoption of this guidance is expected to have a material impact on our consolidated financial statement disclosures and disclosure controls and will include qualitative and quantitative information about contracts with customers, and significant judgments and changes in judgments made in applying the guidance to contracts, and assets recognized from costs to obtain or fulfill contracts. We continue to monitor additional changes, modifications, clarifications or interpretations undertaken by the FASB, which may impact our current conclusions. In addition, we continue to monitor other changes, such as

changes in our business, new collaboration arrangements, business combinations, etc., which may impact our current conclusions prior to the adoption date.

In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments-Overall: Recognition and Measurement of Financial Assets and Financial Liabilities." This guidance principally affects accounting standards for equity investments, financial liabilities where the fair value option has been elected, and the presentation and disclosure requirements for financial instruments. Upon the effective date of the new guidance, all equity investments in unconsolidated entities, other than those accounted for using the equity method of accounting, will generally be measured at fair value through earnings. There will no longer be an available-for-sale classification and therefore, no changes in fair value will be reported in other comprehensive income (loss) for equity securities with readily determinable fair values. The new guidance on the classification and measurement will be effective for public business entities in fiscal years beginning after December 15, 2017, including interim periods within those fiscal years and early adoption is permitted. The Company is in the process of evaluating the impact of the adoption of ASU 2016-01 on the consolidated financial statements and currently anticipates the new guidance would impact its consolidated statements of operations and consolidated statements of comprehensive income as the Company's marketable equity securities, are currently classified as available-for-sale and are reported at fair value, with unrealized gains and losses, net of tax, recorded in accumulated other comprehensive income.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which replaces prior lease guidance (Topic 840.) This guidance establishes a right-of-use ("ROU") model that requires a lessee to record a ROU asset and lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statement of Operations. The guidance also eliminates today's real estate-specific provisions for all entities. For lessors, the guidance modifies the classification criteria and the accounting for sales-type and direct financing leases. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. Entities have the option to use certain practical expedients. Full retrospective application is prohibited. This ASU is effective for public business entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. We are currently evaluating the impact of this accounting standards updated on our Consolidated Financial Statements. We expect that upon adoption, ROU assets and lease liabilities will be recognized in the balance sheet in amounts that will be material.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," which amends the FASB's guidance on the impairment of financial instruments. The ASU adds to GAAP an impairment model (known as the "current expected credit loss model") that is based on expected losses rather than incurred losses. ASU 2016-13 is effective for annual reporting periods ending after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The adoption of ASU 2016-13 is not expected to have a material impact on our consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments," which provides the FASB's guidance on certain cash flow statements items. ASU 2016-15 is effective for fiscal reporting periods beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted including adoption in an interim period. The adoption of ASU 2016-15 is not expected to have a material impact on our consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU No. 2016-18, "Statement of Cash Flows (Topic 230) Restricted Cash a consensus of the FASB Emerging Issues Task Force." The standard requires restricted cash and restricted cash equivalents to be included with cash and cash equivalents on the statement of cash flows. The new standard is expected to be effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, with early adoption permitted. We are currently evaluating the impact of adopting ASU 2016-18 on our consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-01 "Business Combinations (Topic 805): Clarifying the Definition of a Business". The guidance requires the use of a framework to determine whether a set of assets and activities constitutes an acquired or a sold business. The guidance is effective January 1, 2018 and must be adopted prospectively. Early adoption is encouraged.

In January 2017, the FASB issued ASU No. 2017-04, "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment." The amendments eliminate Step 2 from the goodwill impairment test. The annual, or interim, goodwill impairment test is performed by comparing the fair value of a reporting unit with its carrying amount. An impairment charge should be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. In addition, income tax effects

from any tax deductible goodwill on the carrying amount of the reporting unit should be considered when measuring the goodwill impairment loss, if applicable. The amendments also eliminate the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. The new standard is expected to be effective for fiscal years beginning after December 15, 2019, with early adoption permitted. We are currently evaluating the impact of adopting ASU 2017-04 on our consolidated financial statements and related disclosures.

In May 2017, the FASB issued ASU No. 2017-09, "Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting." The amendments provide guidance on determining which changes to the terms and conditions of share-based payment awards require an entity to apply modification accounting under Topic 718. The new standard is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017 with early adoption permitted. We are currently evaluating the impact of adopting ASU 2017-09 on our consolidated financial statements and related disclosures.

Note 3. Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding, less RSAs subject to forfeiture. Diluted net income (loss) per share is computed by dividing net income (loss) by the weighted average number of shares of common stock outstanding plus all additional common stock shares that would have been outstanding, assuming dilutive potential common stock shares had been issued for other dilutive securities. For periods of net loss, diluted and basic net loss per share are identical since potential common stock shares are excluded from the calculation, as their effect was anti-dilutive.

The following table sets forth the competition of basic and diluted net income (loss) per share during three and six months ended June 30, 2017 and 2016 (in thousands, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Numerator:				
Net income (loss)	\$ (6,280)	\$ 2,239	\$ (13,740)	\$ (4,735)
Denominator:				
Weighted average common stock shares used in computing net income (loss) per share, basic	47,232	40,495	44,258	40,283
Effect of dilutive shares	—	1,073	—	—
Weighted average common stock shares used in computing net income (loss) per share, diluted	47,232	41,568	44,258	40,283
Net income (loss) per share, basic	(0.13)	\$ 0.06	(0.31)	\$ (0.12)
Net income (loss) per share, diluted	(0.13)	\$ 0.05	(0.31)	\$ (0.12)

Anti-Dilutive Securities

The following shares were not considered in the computation of diluted net income (loss) per share because their effect was anti-dilutive (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Shares of common stock issuable pursuant to equity awards outstanding under the Equity Incentive Plan	7,621	2,574	7,621	5,645
Shares of common stock issuable upon exercise of outstanding warrants	73	73	73	73
Total shares excluded as anti-dilutive	7,694	2,647	7,694	5,718

Note 4. Collaborative Arrangements

GSK Platform Technology Transfer, Collaboration and License Agreement

In July 2014, we entered into a CodeEvolver® platform technology transfer collaboration and license agreement (the "GSK CodeEvolver® Agreement") with GlaxoSmithKline ("GSK"). Pursuant to the terms of the agreement, we granted GSK a non-exclusive license to use the CodeEvolver® protein engineering technology platform to develop novel enzymes for use in the manufacture of GSK's pharmaceutical and health care products.

We received a \$6.0 million up-front licensing fee upon signing the GSK CodeEvolver® Agreement and subsequently a \$5.0 million non-creditable, non-refundable milestone payment upon achievement of the first milestone in 2014. In September 2015, we achieved the second milestone of the agreement and earned milestone revenue of \$6.5 million. In April 2016, we completed the full transfer of the CodeEvolver® protein engineering platform technology and earned milestone revenue of \$7.5 million. We also have the potential to receive additional back end milestone payments that range from \$5.75 million to \$38.5 million per project based on GSK's successful application of the licensed technology. The back end milestone payments are not deemed substantive milestones due to the fact that the achievement of the event underlying the payment predominantly relates to GSK's performance of future development and commercialization activities.

In the third quarter of 2016, we earned and recognized the first contingent payment under the agreement related to the development of an enzyme for an already-commercialized product. In addition, we are eligible to receive royalties based on net sales, if any, of a limited set of products developed by GSK using the CodeEvolver® protein engineering technology platform.

The term of the GSK CodeEvolver® Agreement continues, unless earlier terminated, until the expiration of all payment obligations under the GSK CodeEvolver® Agreement. GSK can terminate the GSK CodeEvolver® Agreement by providing 90 days written notice to us.

Under the GSK CodeEvolver® Agreement, the significant deliverables were determined to be the license, platform technology transfer, and contingent obligation to supply GSK with enzymes manufactured by us at GSK's expense. We determined that the license did not have stand-alone value. In addition, we determined that the license and the platform technology transfer and our participation in joint steering committee activities in connection with the platform technology transfer represent a single unit of accounting. Our participation in the joint steering committee does not represent a separate unit of accounting because GSK could not negotiate for and/or acquire these services from other third parties and our participation on the joint steering committee is coterminous with the technology transfer period. Amounts to be received under the supply arrangement, if any, described above will be recognized as revenue to the extent GSK purchases enzymes from us.

The up-front license fee of \$6.0 million was recognized ratably over the technology transfer period of three years from July 2014. We recognized all deferred revenue from GSK upon completion of the technology transfer in April 2016. We recognized none of the up-front license fees for the three and six months ended June 30, 2017, compared to \$2.5 million and \$3.0 million for the three and six months ended June 30, 2016, respectively, as research and development revenue.

Merck Platform Technology Transfer and License Agreement

In August 2015, we entered into a CodeEvolver® platform technology transfer and license agreement (the "Merck CodeEvolver® Agreement") with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc. (collectively, "Merck"). The Merck CodeEvolver® Agreement allows Merck to use the CodeEvolver® protein engineering technology platform in the field of human and animal healthcare.

Under the terms of the Merck CodeEvolver® Agreement, we granted to Merck a non-exclusive worldwide license to use the CodeEvolver® protein engineering technology platform to research, develop and manufacture novel enzymes for use by Merck in its internal research programs ("Merck Non-Exclusive Field"). The license to Merck is exclusive for the research, development and manufacture of novel enzymes for use by Merck in the chemical synthesis of therapeutic products owned or controlled by Merck ("Merck Exclusive Field"). Merck has the right to grant sublicenses to affiliates of Merck and, in certain limited circumstances, to third parties. We also granted to Merck a license to make or have made products manufactured using the CodeEvolver® protein engineering technology platform with a right to grant sublicenses solely to affiliates of Merck, contract manufacturing organizations and contract research organizations. The manufacturing license is exclusive in the Merck Exclusive Field and non-exclusive in the Merck Non-Exclusive Field. The licenses are subject to certain limitations based on pre-existing contractual obligations that apply to the technology and intellectual property that are the subject of the license grants. The licenses do not permit the use of the CodeEvolver® protein engineering technology platform to discover any therapeutic enzyme, diagnostic product or vaccine. In addition, Merck is prohibited from using the CodeEvolver® protein engineering technology platform to develop or produce enzymes or any other compounds for or on behalf of any third parties

except in a very limited manner when Merck divests a therapeutic product that is manufactured using an enzyme developed using the CodeEvolver® protein engineering technology platform.

Under the Merck CodeEvolver® Agreement, we transferred the CodeEvolver® protein engineering technology platform to Merck over the period from August 2015 through September 2016. As part of this technology transfer, we provided to Merck our proprietary enzymes, proprietary protein engineering protocols and methods, and proprietary software algorithms.

The licenses to Merck are granted under patents, patent applications and know-how that we own or control as of the effective date of the Merck CodeEvolver® Agreement and that cover the CodeEvolver® protein engineering technology platform. Any improvements to the CodeEvolver® protein engineering technology platform during the technology transfer period are also included in the license grants from Codexis to Merck. Following the technology transfer period, Merck can exercise annual options that, upon payment of certain option fees, would extend Merck's license to include certain improvements to the CodeEvolver® protein engineering technology platform that arise during the three-year period that begins at the end of the technology transfer period.

Under the Merck CodeEvolver® Agreement, we will own any improvements to our protein engineering methods, processes and algorithms that arise and any enzyme technology or process technology that are developed during a technology transfer project, an evolution program or additional services. Merck will own (the "Merck-Owned Technology") (a) any enzyme technology that is developed solely by Merck under the Merck CodeEvolver® Agreement using the CodeEvolver® protein engineering technology platform (a "Project Enzyme") and (b) the methods of use of any Project Enzyme or any enzyme developed jointly by Merck and us using the CodeEvolver® protein engineering technology platform. Merck granted to us a worldwide, non-exclusive, fully paid-up, royalty-free license, with the right to grant sublicenses, to use the Merck-Owned Technology outside of the Merck Exclusive Field.

For each API that Merck manufactures using an enzyme developed with the CodeEvolver® protein engineering technology platform, we will have a right of first refusal to supply Merck with the enzyme used to manufacture the API if Merck outsources the supply of the enzyme. Our right of first refusal applies during the period that begins on the completion of a phase III clinical trial for the product containing the API and ends five years following regulatory approval for such product.

The Merck CodeEvolver® Agreement has a term that continues, unless earlier terminated, until the expiration of all payment obligations under the agreement. Merck may terminate the Merck CodeEvolver® Agreement by providing 90 days written notice to us. We can terminate the Merck CodeEvolver® Agreement by providing 30 days written notice to Merck if we determine, pursuant to our contractual audit rights under the Merck CodeEvolver® Agreement, that Merck has repeatedly failed to make required payments to us and/or materially underpaid us an amount due under the Merck CodeEvolver® Agreement. In the event the Merck CodeEvolver® Agreement is terminated earlier by Merck, or by us due to an uncured material breach by Merck, or if Merck sells or transfers to a third party any Merck business or facility that includes any of our proprietary materials, information or technology, we have the right to conduct an audit of Merck's facilities to confirm that all of our proprietary materials, information and technology have been destroyed. The Merck CodeEvolver® Agreement contains indemnification provisions under which Merck and we have agreed to indemnify each other against certain third party claims.

We received a \$5.0 million up-front license fee upon execution of the Merck CodeEvolver® Agreement, which was recognized ratably over the estimated platform technology transfer period of two years. The technology transfer was completed in September 2016 and all remaining deferred revenue was recognized. We have the potential to receive payments of up to a maximum of \$15.0 million for each commercial active pharmaceutical ingredient ("API") that is manufactured by Merck using one or more novel enzymes developed by Merck using the CodeEvolver® protein engineering technology platform.

We recognized no license fees for the three and six months ended June 30, 2017, compared to \$0.6 million and \$1.3 million for the three and six months ended June 30, 2016, respectively, as research and development revenue. Additionally, we recognized research and development revenues of \$0.9 million and \$1.8 million for the three and six months ended June 30, 2017, respectively, compared to \$0.5 million and \$0.7 million for the three and six months ended June 30, 2016, respectively, for various research projects under our collaborative arrangement.

Merck Sitagliptin Catalyst Supply Agreement

In February 2012, we entered into a five-year Sitagliptin Catalyst Supply Agreement ("Sitagliptin Catalyst Supply Agreement") with Merck whereby Merck may obtain commercial scale substance for use in the manufacture of Januvia®, its product based on the active ingredient sitagliptin. In December 2015, Merck exercised its option under the terms of the Sitagliptin Catalyst Supply Agreement to extend the agreement for an additional five years through February 2022.

Effective as of January 2016, we and Merck amended the Sitagliptin Catalyst Supply Agreement to prospectively provide for variable pricing based on the cumulative volume of sitagliptin purchased by Merck under the Sitagliptin Catalyst Supply

Agreement and to allow Merck to purchase a percentage of its requirements for sitagliptin from a specified third-party supplier. Merck has the right to terminate the Sitagliptin Catalyst Supply Agreement at any time after January 1, 2018 by giving us 24 months' advance written notice. In June 2017, we completed a contractual milestone by qualifying the specified third-party enzyme supplier and recognized \$0.3 million as research and development revenue.

The Sitagliptin Catalyst Supply Agreement requires Merck to pay an annual license fee for the rights to the sitagliptin technology each year for the term of the agreement. Amounts of annual license fees are based on contractually agreed prices and are on a declining scale. Prior to December 2015, the aggregate license fee for the initial five year period was being recognized ratably over the initial five year term of the Sitagliptin Catalyst Supply Agreement as collaborative research and development revenue. Due to the amendment entered in December 2015 as noted above, we revised our performance period in December 2015 and began recognizing the remaining unamortized portion of the license fee and the aggregate license fees for the second five year period over the revised period on a straight line basis.

We recognized license fees of \$0.3 million and \$0.7 million for the three and six months ended June 30, 2017, respectively, and \$0.3 million and \$0.7 million for the three and six months ended June 30, 2016, respectively, as research and development revenues. We had a deferred revenue balance from Merck related to license fees of \$2.2 million at June 30, 2017 and \$1.3 million at December 31, 2016. In addition, pursuant to the terms of the agreement, Merck may purchase supply from us for a fee based on contractually stated prices and we recognized \$3.2 million and \$5.0 million for the three and six months ended June 30, 2017, respectively, compared to \$1.1 million and \$2.7 million for the three and six months ended June 30, 2016 in product sales under this agreement.

Biopharmaceutical Collaborative Development Agreement

In May 2015, we entered into a collaborative development agreement with a leading global biopharmaceutical company. Under the terms of the agreement, we used our CodeEvolver[®] protein engineering platform technology to develop a novel enzyme for use in our partner's therapeutic development program. We recognized revenues of \$33,000 and \$0.1 million for the three and six months ended June 30, 2017, respectively, compared to \$0.4 million and \$1.8 million for the three and six months ended June 30, 2016 as collaborative research and development revenues. Under the agreement, we have the potential to receive additional license fees and milestone payments.

Enzyme Supply Agreement

In November 2016, we entered into a supply agreement whereby our customer may purchase quantities of one of our proprietary enzymes for use in its commercial manufacture of a product. Pursuant to the supply agreement, we received an upfront payment of \$0.75 million in December 2016, which we accordingly recorded as deferred revenues. Such upfront payment will be recognized over the period of the supply agreement as the customer purchases our proprietary enzyme. As of June 30, 2017 and December 31, 2016, we had deferred revenue from the supply agreement of \$0.7 million. Under the agreement, we recognize product revenues for quantities of enzyme sold to our customer when all revenue recognition criteria are met.

Research and Development Agreement

In March 2017, we entered into a multi-year research and development services agreement with a fine chemicals customer. Under the agreement, we have the potential to receive research and development revenues and milestone payments based on the customer's decision to continue the development process. We received an upfront payment of \$3.0 million, which is recognized ratably over the maximum term of the services period of 21 months, of which we recognized \$0.4 million in the three and six months ended June 30, 2017. We also recognized 0.4 million of revenue for research and development services on a net payment received under the agreement for the three and six months ended June 30, 2017. Total revenue recognized under the research and development agreement for the three and six months ended June 30, 2017 was \$0.8 million. As of June 30, 2017, we had deferred revenue from the development services agreement of \$2.6 million.

Note 5. Cash Equivalents and Marketable Securities

Cash equivalents and marketable securities classified as available-for-sale at June 30, 2017 and at December 31, 2016 consisted of the following (in thousands):

	June 30, 2017			
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds ⁽¹⁾	\$ 10,736	\$ —	\$ —	\$ 10,736
Common shares of CO2 Solutions ⁽²⁾	563	742	—	1,305
Total	\$ 11,299	\$ 742	\$ —	\$ 12,041

	December 31, 2016			
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Money market funds ⁽¹⁾	\$ 11,172	\$ —	\$ —	\$ 11,172
Common shares of CO2 Solutions ⁽²⁾	563	579	—	1,142
Total	\$ 11,735	\$ 579	\$ —	\$ 12,314

(1) Money market funds are classified in cash and cash equivalents on our condensed consolidated balance sheets.

(2) Common shares of CO2 Solutions are classified in marketable securities on our condensed consolidated balance sheets.

There were no marketable securities in an unrealized loss position at June 30, 2017 or at December 31, 2016.

Note 6. Fair Value Measurements

The following tables present the financial instruments that were measured at fair value on a recurring basis at June 30, 2017 and December 31, 2016 by level within the fair value hierarchy (in thousands):

	June 30, 2017			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 10,736	\$ —	\$ —	\$ 10,736
Common shares of CO2 Solutions	—	1,305	—	1,305
Total	\$ 10,736	\$ 1,305	\$ —	\$ 12,041

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 11,172	\$ —	\$ —	\$ 11,172
Common shares of CO2 Solutions	—	1,142	—	1,142
Total	\$ 11,172	\$ 1,142	\$ —	\$ 12,314

We determine the fair value of Level 1 assets using quoted prices in active markets for identical assets. We estimated the fair value of our investment in 10,000,000 common shares of CO2 Solutions using the market value of common shares as determined by trading on the TSX Venture Exchange, and we classified our investment in CO2 Solutions as Level 2 assets due to the volatile and low trading volume. There were no transfers between Level 1 and Level 2 securities in the periods presented. (See also Note 5, "Cash Equivalents and Marketable Securities".)

Note 7. Balance Sheets Details

Inventories

Inventories consisted of the following (in thousands):

	June 30, 2017	December 31, 2016
Raw materials	\$ 84	\$ 118
Work-in-process	227	59
Finished goods	495	648
Inventories	\$ 806	\$ 825

Property and Equipment, net

Property and equipment, net consisted of the following (in thousands):

	<u>June 30, 2017</u>	<u>December 31, 2016</u>
Laboratory equipment	\$ 19,620	\$ 18,849
Leasehold improvements	10,462	10,395
Computer equipment and software	3,678	3,267
Office equipment and furniture	1,185	1,171
Construction in progress ⁽¹⁾	94	124
Property and equipment	35,039	33,806
Less: accumulated depreciation and amortization	(32,070)	(31,651)
Property and equipment, net	<u>\$ 2,969</u>	<u>\$ 2,155</u>

(1) Construction in progress includes equipment received but not yet placed into service pending installation.

Intangible Assets, net

Intangible assets, net consisted of the following (in thousands, except weighted average amortization period):

	<u>June 30, 2017 and December 31, 2016</u>			
	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>	<u>Net Carrying Amount</u>	<u>Amortization Period (years)</u>
Developed and core technology	\$ 1,534	\$ (1,534)	\$ —	5
Maxygen intellectual property	20,244	(20,244)	—	6
Intangible assets, net	<u>\$ 21,778</u>	<u>\$ (21,778)</u>	<u>\$ —</u>	

Note 8. Stock-Based Compensation

Equity Incentive Plans

In March 2010, our board of directors (the "Board") and stockholders approved the 2010 Equity Incentive Award Plan (the "2010 Plan"), which became effective upon the completion of our initial public offering in April 2010. The number of shares of our common stock available for issuance under the 2010 Plan is equal to 1,100,000 shares plus any shares of common stock reserved for future grant or issuance under our 2002 Stock Plan (the "2002 Plan") that remained unissued at the time of completion of the initial public offering. The 2010 Plan also provides for automatic annual increases in the number of shares reserved for future issuance. All grants will reduce the 2010 Plan reserve by one share for every share granted.

The 2010 Plan provides for the grant of incentive stock options, non-statutory stock options, RSUs, RSAs, PSUs, PBOs, stock appreciation rights, and stock purchase rights to our employees, non-employee directors and consultants.

Stock Options

The option exercise price for incentive stock options is at least 100% of the fair value of our common stock on the date of grant and the option exercise price for nonstatutory stock options is at least 85% of the fair value of our common stock on the date of grant, as determined by the Board. If, at the time of a grant, the optionee directly or by attribution owns stock possessing more than 10% of the total combined voting power of all of our outstanding capital stock, the exercise price for these options must be at least 110% of the fair value of the underlying common stock. Stock options granted to employees generally have a maximum term of 10 years and vest over a four year period from the date of grant, of which 25% vest at the end of one year, and 75% vest monthly over the remaining three years. We may grant options with different vesting terms from time to time. Unless an employee's termination of service is due to disability or death, upon termination of service, any unexercised vested options will be forfeited at the end of three months or the expiration of the option, whichever is earlier.

Restricted Stock Units

We also grant employees RSUs, which generally vest over either a three year period with one-third of the shares subject to the RSUs vesting on each yearly anniversary of the vesting commencement date or over a four year period with 25% of the shares subject to the RSU vesting on each yearly anniversary of the vesting commencement date, in each case contingent upon such employee's continued service on such vesting date. RSUs are generally subject to forfeiture if employment terminates prior to the release of vesting restrictions. We may grant RSUs with different vesting terms from time to time.

Performance-contingent Restricted Stock Units and Performance Vesting Options

In 2015 and 2016, the compensation committee of the Board approved, and, in February 2017 solely in respect of non-executive employees, delegated to our Chief Executive Officer the authority to approve grants of PSUs. In February 2017, the compensation committee of the Board also approved grants of PBOs and PSUs to our executives. The PSUs and PBOs vest based upon both the successful achievement of certain corporate operating milestones in specified timelines and continued employment through the applicable vesting date. When the performance goals are deemed to be probable of achievement for these types of awards, recognition of stock-based compensation expense commences.

In the first quarter of 2017, our compensation committee and Chief Executive Officer granted PSUs ("2017 PSUs") and our compensation committee granted PBOs ("2017 PBOs"), each of which commence vesting based upon the achievement of various weighted performance goals, including revenue growth, fundraising, service revenue, new platform license revenue, and strategic advancement of biotherapeutics pipeline. The number of shares underlying the 2017 PSUs and 2017 PBOs that are eligible to vest are based upon our achievement of the performance goals and, once the number of shares eligible to vest is determined, those shares vest in two equal installments with 50% vesting upon achievement and the remaining 50% vesting on the first anniversary of achievement, in each case, subject to the recipient's continued service through the applicable vesting date. If the performance goals are achieved at the threshold level, the number of shares eligible to vest in respect of the 2017 PSUs and the 2017 PBOs would be equal to half the number of 2017 PSUs granted and one-quarter the number of shares underlying the 2017 PBOs granted. If the performance goals are achieved at the target level, the number of shares eligible to vest in respect of the 2017 PSUs and 2017 PBOs would be equal to the number of 2017 PSUs granted and half of the shares underlying the 2017 PBOs granted. If the performance goals are achieved at the superior level, the number of shares eligible to vest in respect of the 2017 PSUs would be equal to two times the number of 2017 PSUs granted and equal to the number of 2017 PBOs granted. The number of shares issuable upon achievement of the performance goals at the levels between the threshold and target levels for the 2017 PSUs and 2017 PBOs or between the target level and superior levels for the 2017 PSUs would be determined using linear interpolation. Achievement below the threshold level would result in no shares being eligible to vest in respect of the 2017 PSUs and 2017 PBOs. As of June 30, 2017, we estimated that the 2017 PSU and 2017 PBOs performance goals would be achieved at 119.0% of the target level. Accordingly, we recognized expense to reflect the target level.

In 2016, we awarded PSUs ("2016 PSUs") based upon the achievement of various weighted performance goals, including revenue growth, non-GAAP net income growth, new licensing collaborations, new R&D service revenue arrangements and novel therapeutic enzymes advancement. In the first quarter of 2017, we determined that the 2016 PSU performance goals had been achieved at 142.3% of the target level, and recognized expenses accordingly. Accordingly, one-half of the shares underlying the 2016 PSUs vested in the first quarter of 2017 and one-half of the shares underlying the 2016 PSUs will vest in the first quarter of 2018, in each case subject to the recipient's continued service on each vesting date. No PBOs were awarded in 2016.

In 2015, we awarded PSUs ("2015 PSUs") based upon the achievement of various weighted performance goals, including revenue growth, non-GAAP net income growth, new licensing collaborations, and securing a drug development partnership, with other terms similar to the 2014 PSUs and 2016 PSUs. In the first quarter of 2016, we determined that the 2015 PSU performance goals had been achieved at 92.8% of the target level, and recognized expenses accordingly. One-half of the shares underlying the 2015 PSUs vested in the first quarter of each of 2016 and 2017, subject to the recipient's continued service on each vesting date. No PBOs were awarded in 2015.

Stock-Based Compensation Expense

Stock-based compensation expense is included in the consolidated statements of operations as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Research and development	\$ 342	\$ 222	\$ 664	\$ 442
Selling, general and administrative	1,369	1,020	2,715	2,189
Total	\$ 1,711	\$ 1,242	\$ 3,379	\$ 2,631

The following table presents total stock-based compensation expense by security types included in the condensed consolidated statements of operations for the three and six months ended June 30, 2017 and 2016 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Stock options	\$ 380	\$ 267	\$ 714	\$ 571
RSUs and RSAs	484	561	943	1,135
PSUs	348	414	988	925
PBOs	499	—	734	—
Total	\$ 1,711	\$ 1,242	\$ 3,379	\$ 2,631

As of June 30, 2017, unrecognized stock-based compensation expense, net of expected forfeitures, was \$3.2 million related to unvested employee stock options, \$2.2 million related to unvested RSUs and RSAs, \$0.9 million related to unvested PSUs, and \$1.6 million related to unvested PBOs.

Valuation Assumptions

The weighted-average assumptions used to estimate the fair value of employee stock options and PBOs granted were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	(1)			
Expected term (in years)	—	5.3	5.3	5.4
Volatility	—	64%	62%	65%
Risk-free interest rate	—	1.46%	2.00%	1.30%
Dividend yield	—	—%	—%	—%
Weighted-average estimated fair value of stock options granted	—	\$ 1.94	\$ 2.52	\$ 2.30

(1) The Company did not grant employee stock options or PBOs in the three months ended June 30, 2017.

Note 9. Capital Stock

Exercise of Options

For the six months ended June 30, 2017 and 2016, 55,780 and 323,981 shares, respectively, were exercised at a weighted-average exercise price of \$2.55 and \$2.58 per share, respectively, with net cash proceeds of \$0.1 million and \$0.8 million, respectively.

Warrants

Our outstanding warrants are exercisable for common stock at any time during their respective terms. As of June 30, 2017, the following warrants remain outstanding:

Issue Date	June 30, 2017		
	Shares Subject to Warrants	Exercise Price per Share	Expiration
September 28, 2007	72,727	\$ 8.25	September 28, 2017

Public Offering

In April 2017, we completed a public offering in which we issued and sold 6.3 million shares of our common stock, par value \$0.0001 per share, at a public offering price of \$4.00 per share. We received net proceeds of approximately \$23.3 million after deducting the underwriting discounts, commissions and other offering expenses of \$0.5 million.

Consolidated statements of stockholders' equity as of June 30, 2017 and 2016 are as follows (in thousands):

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
December 31, 2015	40,343	\$ 4	\$ 305,981	\$ 405	\$ (283,511)	\$ 22,879
Exercise of stock options	324	—	837	—	—	837
Release of stock awards	700	—	(708)	—	—	(708)
Employee stock-based compensation	—	—	2,631	—	—	2,631
Cancelled shares	(196)	—	(790)	—	—	(790)
Total comprehensive loss	—	—	—	(434)	(4,735)	(5,169)
June 30, 2016	41,171	\$ 4	\$ 307,951	\$ (29)	\$ (288,246)	\$ 19,680
December 31, 2016	41,255	\$ 4	\$ 311,164	\$ —	\$ (292,069)	\$ 19,099
Exercise of stock options	56	—	142	—	—	142
Release of stock awards	688	—	(1,636)	—	—	(1,636)
Employee stock-based compensation	—	—	3,379	—	—	3,379
Issuance of common stock, net of issuance costs	6,325	1	23,290	—	—	23,291
Total comprehensive loss	—	—	—	102	(13,740)	(13,638)
June 30, 2017	48,324	\$ 5	\$ 336,339	\$ 102	\$ (305,809)	\$ 30,637

Note 10. Commitments and Contingencies

Operating Leases

Our headquarters are located in Redwood City, California, where we occupy approximately 107,200 square feet of office and laboratory space in four buildings within the same business park of Metropolitan Life Insurance Company ("Met-Life"). We entered into the initial lease with Met-Life for a portion of this space in 2004 and the lease has been amended multiple times since then to adjust space and amend the terms of the lease, with the latest amendment in October 2016. The various terms for the spaces under the lease had expiration dates that range from January 2020 through January 2022. As described further below, in October 2016, we exercised an option to extend our lease of certain spaces through January 2022. Beginning in February 2014, we have subleased office space to different subtenants with separate options to extend the subleases. If all such options to extend were exercised, these agreements would expire at various dates through November 2019.

We incurred \$3.6 million of capital improvement costs related to the facilities leased from Met-Life through December 31, 2012. During 2011 and 2012, we requested and received \$3.1 million of reimbursements from the landlord from the tenant improvement and HVAC allowances for the completed construction. The reimbursements were recorded once cash was received and are amortized on a straight line basis over the term of the lease as a reduction in rent expense. The remaining lease incentive obligation was \$1.1 million and \$1.3 million at June 30, 2017 and December 31, 2016, respectively, and is reflected as liabilities on the consolidated balance sheet. Rent expense for the Redwood City properties is recognized on a straight-line basis over the term of the lease.

We are required to restore certain areas of the Redwood City facilities that we are renting to their original form. We are expensing the asset retirement obligation over the terms of the respective leases. We review the estimated obligation each reporting period and make adjustments if our estimates change. We recorded asset retirement obligations of \$0.4 million as of both June 30, 2017 and December 31, 2016, which are included in other liabilities on the consolidated balance sheets.

Accretion expense related to our asset retirement obligations was nominal in the three and six months ended June 30, 2017 and June 30, 2016.

Pursuant to the terms of the amended lease agreement, we exercised our right to deliver a letter of credit in lieu of a security deposit. The letters of credit are collateralized by deposit balances held by the bank in the amount of \$0.7 million as of June 30, 2017 and \$0.8 million as of December 31, 2016. These deposits are recorded as restricted cash on the consolidated balance sheets.

Rent expense was \$1.0 million and \$1.9 million during the three and six months ended June 30, 2017, respectively, partially offset by sublease income of \$0.3 million and \$0.7 million, respectively. Rent expense was \$0.8 million and \$1.7 million during the three and six months ended June 30, 2016, respectively, partially offset by sublease income of \$0.3 million and \$0.5 million, respectively.

Capital Leases

In December 2016, we entered into a three-year financing lease agreement with a third party supplier for the purchase of laboratory equipment that was partially financed through a capital lease of approximately \$0.4 million. The lease became effective upon delivery of the equipment, which occurred in February 2017, and the term of the lease is three years from the effective date. This financing agreement was accounted for as a capital lease due to the bargain purchase option at the end of the lease.

In April 2017, we entered into a three-year financing lease agreement with a third party supplier for the purchase of information technology equipment for approximately \$0.3 million. The effective date of the lease was May 19, 2017 and the term of the lease is three years. This financing agreement was accounted for as a capital lease due to the bargain purchase option at the end of the lease.

Leases

Future minimum payments under non-cancellable capital and operating leases are as follows at June 30, 2017 (in thousands):

Years ending December 31,	Capital Leases	Operating Leases
2017 (6 months remaining)	\$ 126	\$ 1,552
2018	252	3,185
2019	252	3,280
2020	60	712
2021 and beyond	—	531
Total minimum lease payments	690	\$ 9,260
Less: amount representing interest	(47)	
Present value of capital lease obligations	643	
Less: current portion	(224)	
Long-term portion of capital leases	\$ 419	

Minimum payments have not been reduced by future minimum sublease rentals of \$2.2 million to be received under non-cancellable subleases at June 30, 2017.

Other Commitments

We enter into supply and service arrangements in the normal course of business. Supply arrangements are primarily for fixed-price manufacture and supply. Service agreements are primarily for the development of manufacturing processes and certain studies. Commitments under service agreements are subject to cancellation at our discretion which may require payment of certain cancellation fees. The timing of completion of service arrangements is subject to variability in estimates of the time required to complete the work.

The following table provides quantitative data regarding our other commitments. Future minimum payments reflect amounts that we expect to pay including potential obligations under services agreements subject to risk of cancellation by us (in thousands):

Other Commitment Agreement Type	Agreement Date	Future Minimum Payment
Manufacture and supply agreement with expected future payment date of December 2022	April 2016	\$ 1,693
Service agreement for the development of manufacturing process	October 2016	193
Service agreement for the development of manufacturing process	April 2017	2,429
Service agreement for stability study	July 2017	345
Total other commitments		\$ 4,660

Credit Facility

Effective June 30, 2017, we entered into a credit facility (the "Credit Facility") consisting of term loans ("Term Debt") totaling up to \$10.0 million, and advances ("Advances") under a revolving line of credit ("Revolving Line of Credit") totaling up to \$5.0 million with an accounts receivable borrowing base of 80% of eligible accounts receivable. At June 30, 2017, we have not drawn from the Credit Facility. We may draw on the Term Debt at any time prior to June 30, 2018, subject to customary conditions for funding including, among others, that no event of default exists. We may draw on the Revolving Line of Credit at any time prior to the maturity date. On July 1, 2021, any loans for Term Debt mature and the Revolving Line of Credit terminates. Term Debt bears interest through maturity at a variable rate based on the London Interbank Offered Rate plus 3.60%. Advances under the Revolving Line of Credit bear interest at a variable annual rate equal to the greater of (i) 1.00% above the prime rate and (ii) 5.00%.

The Credit Facility allows for interest-only payments on Term Debt through February 1, 2019. Interest-only payments on Term Debt may be continued through August 1, 2019, provided we enter into a licensing, commercialization, corporate collaboration or similar monetization agreement on which we receive at least a \$6.0 million upfront cash receipt and/or milestone cash payments on or before January 15, 2019. Monthly payments of principal and interest on the Term Debt are required following the applicable amortization date. We may elect to prepay in full the Term Debt and Advances under the Revolving Line of Credit at any time. Prepayments of Term Debt and early termination of the Revolving Line of Credit are subject to prepayment and final payment fees are as follows:

	Term Debt	Revolving Line of Credit
Through and including the first anniversary of the funding date of the first Term Debt drawn	2.0%	
After the first anniversary of the funding date of the first Term Debt drawn and before the maturity date	1.0%	
On the earliest to occur of the maturity date, the acceleration of Term Debt drawn or prepayment of Term Debt drawn	5.5%	
Through and including the first anniversary of the closing date		3.0%
After the first anniversary of the closing date through and including the second anniversary of the closing date		2.0%
After the second anniversary of the closing date through and including the third anniversary of the closing date		1.0%

Our obligations under the Credit Facility are secured by a lien on substantially all of our personal property other than our intellectual property. The Credit Facility includes a number of customary covenants and restrictions which require us to comply with certain financial covenants including achieving consolidated product revenues levels at minimum levels as set forth in the Credit Facility through December 2018 and on and after January 2019, in each case unless we maintain certain minimum cash levels with the lender in an amount equal to or greater than six times the sum of the average six-month trailing operating cash flow net outlay plus the average monthly principal due and payable in the immediately succeeding three-month period. The Credit Facility places various restrictions on the Company's transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens and selling assets and permitted assets to be held at foreign subsidiaries above specified caps, in each case subject to certain exceptions. A failure to comply with these covenants could permit the lender to exercise remedies against us and the collateral securing the Credit

Facility, including foreclosure of our properties securing the Credit Facilities and our cash. At June 30, 2017, we were in compliance with the covenants for the Credit Facility.

Legal Proceedings

On February 19, 2016, we filed a complaint against EnzymeWorks, Inc., a California corporation, EnzymeWorks, Inc., a Chinese corporation (collectively with the California corporation, “EnzymeWorks”), and Junhua “Alex” Tao (collectively with EnzymeWorks, the “Defendants”) in the United States District Court for the Northern District of California. On April 29, 2016, we filed a First Amended Complaint. The First Amended Complaint alleges that the Defendants have engaged in willful patent infringement, trade secret misappropriation, breach of contract, intentional interference with contractual relations, intentional interference with prospective economic relations and statutory and common law unfair competition. We have sought injunctive relief, monetary damages, treble damages, restitution, punitive damages and attorneys’ fees. On May 13, 2016, the Defendants filed a Partial Motion to Dismiss the claims for breach of contract, intentional interference with contractual relations, intentional interference with prospective economic relations, statutory unfair competition, and common law unfair competition in the First Amended Complaint. We opposed the Defendant’s Partial Motion to Dismiss. On August 11, 2016, the judge issued an order that denied the Defendants’ Partial Motion to Dismiss with respect to all five claims and in all relevant parts, and granted the motion with respect to certain underlying arguments. The Defendants filed their Answer on September 1, 2016, stating that the Defendants would not contest infringement of the asserted patents and denying the trade secret claim and other non-patent claims. There are no counterclaims. On September 21, 2016, the parties filed a stipulation in which the Defendants agreed not to contest our construction of certain patent claim terms and vacating deadlines related to the claim construction proceedings. The Court entered the stipulated order on September 26, 2016. On July 19, 2017, Defendants filed a Stipulation with Proposed Order seeking leave to file Defendants’ First Amended Answer to add an affirmative defense of “competition privilege.” The Court entered the Order granting leave for Defendants to file the First Amended Answer on July 24, 2017. On July 31, 2017, the parties filed a stipulation acknowledging that EnzymeWorks had not denied or disputed its infringement of each of Codexis’ ten asserted patents, or the validity of those patents. Based on this stipulation, on August 8, 2017, the Court entered an order granting Codexis summary judgment on its claims of patent infringement against EnzymeWorks. Additional issues remain to be resolved, including Tao’s individual liability for the infringement, Codexis’ claims that the infringement was willful, the amount of damages to be awarded to Codexis, and the trade secret and other non-patent claims. The case is currently in fact discovery, which is scheduled to close on August 30, 2017. We are unable to determine when this litigation will be resolved or its ultimate outcome.

Other than our litigation against the Defendants, we are not currently a party to any material litigation or other material legal proceedings.

Indemnifications

We are required to recognize a liability for the fair value of any obligations we assume upon the issuance of a guarantee. We have certain agreements with licensors, licensees and collaborators that contain indemnification provisions. In such provisions, we typically agree to indemnify the licensor, licensee and collaborator against certain types of third party claims. The maximum amount of the indemnifications is not limited. We accrue for known indemnification issues when a loss is probable and can be reasonably estimated. There were no accruals for expenses related to indemnification issues for any periods presented.

Note 11. Related Party Transactions

Exela PharmSci, Inc.

We entered into a commercialization agreement with Exela in 2007. Under the license agreement, as amended, we and Exela cross-licensed certain technology relating to the manufacture of argatroban, an API, in exchange for rights to certain sublicensing fees or development payments and profit sharing.

Thomas R. Baruch, one of our directors, serves on the board of directors of Exela, and is a retired general partner in Presidio Partners 2007, LP which owns over 10% of Exela’s outstanding capital stock. As such, Mr. Baruch has an indirect pecuniary interest in the shares of Exela held by Presidio Partners 2007, L.P.

We recognized \$0.36 million and \$0.74 million for the three and six months ended June 30, 2017, respectively, and \$0.66 million and \$1.38 million for the three and six months ended June 30, 2016, respectively, shown in the condensed consolidated statement of operations as a revenue sharing arrangement. We had \$0.10 million of receivables from Exela at June 30, 2017 and no receivables as of December 31, 2016.

AstraZeneca PLC

Pam P. Cheng, a member of our board of directors, joined AstraZeneca PLC as Executive Vice President, Operations and Information Technology in June 2015. We sell biocatalyst products to AstraZeneca and to Alfa Aesar, which is a purchasing agent of AstraZeneca.

In the three and six months ended June 30, 2017, we recognized \$24,000 and \$50,000 of revenue, respectively, from AstraZeneca and no revenue from Alfa Aesar, respectively. In the three and six months ended June 30, 2016, we recognized de minimis revenue from AstraZeneca and no revenue from Alfa Aesar, respectively. At June 30, 2017, we had an accounts receivable of \$24,000 and no accounts receivable at December 31, 2016 from AstraZeneca PLC. At June 30, 2017, we had no accounts receivables and \$0.4 million in accounts receivable at December 31, 2016 from Alfa Aesar.

Note 12. Significant Customer and Geographic Information

Significant Customers

Customers that each contributed 10% or more of our total revenues were as follows:

	Percentage of Total Revenues for the			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Customer A	45%	17%	42%	24%
Customer B	*	63%	*	44%
Customer C	21%	*	12%	*
Customer D	*	*	13%	*

Customers that each contributed 10% or more of our total accounts receivable had the following balances for the periods presented:

	Percentage of Accounts Receivables at	
	June 30, 2017	December 31, 2016
	Customer A	59%
Customer E	*	16%

* Less than 10% of the period presented

Geographic Information

Geographic revenues are identified by the location of the customer and consist of the following (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
	Revenues:			
United States	\$ 4,366	\$ 2,408	6,097	\$ 5,102
Asia				
Singapore	2,148	1,165	3,494	2,121
India	1,526	1,023	2,275	2,046
Others	313	269	1,193	495
Europe				
United Kingdom	24	10,071	43	10,581
Switzerland	1,424	185	2,328	618
Slovenia	—	164	1,632	743
Others	511	367	1,162	542
Others	35	350	93	1,750
Total revenues	\$ 10,347	\$ 16,002	\$ 18,317	\$ 23,998

Identifiable long-lived assets as follows (in thousands):

Long-lived assets:	June 30, 2017	December 31, 2016
United States	\$ 3,272	\$ 2,414

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated financial statements and the related notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2016 included in our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 9, 2017 (the "Annual Report"). This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements include, but are not limited to, expectations regarding our strategy, business plans, financial performance and developments relating to our industry. These statements are often identified by the use of words such as may, will, expect, believe, anticipate, intend, could, should, estimate, or continue, and similar expressions or variations. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q and Part I, Item 1A of our Annual Report, as incorporated herein and referenced in Part II, Item 1A of this Quarterly Report on Form 10-Q and elsewhere in this report. The forward-looking statements in this Quarterly Report on Form 10-Q represent our views as of the date of this Quarterly Report on Form 10-Q. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

Business Overview

We discover, develop and sell proteins that deliver value to our clients in a growing set of industries. We view proteins as a vast untapped source of value-creating materials, and we are using our proven technologies, which we have been continuously improving over our fifteen-year history, to commercialize an increasing number of novel proteins, both as proprietary Codexis products and in partnership with our customers.

Many companies have historically used naturally occurring proteins to produce or enhance goods used in everyday life. Despite the growing number of commercial applications of naturally occurring proteins across many industries, the inherent limitations of naturally occurring proteins frequently restrict their commercial use. Through the application of our proprietary CodeEvolver[®] protein engineering technology platform, we are able to engineer novel proteins to overcome these restrictions, thereby adding value or opening up new prospects for our existing and potential customers' products, processes or businesses. We have developed new proteins that are significantly more stable and/or active in our customers' commercial applications than proteins derived from nature.

We are a pioneer in the harnessing of computational technologies to drive biology advancements. Over the last fifteen years, we have made substantial investments in the development of our CodeEvolver[®] protein engineering technology platform, the primary source of our competitive advantage. Our technology platform is powered by proprietary, artificial intelligence-based, computational algorithms that rapidly mine our large and continuously growing library of protein variants' performance attributes. These computational outputs enable increasingly reliable predictions for next generation protein variants to be engineered, enabling delivery of targeted performance enhancements in a time-efficient manner. In addition to its computational prowess, our CodeEvolver[®] protein engineering technology platform integrates additional modular competencies, including robotic high-throughput screening and genomic sequencing, organic chemistry and process development which are all coordinated to create our novel protein innovations.

We use our CodeEvolver[®] protein engineering technology platform to engineer custom enzymes. Most of our custom enzymes are intended for use as biocatalysts or protein catalysts. In simple terms, our protein catalysts can accelerate and/or improve yields of chemical reactions. We use our CodeEvolver[®] protein engineering technology platform to develop novel enzymes that enable industrial biocatalytic reactions and fermentations. Our technology platform has enabled commercially viable products and processes for the manufacture of pharmaceutical intermediates and active ingredients and fine chemicals.

Our approach to develop commercially viable biocatalytic manufacturing processes begins by conceptually designing the most cost-effective and practical process for a targeted product. We then develop optimized protein catalysts to enable that process design using our CodeEvolver[®] protein engineering platform technology. Engineered protein catalyst candidates - many thousands for each protein engineering project - are then rapidly screened and validated in high throughput under

relevant manufacturing operating conditions. This approach results in an optimized protein catalyst enabling cost-efficient processes that typically are relatively simple to run in conventional manufacturing equipment. This also allows for the efficient technical transfer of our process to our manufacturing partners.

The successful embodiment of our CodeEvolver® protein engineering technology platform in commercial manufacturing processes requires well-integrated expertise in a number of technical disciplines. In addition to those directly involved in practicing our CodeEvolver® protein engineering platform technology, such as molecular biology, enzymology, microbiology, cellular engineering, metabolic engineering, bioinformatics, biochemistry and high throughput analytical chemistry, our process development projects also involve integrated expertise in organic chemistry, chemical process development, chemical engineering, fermentation process development and fermentation engineering. Our integrated, multi-disciplinary approach to biocatalyst and process development is a critical success factor for our company.

We initially commercialized our CodeEvolver® protein engineering technology platform and products in the pharmaceuticals market, which remains our primary business focus. Our customers, which include several large global pharmaceutical companies, use our technology, products and services in their manufacturing processes and process development.

We have also used the technology to develop protein catalysts for use in the fine chemicals market. The fine chemicals market consists of several large market verticals, including food and food ingredients, animal feed, flavors, fragrances and agricultural chemicals.

More recently, we are also using the CodeEvolver® protein engineering technology platform to develop early stage, novel biotherapeutic product candidates, both for our customers and for our own business, most notably our lead program for the potential treatment of phenylketonuria ("PKU") disease in humans. PKU is an inherited metabolic disorder in which the enzyme that converts the essential amino acid phenylalanine into tyrosine is deficient.

We have also used our technology to develop an enzyme for customers using next generation sequencing ("NGS") and polymerase chain reaction ("PCR/qPCR") for in vitro molecular diagnostic and genomic research applications. Beta testing for the enzyme was initiated in the second quarter of 2017.

Results of Operations Overview

Revenues decreased to \$10.3 million for the second quarter of 2017 from \$16.0 million in the second quarter of 2016, primarily due to lower research and development service revenues. Research and development service revenues for the second quarter of 2017 decreased to \$3.4 million from \$12.1 million in the second quarter of 2016 as the prior year included a \$7.5 million milestone and recognition of \$2.5 million of deferred revenues upon early completion of the technology transfer of our proprietary CodeEvolver® protein engineering platform to GlaxoSmithKline ("GSK"). An increase in current quarter research and development service revenues to Tate & Lyle, Merck, and another leading pharmaceutical company partially offset the decrease in research and development revenues. Product sales increased by approximately \$3.3 million, or 101%, from the prior year quarter, which was primarily due to higher customer demand for enzymes for both generic and branded products. Revenues from Exela in a revenue sharing arrangement decreased by \$0.3 million, or 46% from the prior year quarter.

Product gross margins were 43% in the three months ended June 30, 2017, compared to 32% in the same period in 2016 due to improved sales mix.

Research and development expenses increased by \$1.2 million, or 24%, to \$6.3 million for the second quarter of 2017, compared to the second quarter of 2016, due primarily to an increase in outside services and an increase in costs associated with higher headcount, which was partially offset by lower amortization of intangibles, which ceased in the fourth quarter of 2016.

Selling, general and administrative expense increased by \$0.1 million, or 2%, to \$6.5 million for the second quarter of 2017, compared to the second quarter of 2016, due primarily to an increase in costs associated with higher headcount, partially offset by a decrease in legal expenses related to intellectual property, lower depreciation and a decrease in outside services.

Net loss for the second quarter of 2017 was \$6.3 million, representing a net loss of \$0.13 per basic and diluted share. This compares to net income of \$2.2 million, representing basic net income of \$0.06 per basic share or diluted net income of \$0.05 per share for the second quarter of 2016. The increase in net loss for the second quarter of 2017 over the same period of the prior year is primarily related to recognition of a milestone payment of \$7.5 million and deferred revenues of \$2.5 million in the prior year quarter, which was partially offset by increased revenue from product sales.

Cash and cash equivalents increased by \$9.6 million to \$28.8 million as of June 30, 2017 compared to \$19.2 million as of December 31, 2016. Net cash used in operating activities was \$11.6 million in the six months ended June 30, 2017 compared to net cash provided by operations of \$0.2 million in the six months ended June 30, 2016. On April 12, 2017, we completed a public offering of approximately 6.3 million shares of our common stock at an offering price of \$4.00 per share resulting in net proceeds to us of approximately \$23.3 million. We believe that based on our current level of operations, our existing cash, cash equivalents, and marketable securities will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months.

In June 2017, we entered into a loan and security agreement that allows us to borrow up to \$10.0 million under a term loan, and up to \$5.0 million under a revolving credit facility with 80% of certain eligible accounts receivable as a borrowing base (the "Credit Facility"). Obligations under the Credit Facility are secured by a lien on substantially all of our personal property other than our intellectual property. As of June 30, 2017, no amounts were borrowed under the Credit Facility and we were in compliance with the covenants for the Credit Facility. See Note 10, "Commitments and Contingencies--Credit Facility".

GSK Platform Technology Transfer, Collaboration and License Agreement

In July 2014, we entered into a CodeEvolver[®] platform technology transfer and license agreement (the "GSK CodeEvolver[®] Agreement") with GSK. Pursuant to the terms of the agreement, we granted GSK a non-exclusive license to use the CodeEvolver[®] protein engineering technology platform to develop novel enzymes for use in the manufacture of GSK's pharmaceutical and health care products.

We received a \$6.0 million up-front license fee upon execution of the GSK CodeEvolver[®] Agreement and subsequently a \$5.0 million non-creditable, non-refundable milestone payment upon achievement of the first milestone in 2014. In September 2015, we achieved the second milestone and earned milestone revenue of \$6.5 million. In the second quarter of 2016, we completed the full transfer of the protein engineering platform technology and earned milestone revenue of \$7.5 million. We also have the potential to receive additional back end milestone payments that range from \$5.75 million to \$38.5 million per project based on GSK's successful application of the licensed technology. The back end milestone payments are not deemed substantive milestones due to the fact that the achievement of the event underlying the payment predominantly relates to GSK's performance of future development and commercialization activities.

We are eligible to receive royalties based on net sales, if any, of a limited set of products developed by GSK using the CodeEvolver[®] protein engineering technology platform.

The up-front license fee of \$6.0 million was recognized ratably over the technology transfer period of three years from July 2014. We recognized all deferred revenue from GSK upon completion of the technology transfer in April 2016. We recognized none of the up-front license fees for the three and six months ended June 30, 2017, compared to \$2.5 million and \$3.0 million for the three and six months ended June 30, 2016, respectively, as research and development revenue.

In September 2016, we recorded our first back end milestone payment based on GSK's successful application of our technology in an existing pharmaceutical product.

Merck Platform Technology Transfer and License Agreement

In August 2015, we entered into a CodeEvolver[®] platform technology transfer and license agreement (the "Merck CodeEvolver[®] Agreement") with Merck, which allows Merck to use the CodeEvolver[®] protein engineering technology platform in the field of human and animal healthcare.

We received a \$5.0 million up-front license fee upon execution of the Merck CodeEvolver[®] Agreement, which was recognized ratably over the estimated platform technology transfer period of two years. The technology transfer was completed in September 2016 and all remaining deferred revenue was recognized. We recognized none of the up-front license fees for the three and six months ended June 30, 2017, compared to \$0.6 million and \$1.3 million for the three and six months ended June 30, 2016, respectively, as research and development revenue. Additionally, we recognized research and development revenues of \$0.9 million and \$1.8 million for the three and six months ended June 30, 2017, respectively, compared to \$0.5 million and \$0.7 million for the three and six months ended June 30, 2016, respectively, for various research projects under our collaborative arrangement.

Following the completion of the technology transfer, we may be eligible to receive payments of up to a maximum of \$15.0 million for each commercial API that is manufactured by Merck using one or more novel enzymes developed by Merck using the CodeEvolver[®] protein engineering technology platform.

Results of Operations

The following table shows the amounts from our consolidated statements of operations for the periods presented (in thousands):

	Three months ended June		Change		Six months ended June 30,		Change	
	30,		\$	%	2017		2016	
	2017	2016			2017	2016	\$	%
Revenues:								
Product sales	\$ 6,600	\$ 3,280	\$ 3,320	101 %	\$ 12,186	\$ 7,020	\$ 5,166	74 %
Research and development revenues	3,391	12,064	(8,673)	(72)%	5,391	15,598	(10,207)	(65)%
Revenue sharing arrangement	356	658	(302)	(46)%	740	1,380	(640)	(46)%
Total revenues	10,347	16,002	(5,655)	(35)%	18,317	23,998	(5,681)	(24)%
Costs and operating expenses:								
Cost of product sales	3,790	2,221	1,569	71 %	6,792	4,710	2,082	44 %
Research and development	6,348	5,112	1,236	24 %	12,187	10,798	1,389	13 %
Selling, general and administrative	6,546	6,420	126	2 %	13,152	13,222	(70)	(1)%
Total costs and operating expenses	16,684	13,753	2,931	21 %	32,131	28,730	3,401	12 %
Income (loss) from operations	(6,337)	2,249	(8,586)	(382)%	(13,814)	(4,732)	(9,082)	(192)%
Interest income	49	13	36	277 %	68	28	40	143 %
Other expenses, net	(34)	(49)	15	31 %	(12)	(46)	34	74 %
Income (loss) before income taxes	(6,322)	2,213	(8,535)	(386)%	(13,758)	(4,750)	(9,008)	(190)%
Benefit from income taxes	(42)	(26)	(16)	(62)%	(18)	(15)	(3)	(20)%
Net income (loss)	\$ (6,280)	\$ 2,239	\$ (8,519)	(380)%	\$ (13,740)	\$ (4,735)	\$ (9,005)	(190)%

Revenues

Our revenue is comprised of product sales, research and development revenues, and a revenue sharing arrangement, as follows:

- Product sales consist of sales of enzymes, chemical intermediates, and Codex[®] Biocatalyst Panels and Kits.
- Research and development revenues include license, technology access and exclusivity fees, research services fees for FTE, milestone payments, royalties, and optimization and screening fees.
- Revenue sharing arrangement is recognized based upon sales of licensed products by Exela.

The following table shows the amounts of our product sales, research and development revenues from our condensed consolidated statements of operations for the periods presented (in thousands):

(In Thousands)	Three months ended June		Change		Six months ended June 30,		Change	
	30,		\$	%	2017		2016	
	2017	2016			2017	2016	\$	%
Product sales	\$ 6,600	\$ 3,280	\$ 3,320	101 %	\$ 12,186	\$ 7,020	\$ 5,166	74 %
Research and development revenues	3,391	12,064	(8,673)	(72)%	5,391	15,598	(10,207)	(65)%
Revenue sharing arrangement	356	658	(302)	(46)%	740	1,380	(640)	(46)%
Total revenues	\$ 10,347	\$ 16,002	\$ (5,655)	(35)%	\$ 18,317	\$ 23,998	\$ (5,681)	(24)%

Revenues typically fluctuate on a quarterly basis due to the variability in our customers' manufacturing schedules and the timing of our customers' clinical trials. In addition, we have limited internal capacity to manufacture enzymes. As a result, we are dependent upon the performance and capacity of third party manufacturers for the commercial scale manufacturing of the enzymes used in our pharmaceutical and fine chemicals business.

We accept purchase orders for deliveries covering periods from one day up to approximately one year from the date on which the order is placed. However, purchase orders can generally be revised or cancelled by the customer without penalty. Considering these industry practices and our experience, we do not believe the total of customer purchase orders outstanding (backlog) provides meaningful information that can be relied on to predict actual sales for future periods.

Revenues were \$10.3 million and \$18.3 million in the three and six months ended June 30, 2017, respectively, compared to \$16.0 million and \$24.0 million for the same periods in 2016. The decrease in revenues is primarily due to the completion of the technology transfer of our proprietary CodeEvolver® protein engineering platform to GSK in the prior year, which resulted in prior year revenues of \$10.0 million and \$10.5 million for the three and six months ended June 30, 2016, respectively, from recognition of a milestone payment and related deferred revenues. The decrease was partially offset by higher research and development service revenues for Tate & Lyle, Merck and another leading pharmaceutical company. We expect that the research and development revenues for the year will be lower than the prior year as the latter included milestone payments and related deferred revenue recognition from both GSK and Merck from the completion of the transfer of our CodeEvolver® protein engineering platform to both companies in 2016.

Product sales increased \$3.3 million, or 101%, and \$5.2 million, or 74% in the three and six months ended June 30, 2017, respectively, compared to the same periods in 2016 due to higher customer demand for enzymes for both generic and branded products. We expect that the product revenues for the year will be higher than the prior year due to increased demand for our enzymes.

Revenues from the revenue-sharing arrangement with Exela decreased by \$0.3 million and \$0.6 million during the three and six months ended June 30, 2017, respectively, compared to the same period in 2016. This is a result of the expiration of the formulation patent for argatroban in June 2014, allowing for generic competition in the subsequent quarters after expiration of the patent. We expect that the revenue-sharing arrangement revenues may decline in future quarters due to increased competition resulting from the expiration of the third party patent related to the production of argatroban.

Cost and Operating Expenses

Our cost and operating expenses are comprised of cost of product sales, research and development expense, and selling, general and administrative expense. The following table shows the amounts of our cost of product sales, research and development expense, and selling, general and administrative expense from our consolidated statements of operations for the periods presented (in thousands):

(In Thousands)	Three months ended June 30,		Change		Six months ended June 30,		Change	
	2017	2016	\$	%	2017	2016	\$	%
	Cost of product sales	\$ 3,790	\$ 2,221	\$ 1,569	71%	\$ 6,792	\$ 4,710	\$ 2,082
Research and development expense	6,348	5,112	1,236	24%	12,187	10,798	1,389	13 %
Selling, general and administrative expense	6,546	6,420	126	2%	13,152	13,222	(70)	(1)%
Total costs and operating expenses	\$ 16,684	\$ 13,753	\$ 2,931	21%	\$ 32,131	\$ 28,730	\$ 3,401	12 %

Cost of Product Sales and Product Gross Margin

The following table shows the amounts of our revenues from product sales, cost of product sales, product gross profit and product gross margin from our consolidated statements of operations for the periods presented (in thousands):

(In Thousands)	Three months ended June 30,		Change		Six months ended June 30,		Change	
	2017	2016	\$	%	2017	2016	\$	%
	Revenues from product sales	\$ 6,600	\$ 3,280	\$ 3,320	101%	\$ 12,186	\$ 7,020	\$ 5,166
Cost of product sales	3,790	2,221	1,569	71%	6,792	4,710	2,082	44%
Product gross profit	\$ 2,810	\$ 1,059	\$ 1,751	165%	\$ 5,394	\$ 2,310	\$ 3,084	134%
Product gross margin (%)	43%	32%			44%	33%		

Cost of product sales comprises both internal and third-party fixed and variable costs, including materials and supplies, labor, facilities and other overhead costs associated with our product sales.

Product gross margins were 43% and 44% in the three and six months ended June 30, 2017, respectively, compared to 32% and 33%, respectively, in the corresponding periods in 2016 due to improved sales mix.

Research and Development Expenses

Research and development expenses consist of costs incurred for internal projects as well as partner-funded collaborative research and development activities. These costs primarily consist of (i) employee-related costs, which include salaries and other personnel-related expenses (including stock-based compensation), (ii) various allocable expenses, which include occupancy-related costs, supplies, depreciation of facilities and laboratory equipment and amortization of acquired technologies, and (iii) external costs. Research and development expenses are expensed when incurred.

Research and development expenses increased by \$1.2 million, or 24%, during the three months ended June 30, 2017 and \$1.4 million, or 13%, during the six months ended June 30, 2017, compared to the same periods in 2016 primarily due to an increase in outside services and increased costs associated with higher headcount, partially offset by no amortization of intangibles, which were fully amortized by the fourth quarter of 2016.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of employee-related costs, which include salaries and other personnel-related expenses (including stock-based compensation), hiring and training costs, consulting and outside services expenses (including audit and legal counsel related costs), marketing costs, building lease costs, and depreciation and amortization expenses.

Selling, general and administrative expenses increased by \$0.1 million, or 2% during the three months ended June 30, 2017 compared to the same period in 2016, primarily due to an increase in costs associated with higher headcount, partially offset by a decrease in legal expenses related to intellectual property, lower depreciation expense and lower outside services. For the six months ended June 30, 2017, selling, general and administrative expenses decreased by \$0.1 million, or 1%, compared to the corresponding period in 2016, primarily due to a decrease in legal expenses related to intellectual property, lower depreciation expenses and lower outside services, partially offset by an increase in costs associated with higher headcount.

Interest income and other income

(In Thousands)	Three months ended June 30,		Change		Six months ended June 30,		Change	
	2017	2016	\$	%	2017	2016	\$	%
Interest income	\$ 49	\$ 13	\$ 36	277%	\$ 68	\$ 28	\$ 40	143%
Other expense	(34)	(49)	15	31%	(12)	(46)	34	74%
Total other income (expense)	\$ 15	\$ (36)	\$ 51	142%	\$ 56	\$ (18)	\$ 74	411%

Interest income was not material during the three and six months ended June 30, 2017 and 2016.

The change in other expense for the six months ended June 30, 2017 compared to the same period in 2016 was primarily related to fluctuations in foreign currency.

Provision for income taxes

We recognized income tax benefit of \$42,000 and \$18,000 for the three and six months ended June 30, 2017, respectively. We recognized benefit from income tax of \$26,000 and \$15,000 for the three and six months ended June 30, 2016, respectively. We continue to recognize a full valuation allowance against our net deferred tax assets as we believe that it is more likely than not that the majority of our deferred tax assets will not be realized.

Net income (loss)

Net loss for the second quarter of 2017 was \$6.3 million, representing a net loss of \$0.13 per basic and diluted share. This compares to a net income of \$2.2 million, representing basic net income of \$0.06 per share or diluted net income of \$0.05 per share for the second quarter of 2016. For the six months ended June 30, 2017, net loss was \$13.7 million, representing a net loss of \$0.31 per basic and diluted share. This compares to a net loss of \$4.7 million, representing basic net loss of \$0.12 per basic and diluted share for the six months ended June 30, 2016. The increase in net loss for the three and six months ended June 30, 2017 and over the same period of the prior year is primarily related to the same period of the prior year is primarily related to decrease in research and development revenues which was partially offset by an increase in revenue from product sales net of associated increases in costs of product sales.

Liquidity and Capital Resources

Liquidity is the measurement of our ability to meet working capital needs and to fund capital expenditures. Our sources of cash include operations and stock option exercises. For the six months ended June 30, 2017 our most significant cash flow activities consisted of \$23.3 million of net proceeds from our underwritten public offering in April 2017, which was completed in April 2017, partially offset by \$11.6 million of cash used in operations and \$1.6 million taxes paid related to net share settlement of restricted stock awards. We actively manage our cash usage and investment of liquid cash to ensure the maintenance of sufficient funds to meet our working capital needs. The majority of our cash and investments are held in U.S. banks, and our foreign subsidiaries maintain a limited amount of cash in their local banks to cover their short-term operating expenses.

The following tables summarize our cash and cash equivalents and working capital as of June 30, 2017 and December 31, 2016, as well as our statements of cash flows for the three and six months ended June 30, 2017 and 2016:

(In Thousands)	June 30, 2017	December 31, 2016
Cash and cash equivalents	\$ 28,817	\$ 19,240
Working capital	\$ 27,163	\$ 14,860

(In Thousands)	Six months ended June 30,	
	2017	2016
Net cash provided by (used in) operating activities	\$ (11,558)	\$ 187
Net cash used in investing activities	(602)	(447)
Net cash provided by (used in) financing activities	21,737	(661)
Net increase (decrease) in cash and cash equivalents	<u>\$ 9,577</u>	<u>\$ (921)</u>

We have historically experienced negative cash flows from operations as we continue to invest in key technology development projects and improvements to our CodeEvolver[®] protein engineering technology platform, and expand our business development and collaborations with new customers. Our cash flows from operations will continue to be affected principally by sales and gross margins from product sales and collaborative research and development services provided to customers, as well as our headcount costs, primarily in research and development. Our primary source of cash flows from operating activities is cash receipts from our customers for purchases of products and/or collaborative research and development services. Our largest uses of cash from operating activities are for employee-related expenditures, rent payments, inventory purchases to support our product sales and non-payroll research and development costs.

We are eligible to earn milestone and other contingent payments for the achievement of defined collaboration objectives and certain royalty payments under our collaboration agreements. Our ability to earn these milestone and contingent payments and the timing of achieving these milestones is primarily dependent upon the outcome of our collaborators' research and development activities and is uncertain at this time.

We believe that based on our current level of operations, our existing cash and cash equivalents will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months. On May 2, 2017, we received a payment in the low single-digit million dollar range from a customer relating to our March 2017 research and development agreement.

In June 2017, we entered into the Credit Facility, which consists of term debt for loans that allow us to borrow up to \$10.0 million and a revolving credit facility that allows us to borrow up to \$5.0 million with a certain eligible accounts receivable borrowing base of 80% of eligible accounts receivable. We may draw on the term debt at any time prior to June 30, 2018, subject to customary conditions for funding including, among others, that no event of default exists. Draws on the Credit Facility are secured by a lien on substantially all of our personal property other than our intellectual property. No amounts were drawn down under the credit facility as of June 30, 2017. At June 30, 2017, we were in compliance with the covenants for the Credit Facility. The Credit Facility requires us to maintain compliance with certain financial covenants including attainment of certain lender-approved projections or maintenance of certain minimum cash levels. Restrictive covenants in the Credit Facility restrict the payment of dividends or other distributions. For additional information about our contractual obligations, see Note 10 "Commitments and Contingencies" in the accompanying notes to the unaudited condensed consolidated financial statements. However, we may need additional capital if our current plans and assumptions change. Our need for additional capital will depend on many factors, including the financial success of our business, the spending required to develop and commercialize new and existing products, the effect of any acquisitions of other businesses, technologies or facilities that we may make or develop in the future, our spending on new market opportunities, and the potential costs for the filing, prosecution, enforcement and defense of patent claims, if necessary.

As of June 30, 2017, we had cash and cash equivalents of \$28.8 million and \$15.0 million available to borrow on under the Credit Facility. Our liquidity is dependent upon our cash and cash equivalents, cash flows provided by operating activities and the continued availability of borrowings under the Credit Facility.

If our capital resources are insufficient to meet our capital requirements, and we are unable to enter into or maintain collaborations with partners that are able or willing to fund our development efforts or commercialize any products that we develop or enable, we will have to raise additional funds to continue the development of our technology and products and complete the commercialization of products, if any, resulting from our technologies. If future financings involve the issuance of equity securities, our existing stockholders would suffer dilution. If we raise debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and fail to generate sufficient revenue to achieve planned gross margins and to control operating costs, our ability to fund our operations, take advantage of strategic opportunities, develop products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research or development programs or the commercialization of products resulting from our technologies, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

Cash Flows from Operating Activities

Cash used in operating activities was \$11.6 million net for the six months ended June 30, 2017, which resulted from a net loss of \$13.7 million for the six months ended June 30, 2017 adjusted for non-cash charges for depreciation and amortization of \$0.6 million and stock-based compensation of \$3.4 million. Additional cash used from changes in operating assets and liabilities was \$1.6 million. Changes in operating assets and liabilities included increases of \$1.9 million in accounts receivable, \$1.8 million in prepaid expenses primarily for outside services, decreases of \$1.4 million decrease in accrued compensation and a \$0.4 million in accounts payable. These were partially offset by a \$3.9 million increase in deferred revenues.

Cash provided by operating activities was \$0.2 million for the six months ended June 30, 2016, which resulted from a net loss of \$4.7 million for the six months ended June 30, 2016, adjusted for non-cash charges for depreciation and amortization of \$2.6 million and stock-based compensation of \$2.6 million. Additional cash uses from changes in operating assets and liabilities of \$0.3 million, related primarily to a decrease of \$3.7 million in deferred revenue, a decrease of \$0.5 million in accrued compensation and a decrease of \$0.5 million in accounts payable, partially offset by a \$4.0 million decrease in accounts receivable and \$0.6 million increase in other accrued liabilities.

Cash Flows from Investing Activities

Cash used in investing activities was \$0.6 million and \$0.4 million for the six months ended June 30, 2017 and 2016, respectively, primarily related to the purchase of property and equipment.

Cash Flows from Financing Activities

Cash provided by financing activities was \$21.7 million for the six months ended June 30, 2017 which represents \$23.3 million of net proceeds from the public offering in April 2017, partially offset by \$1.6 million for taxes paid related to net share settlement of equity awards. Cash used in operating activities was \$0.7 million for the six months ended June 30, 2016 which primarily represented taxes paid related to net share settlement of equity awards.

Contractual Obligations

(In Thousands)	Payments due by period			
	Total	Less than 1 year	1-3 years	3-5 years
Capital lease obligations	\$ 690	\$ 252	\$ 438	\$ —
Operating leases	9,260	3,138	5,351	771
Total	\$ 9,950	\$ 3,390	\$ 5,789	\$ 771

Other Commitments

We have other commitments related to supply and service arrangements entered into the normal course of business. For additional information about other commitments, see Note 10 "Commitments and Contingencies" in the accompanying notes to the unaudited condensed consolidated financial statements. Future minimum payments reflect amounts those obligations are

expected to have on our liquidity and cash flows in future period and include obligations subject to risk of cancellation by us (in thousands):

Other Commitment Agreement Type	Agreement Date	Future Minimum Payment
Manufacture and supply agreement with expected future payment date of December 2022	April 2016	\$ 1,693
Service agreement for the development of manufacturing process	October 2016	193
Service agreement for the development of manufacturing process	April 2017	2,429
Service agreement for stability study	July 2017	345
Total other commitments		\$ 4,660

Contingent commitment

In June 30, 2017, we entered into a credit facility consisting of term loans totaling up to \$10.0 million, and advances under a revolving line of credit totaling up to \$5.0 million with an accounts receivable borrowing base of 80% of certain eligible accounts receivable. We may draw on the term debt at any time prior to June 30, 2018, subject to customary conditions for funding including, among others, that no event of default exists. The credit facility terminates July 1, 2021. Term debt loans bear interest through maturity at a variable rate based on the London Interbank Offered Rate plus 3.60%. Advances under the revolving line of credit bear interest at a variable annual rate equal to the greater of (i) 1.00% above the prime rate and (ii) 5.00%. We did not draw from the credit facility at June 30, 2017. For additional information about our credit facility, see Note 10 "Commitments and Contingencies" in the accompanying notes to the unaudited condensed consolidated financial statements.

Off-Balance Sheet Arrangements

As of June 30, 2017, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4) of Regulation S-K as promulgated by the SEC.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make judgments, estimates and assumptions in the preparation of our consolidated financial statements and accompanying notes. Actual results could differ from those estimates. There have been no material changes to our critical accounting policies or estimates as discussed in our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 9, 2017.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk Management

Our cash flows and earnings are subject to fluctuations due to changes in foreign currency exchange rates, interest rates and other factors. These market risk exposures are disclosed in Part I, Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 9, 2017.

Interest Rate Sensitivity

In June 30, 2017, we entered into a credit facility agreement consisting of term loans totaling up to \$10.0 million, and advances under a revolving line of credit totaling up to \$5.0 million. Draws on the term debt bear interest at a variable rate based on the London Interbank Offered Rate plus 3.60%. Advances under the revolving line of credit bear interest at a variable annual rate equal to the greater of (i) 1.00% above the prime rate and (ii) 5.00%. Increases in these variable interest rates will increase our future interest expense and decrease our results of operations and cash flows. We did not draw from the credit facility at June 30, 2017.

Equity Price Risk

As described in Note 5, "Cash Equivalents and Marketable Securities" and Note 6, "Fair Value Measurements" to the condensed consolidated financial statements, we have an investment in common shares of CO2 Solutions, whose shares are publicly traded in Canada on the TSX Venture Exchange. As of June 30, 2017, the fair value of our investment in CO2 Solutions' common stock was \$1.3 million, including an unrealized gain of \$0.7 million.

This investment is exposed to fluctuations in both the market price of CO2 Solutions' common shares and changes in the exchange rate between the U.S. dollar and the Canadian dollar. The effect of a 10% adverse change in the market price of CO2 Solution's common shares as of June 30, 2017 would have been an unrealized loss of approximately \$0.1 million, recognized as a component of our condensed consolidated statements of comprehensive income (loss). The effect of a 10% adverse change in the exchange rate between the U.S. dollar and the Canadian dollar as of June 30, 2017 would have been an unrealized loss of approximately \$0.1 million, recognized as a component of our condensed consolidated statements of comprehensive income (loss).

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures and internal controls that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our principal executive officer and our principal financial and accounting officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, including our principal executive officer and our principal financial and accounting officer, evaluated the effectiveness of our disclosure controls and procedures as defined by Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Based on this review, our principal executive officer and our principal financial and accounting officer concluded that these disclosure controls and procedures were effective as of June 30, 2017 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, even if determined effective and no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives to prevent or detect misstatements. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

On February 19, 2016, we filed a complaint against EnzymeWorks, Inc., a California corporation, EnzymeWorks, Inc., a Chinese corporation (collectively with the California corporation, "EnzymeWorks"), and Junhua "Alex" Tao (collectively, with EnzymeWorks, the "Defendants") in the United States District Court for the Northern District of California. On April 29, 2016, we filed a First Amended Complaint. The First Amended Complaint alleges that the Defendants have engaged in willful patent infringement, trade secret misappropriation, breach of contract, intentional interference with contractual relations, intentional interference with prospective economic relations and statutory and common law unfair competition. We have sought injunctive relief, monetary damages, treble damages, restitution, punitive damages and attorneys' fees. On May 13, 2016, the Defendants filed a Partial Motion to Dismiss the claims for breach of contract, intentional interference with contractual relations, intentional interference with prospective economic relations, statutory unfair competition, and common law unfair competition in the First Amended Complaint. We opposed the Defendant's Partial Motion to Dismiss. On August 11, 2016, the judge issued an order that denied the Defendants' Partial Motion to Dismiss with respect to all five claims and in all relevant parts, and granted the motion with respect to certain underlying arguments. The Defendants filed their Answer on September 1, 2016, stating that the Defendants would not contest infringement of the asserted patents and denying the trade secret claim and other non-patent claims. There are no counterclaims. On September 21, 2016, the parties filed a stipulation in which the Defendants agreed not to contest our construction of certain patent claim terms and vacating deadlines related to the claim construction proceedings. The Court entered the stipulated order on September 26, 2016. On July 19, 2017, Defendants filed a Stipulation with Proposed Order seeking leave to file Defendants' First Amended Answer to add an affirmative defense of "competition privilege." The Court entered the Order granting leave for Defendants to file the First Amended Answer on July 24, 2017. On July 31, 2017, the parties filed a stipulation acknowledging that EnzymeWorks had not denied or disputed its infringement of each of Codexis' ten asserted patents, or the validity of those patents. Based on this stipulation, on August 8, 2017, the Court entered an order granting Codexis summary judgment on its claims of patent infringement against EnzymeWorks. Additional issues remain to be resolved, including Tao's individual liability for the infringement, Codexis' claims that the infringement was willful, the amount of damages to be awarded to Codexis, and the trade secret and other non-patent claims. The case is currently in fact discovery, which is scheduled to close on August 30, 2017. We are unable to determine when this litigation will be resolved or its ultimate outcome.

Other than our litigation against the Defendants, we are not currently a party to any material litigation or other material legal proceedings.

ITEM 1A. RISK FACTORS

We have included in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2016, a description of certain risks and uncertainties that could affect our business, future performance or financial condition (the "Risk Factors"). Except as set forth below, there are no material changes from the disclosure provided in the Form 10-K for the year ended December 31, 2016 with respect to the Risk Factors. Investors should consider the Risk Factors prior to making an investment decision with respect to our stock.

If we are unable to comply with the terms of our credit facility, our business and financial condition would be materially and adversely affected.

On June 30, 2017 we entered into a credit facility ("Credit Facility") financing arrangement secured by a lien on substantially all of our personal property other than our intellectual property. Although we have no loans or draws under the Credit Facility as of the date of this report, the Credit Facility includes affirmative and negative covenants including, among others, covenants requiring us to achieve consolidated product revenues at minimum levels and restricting our ability to transfer collateral, incur additional indebtedness, engage in mergers or acquisitions, pay dividends or make other distributions, make investments, create liens and sell assets. The Credit Facility also includes events of default including, among other things, our failure to pay any amounts due under the Credit Facility, a breach of covenants under the Credit Facility, our insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than \$250,000 and a final judgment against us in an amount greater than \$250,000. If an event of default occurs, it could cause our obligations to become immediately due and payable and our lender would be entitled to foreclose against the collateral securing the indebtedness, including our cash. If our indebtedness were to be accelerated, we may be unable to repay such debt and, therefore, such acceleration could materially and adversely affect our business and financial condition. For more information

regarding our compliance with our financial covenants, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Debt service obligation may place us at a competitive disadvantage in our industry.

Draws under the Credit Facility would create debt service obligations for us. Although we have not drawn on the Credit Facility to date, any future draws under the Credit Facility and the related debt service requirements could adversely affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities. For example, the Credit Facility presents the following risks, certain of which apply regardless of whether we draw on the Credit Facility:

- we may be required to use a portion of our cash flow from operations to make debt service payments, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, product development efforts, research and development, and other general corporate requirements;
- our interest expense could increase if prevailing interest rates increase, because a portion of draws which could be made under the Credit Facility bear interest at floating rates;
- the Credit Facility could reduce our flexibility to adjust to changing business conditions or obtain additional financing to fund working capital, capital expenditures, product development efforts, research and development, and other general corporate requirements; and
- restrictive covenants in our Credit Facility, which apply regardless of whether we draw down under the facility, limit our ability to, among other things, transfer collateral, incur additional indebtedness, engage in mergers or acquisitions, pay dividends or make other distributions, make investments, create liens and sell assets.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Effective June 30, 2017, we entered into a credit facility consisting of a term debt note for loans totaling up to \$10.0 million, and advances under a revolving line of credit totaling up to \$5.0 million. Covenants in the credit facility limit our ability to pay dividends or make other distributions. For additional information see Note 10 "Commitments and Contingencies" in the accompanying notes to the unaudited condensed consolidated financial statements.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

See the Exhibit Index on the page immediately following the signature page to this Quarterly Report on Form 10-Q for a list of exhibits filed as part of this Quarterly Report, which Exhibit Index is incorporated herein by reference.

SIGNATURES

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

Codexis, Inc.

Date: August 9, 2017

By: /s/ John J. Nicols

John J. Nicols
President and Chief Executive Officer
(principal executive officer)

Date: August 9, 2017

By: /s/ Gordon Sangster

Gordon Sangster
Chief Financial Officer
(principal financial and accounting officer)

EXHIBIT INDEX

Listed and indexed below are all Exhibits filed as part of this report.

ITEM 6. Exhibits

- 3.1 Amended and Restated Certificate of Incorporation of Codexis, Inc. filed with the Secretary of the State of the State of Delaware on April 27, 2010 and effective as of April 27, 2010 (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
 - 3.2 Certificate of Designations of Series A Junior Participating Preferred Stock of Codexis, Inc., filed with the Secretary of State of the State of Delaware on September 4, 2012 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed on September 4, 2012).
 - 3.3 Amended and Restated Bylaws of Codexis, Inc. effective as of April 27, 2010 (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010, filed on May 28, 2010).
 - 4.1 Reference is made to Exhibits 3.1 through 3.3.
 - 4.2 Form of the Company's Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, filed on August 9, 2012).
 - 4.3* Form of Warrant to purchase shares of Series D preferred stock issued in connection with the Loan and Security Agreement dated as of September 28, 2007.
 - 4.4* Warrant to purchase shares of Common Stock issued to Alexandria Equities, LLC.
 - 4.5 Reference is made to Exhibit 10.1.
 - 10.1† Loan and Security Agreement effective as of June 30, 2017 by and between Codexis, Inc., a Delaware corporation ("Borrower"), having a place of business at 200 Penobscot Drive, Redwood City, CA 94063 and Western Alliance Bank, an Arizona corporation, having a place of business at 55 Almaden Boulevard, San Jose, CA 95113. ("Bank").
 - 31.1 Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
 - 31.2 Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
 - 32.1 Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. § 1350.
 - 101 The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Condensed Consolidated Balance Sheets at June 30, 2017 and December 31, 2016, (ii) Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2017 and 2016, (iii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the Three and Six Months Ended June 30, 2017 and 2016, (iv) Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2017 and 2016, and (v) Notes to Condensed Consolidated Financial Statements.
- * Filed as exhibits to the registrant's Registration Statement on Form S-1 (File No. 333-164044), effective April 21, 2010, and incorporated herein by reference.
- † Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the Securities and Exchange Commission.

***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT 10.1

CODEXIS, INC., A DELAWARE CORPORATION
WESTERN ALLIANCE BANK, AN ARIZONA CORPORATION
LOAN AND SECURITY AGREEMENT

1

BOS 48349558v4

BOS 48349558v8

US-DOCS\90021610.6
BOS 48349558v10

US-DOCS\90021610.9
BOS 48349558v13

US-DOCS\91983530.2

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

This **LOAN AND SECURITY AGREEMENT** is entered into as of June 30, 2017 (the “Closing Date”), by and between **WESTERN ALLIANCE BANK, an Arizona corporation** (“Bank”) and **CODEXIS, INC., a Delaware corporation** (“Borrower”).

RECITALS

Borrower wishes to obtain credit from time to time from Bank, and Bank desires to extend credit to Borrower. This Agreement sets forth the terms on which Bank will advance credit to Borrower, and Borrower will repay the amounts owing to Bank.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION.

1.1 Definitions. As used in this Agreement, the following terms shall have the following definitions:

“Accounts” means all presently existing and hereafter arising accounts, contract rights, payment intangibles, and all other forms of obligations owing to Borrower arising out of the sale or lease of goods (including, without limitation, the licensing of software and other technology) or the rendering of services by Borrower, whether or not earned by performance, and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower’s Books relating to any of the foregoing.

“Affiliate” means, with respect to any Person, any Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and, where the context so requires, each of such Person’s senior executive officers and directors.

“Amortization Date” is (i) February 1, 2019, if the Licensing Event does not occur, and (ii) the August 1, 2019, if the Licensing Event occurs.

“Anti-Terrorism Laws” are any laws relating to terrorism or money laundering, including Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

“Bank Expenses” means all: reasonable costs or expenses (including reasonable attorneys’ fees and expenses) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; reasonable Collateral audit fees; and Bank’s reasonable attorneys’ fees and expenses incurred in amending, enforcing or defending the Loan Documents (including fees and expenses of appeal), incurred before, during and after an Insolvency Proceeding, whether or not suit is brought.

“Blocked Person” is any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which Bank is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports “terrorism” as defined in Executive Order No. 13224, or (e) a Person that is named a “specially designated national” or “blocked person” on the most current list published by OFAC or other similar list.

“Borrowing Base” means an amount equal to eighty percent (80%) of Eligible Accounts, as determined by Bank with reference to the most recent Borrowing Base Certificate delivered by Borrower.

“Borrowing Base Certificate” is that certain form attached hereto as **Exhibit C**.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.**

“Borrower’s Books” means all of Borrower’s books and records including: ledgers; records concerning Borrower’s assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

“Business Day” means any day that is not a Saturday, Sunday, or other day on which banks in the State of California are authorized or required to close.

“Change in Control” shall mean a transaction in which any “person” or “group” (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934) becomes the “beneficial owner” (as defined in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of a sufficient number of shares of all classes of stock then outstanding of Borrower ordinarily entitled to vote in the election of directors, empowering such “person” or “group” to elect a majority of the Board of Directors of Borrower, who did not have such power before such transaction.

“Closing Date” is defined in the preamble hereto.

“Code” means the California Uniform Commercial Code.

“Collateral” means the property described on **Exhibit A** attached hereto.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards, or merchant services issued or provided for the account of that Person; and (iii) all obligations arising under any agreement or arrangement designed to protect such Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by Bank in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

“Copyrights” means any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof.

“Credit Extension” means any Term Loan, any Revolving Advance or any other extension of credit by Bank for the benefit of Borrower hereunder.

“Daily Balance” means the amount of the Obligations owed at the end of a given day.

“Designated Deposit Account” means Borrower’s primary depository or operating account with Bank.

“Disbursement Letter” is that certain form attached hereto as **Exhibit B-1**.

“Draw Period” is the period commencing on the Closing Date and ending on the earlier of (i) June 30, 2018 and (ii) the occurrence of an Event of Default.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.**

“Effective Interest Rate” is:

(a) with respect to the Term Loans, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the sum of (i) Index Rate on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (ii) Three and Sixty Hundredths percent (3.60%); and

(b) with respect to the Revolving Advances, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the greater of (i) five percent (5.00%) and (ii) the sum of (A) Index Rate on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (B) one percent (1.00%).

“Eligible Accounts” means those Accounts that arise in the ordinary course of Borrower’s business that comply with all of Borrower’s representations and warranties to Bank set forth in Section 5.4; provided, that standards of eligibility may be fixed and revised from time to time by Bank in Bank’s reasonable judgment and upon notification thereof to Borrower in accordance with the provisions hereof. Unless otherwise agreed to by Bank, Eligible Accounts shall not include the following:

(a) Accounts that the account debtor has failed to pay within ninety (90) days ([***) ([***)] days with respect to [***) of invoice date;

(b) Accounts with respect to an account debtor, thirty-five percent (35%) of whose Accounts the account debtor has failed to pay within ninety (90) days ([***) ([***)] days with respect to [***) of invoice date;

(c) Accounts with respect to which the account debtor is an officer, employee, or agent of Borrower;

(d) Accounts with respect to which goods are placed on consignment, guaranteed sale, sale or return, sale on approval, bill and hold, or other terms by reason of which the payment by the account debtor may be conditional, but in each case only to the extent of such condition;

(e) Prebillings, prepaid deposits, retention billings, or progress billings (but only to the extent of such prepayment or retention);

(f) Accounts with respect to which the account debtor is an Affiliate of Borrower;

(g) Accounts with respect to which the account debtor does not have its principal place of business in the United States or Canada (other than such account debtors as are approved by Bank in its reasonable discretion);

(h) Accounts with respect to which the account debtor is the United States or any department, agency, or instrumentality of the United States;

(i) Accounts with respect to which Borrower is liable to the account debtor for goods sold or services rendered by the account debtor to Borrower or for deposits or other property of the account debtor held by Borrower, but only to the extent of any amounts owing to the account debtor against amounts owed to Borrower;

(j) Accounts with respect to an account debtor, including Subsidiaries and Affiliates, whose total obligations to Borrower exceed [***) percent ([***)% of all Accounts, to the extent such obligations exceed the aforementioned percentage, except as approved in writing by Bank;

(k) Accounts with respect to which the account debtor disputes liability or makes any claim with respect thereto as to which Bank believes, in its sole discretion, that there may be a basis for dispute (but

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only to the extent of the amount subject to such dispute or claim), or is subject to any Insolvency Proceeding, or becomes insolvent, or goes out of business; and

(l) Accounts the collection of which Bank reasonably determines to be doubtful.

“Equipment” means all present and future machinery, equipment, tenant improvements, furniture, fixtures, vehicles, tools, parts and attachments in which Borrower has any interest.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

“Event of Default” has the meaning assigned in Article 8.

“Final Payment” is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest) with respect to a Term Loan due on the earliest to occur of (a) the Maturity Date, or (b) the acceleration of such Term Loan, or (c) the prepayment of such Term Loan pursuant to Section 2.2(d) or (e), equal to the original principal amount of such Term Loan funded multiplied by the Final Payment Percentage, payable to Bank.

“Final Payment Percentage” is five and one half percent (5.50%).

“Foreign Subsidiary” is a Subsidiary that is not an entity organized under the laws of the United States or any state thereof or the District of Columbia.

“Funding Date” is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

“GAAP” means generally accepted accounting principles as in effect from time to time.

“Indebtedness” means (a) all indebtedness for borrowed money or the deferred purchase price of property or services, including without limitation reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations and (d) all Contingent Obligations.

“Index Rate” means (i) with respect to the Term Loans, the thirty (30) day U.S. LIBOR rate reported in the Wall Street Journal and (ii) with respect to the Revolving Advances, the Prime Rate published in the Money Rates section of the Western Edition of The Wall Street Journal.

“Insolvency Proceeding” means any proceeding commenced by or against any person or entity under any provision of the United States Bankruptcy Code, as amended, or under any other bankruptcy or insolvency law, including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

“Intellectual Property” means all of Borrower’s right, title, and interest in and to the following: Copyrights, Trademarks and Patents; all trade secrets, all design rights, claims for damages by way of past, present and future infringement of any of the rights included above, all licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights; all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and all proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

“Inventory” means all inventory in which Borrower has or acquires any interest, including work in process and finished products intended for sale or lease or to be furnished under a contract of service, of every kind and description now or at any time hereafter owned by or in the custody or possession, actual or constructive, of Borrower, including such inventory as is temporarily out of its custody or possession or in transit and including any returns upon

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any accounts or other proceeds, including insurance proceeds, resulting from the sale or disposition of any of the foregoing and any documents of title representing any of the above, and Borrower's Books relating to any of the foregoing.

"Investment" means any beneficial ownership of (including stock, partnership interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"IRC" means the Internal Revenue Code of 1986, as amended, and the regulations thereunder.

"Licensing Event" means the entrance into a licensing, commercialization, corporate collaboration or similar monetization agreement entered into by Borrower or any of its Subsidiaries, on or before January 15, 2019, pursuant to which Borrower must receive an upfront and/or milestone cash payments in the aggregate amount of at least Six Million Dollars (\$6,000,000.00) on or before January 15, 2019, and which agreement must be in such form and substance as is reasonably satisfactory to the Bank.

"Lien" means any mortgage, lien, deed of trust, charge, pledge, security interest or other encumbrance.

"Loan Documents" means, collectively, this Agreement, any note or notes (including the Secured Promissory Notes) executed by Borrower in connection with this Agreement, and any other agreement entered into in connection with this Agreement, all as amended or extended from time to time.

"Material Adverse Effect" means a material adverse effect on (i) the business operations or condition (financial or otherwise) of Borrower and its Subsidiaries taken as a whole or (ii) the ability of Borrower to repay the Obligations or otherwise perform its obligations under the Loan Documents or (iii) the value or priority of Bank's security interests in the Collateral.

"Maturity Date" is July 1, 2021.

"[***]" means [***] and its Affiliates.

"Negotiable Collateral" means all letters of credit of which Borrower is a beneficiary, notes, drafts, instruments, securities, documents of title, and chattel paper, and Borrower's Books relating to any of the foregoing.

"Obligations" means all debt, principal, interest, the Prepayment Fee, the Final Payment, the Revolving Facility Termination Fee, Bank Expenses and other amounts owed to Bank by Borrower pursuant to this Agreement or any other Loan Document or agreement (other than any warrant or equity instruments), whether absolute or contingent, due or to become due, now existing or hereafter arising, including any interest that accrues after the commencement of an Insolvency Proceeding and including any debt, liability, or obligation owing from Borrower to others that Bank may have obtained by assignment or otherwise (other than any warrant or equity instruments),

"OFAC" is the U.S. Department of Treasury Office of Foreign Assets Control.

"OFAC Lists" are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"Operating Bum" means, with respect to Borrower and its consolidated Subsidiaries, as of any date of determination, an amount equal to (i) the sum of (A) net income (loss) under GAAP of Borrower and its consolidated Subsidiaries for the immediately preceding six (6) month period, less (B) (1) income taxes paid or accrued, (2) non-financed capital expenditures, (3) cash interest payments, (4) dividends or distributions paid to the extent permitted to be paid hereunder, and (5) payments under licenses permitted hereunder, in each case paid by Borrower or any of its consolidated Subsidiaries during the immediately preceding six (6) month period, divided by (ii) six (6), plus the average monthly principal due and payable on interest-bearing liabilities in the immediately succeeding three (3) month period.

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“Patents” means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

“Payment Date” means the first (1st) calendar day of each calendar month.

“Perfection Certificate” has the meaning assigned in Section 3.1.

“Periodic Payments” means all installments or similar recurring payments that Borrower may now or hereafter become obligated to pay to Bank pursuant to the terms and provisions of any instrument, or agreement now or hereafter in existence between Borrower and Bank.

“Permitted Indebtedness” means:

- (a) Indebtedness of Borrower in favor of Bank arising under this Agreement or any other Loan Document;
- (b) Indebtedness existing on the Closing Date and disclosed in the Perfection Certificate on the Closing Date;
- (c) Indebtedness secured by a lien described in clause (c) of the defined term “Permitted Liens,” provided (i) such Indebtedness does not exceed the lesser of the cost or fair market value of the equipment financed with such Indebtedness and (ii) such Indebtedness does not exceed \$[***] in the aggregate at any given time;
- (d) Subordinated Debt;
- (e) Unsecured Indebtedness to trade creditors incurred in the ordinary course of business;
- (f) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of business;
- (a) intercompany Indebtedness constituting Permitted Investments;
- (b) Indebtedness under corporate credit cards used in the ordinary course of business in an aggregate amount not to exceed [***] Dollars (\$[***]) at any given time;
- (c) letters of credit in the ordinary course of business in connection with the leasing of real property in an aggregate amount not to exceed [***] Dollars (\$[***]);
- (d) Indebtedness (in the aggregate outstanding amount of not greater than [***] Dollars (\$[***]) at any given time) consisting of the financing of insurance premiums in the ordinary course of business;
- (e) additional unsecured Indebtedness not to exceed [***] dollars (\$[***]) in the aggregate at any time; and
- (f) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (j) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower, or its Subsidiary, as the case may be.

“Permitted Investment” means:

- (a) Investments existing on the Closing Date disclosed in the Perfection Certificate;

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(b) (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one (1) year from the date of acquisition thereof, (ii) commercial paper maturing no more than one (1) year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, (iii) certificates of deposit maturing no more than one (1) year from the date of investment therein issued by Bank and (iv) Bank's money market accounts;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit accounts in which Bank has a perfected security interest (unless such perfected security interest is not required by this Agreement and such deposit accounts are otherwise maintained in accordance with the applicable provisions of this Agreement);

(e) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee equity purchase plans or agreements approved by Borrower's Board of Directors; not to exceed in the aggregate for (i) and (ii) [***] Dollars (\$[***]) in any fiscal year;

(f) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(g) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (g) shall not apply to Investments of Borrower in any Subsidiary;

(h) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of Permitted Licenses, the development of technology or the providing of technical support; provided that the cash investments in all such joint ventures and strategic alliances shall not exceed [***] Dollars (\$[***]) in the aggregate per fiscal year;

(i) Investments by Borrower in any domestic U.S. Subsidiaries so long as such Subsidiary has become a co-borrower of the Obligations or a guarantor;

(j) Investments by Borrower in any Foreign Subsidiary not to exceed [***] Dollars (\$[***]) (or equivalent) in the aggregate in any fiscal year; and

(k) Investments constituting of Transfers permitted by Section 7.1.

"Permitted Licenses" are (A) licenses of over-the-counter software that is commercially available to the public, and (B) non-exclusive and exclusive licenses for the use of the Intellectual Property of Borrower or any of its ordinary course of business, provided, that, with respect to each such license described in clause (B), (i) no Event of Default has occurred or is continuing at the time of such license; (ii) the license constitutes an arms length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property; (iii) in the case of any exclusive license, (x) Borrower delivers prompt written notice to the Bank upon consummation of such exclusive license, (y) any such license could not result in a legal transfer of title of the licensed property but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States or (z) if such license is granted for a limited field of use in the ordinary course of Borrower's business and all such licenses, when taken together, shall not exclusively license all or substantially all of the Borrower's Intellectual Property, then globally; and (iv) all upfront payments, royalties, milestone payments or other proceeds arising from the licensing agreement that are payable to Borrower or any of its Subsidiaries are paid to an account maintained with the Bank.

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“Permitted Liens” means the following:

(a) Any Liens existing on the Closing Date and disclosed in the Perfection Certificate on the Closing Date or arising under this Agreement or the other Loan Documents;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings;

(c) Liens (i) upon or in any equipment which was not financed by Bank acquired or held by Borrower or any of its Subsidiaries to secure the purchase price of such equipment or indebtedness incurred solely for the purpose of financing the acquisition of such equipment, or (ii) existing on such equipment at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such equipment;

(d) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (c) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase;

(e) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed [***] Dollars (\$[***]), and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(f) Liens to secure payment of workers’ compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(g) leases or subleases of real property granted in the ordinary course of Borrower’s business (or, if referring to another Person, in the ordinary course of such Person’s business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower’s business (or, if referring to another Person, in the ordinary course of such Person’s business), if the leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest therein;

(h) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;

(i) Liens in favor of other financial institutions arising in connection with Borrower’s deposit and/or securities accounts held at such institutions, provided that Borrower is permitted under the terms of this Agreement to maintain such accounts and Bank has a perfected security interest in the amounts held in such deposit and/or securities accounts (unless such perfected security interest is not required by this Agreement);

(j) Liens on insurance proceeds in favor of insurance companies granted solely to secure Indebtedness described in clause (i) of the definition of “Permitted Indebtedness”;

(k) banker’s liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower’s deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with this Agreement;

(l) Liens consisting of Permitted Licenses;

(m) (1) Liens securing reimbursement obligations in connection with letters of credit permitted under clause (i) of the definition of “Permitted Indebtedness”, or (2) certificates of deposit and/or cash

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collateral accounts serving as collateral in connection with corporate credit cards permitted under clause (h) of the definition of "Permitted Indebtedness"; and

(n) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (m) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

"Prepayment Fee" is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to Bank in amount equal to:-

(i) for a prepayment made on or after the Funding Date of the first Term Loan made hereunder through and including the first anniversary of the Funding Date of the first Term Loan made hereunder, two percent (2.00%) of the principal amount of such Term Loan prepaid; and

(ii) for a prepayment made after the first anniversary of the Funding Date of the first Term Loan made hereunder and prior to the Maturity Date, one percent (1.00%) of the principal amount of such Term Loan prepaid.

"Responsible Officer" means each of the Chief Executive Officer, the Chief Operating Officer, the Chief Financial Officer and the Controller of Borrower.

"Revolving Advance" or "Revolving Advances" means an advance (or advances) by Bank to Borrower under the Revolving Facility.

"Revolving Facility" means the facility under which Borrower may request Bank to issue Revolving Advances, as specified in Section 2.3(a) hereof.

"Revolving Facility Termination Fee" is an additional fee payable by Borrower to Bank, upon the election by Borrower to terminate the Revolving Facility, in amount equal to:

(i) for a termination on or before the first anniversary of the Closing Date, three percent (3.00%) of the Revolving Line;

(i) a termination after the first anniversary of the Closing Date and on or before the second anniversary of the Closing Date, two percent (2.00%) of the Revolving Line; and

(ii) a termination after the second anniversary of the Closing Date and on or before the third anniversary of the Closing Date, one percent (1.00%) of the Revolving Line.

"Revolving Line" means a credit extension of up to Five Million Dollars (\$5,000,000).

"Revolving Loan Request" is the form attached hereto as **Exhibit B-2**.

"Schedule" means the schedule of exceptions attached hereto and approved by Bank, if any.

"Secured Promissory Note" is defined in Section 2.8.

"Secured Promissory Note Record" is a record maintained by the Bank with respect to the outstanding Obligations owed by Borrower to the Bank and credits made thereto.

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“Shares” is (i) one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or any Subsidiary of Borrower, in any direct or indirect domestic Subsidiary; and (ii) sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or any Subsidiary of Borrower, in any direct or indirect Foreign Subsidiary.

“Subordinated Debt” means any debt incurred by Borrower that is subordinated to the debt owing by Borrower to Bank on terms acceptable to Bank (and identified as being such by Borrower and Bank), pursuant to a subordination agreement in form and substance satisfactory to Bank.

“Subsidiary” means any corporation, company or partnership in which (i) any general partnership interest or (ii) more than 50% of the stock or other units of ownership which by the terms thereof has the ordinary voting power to elect the Board of Directors, managers or trustees of the entity, at the time as of which any determination is being made, is owned by Borrower, either directly or through an Affiliate.

“Term Loan” is defined in Section 2.2(a) hereof.

“Trademarks” means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

1.2 Accounting Terms. All accounting terms not specifically defined herein shall be construed in accordance with GAAP and all calculations made hereunder shall be made in accordance with GAAP. When used herein, the terms “financial statements” shall include the notes and schedules thereto.

2. LOAN AND TERMS OF PAYMENT.

2.1 Credit Extensions. Borrower promises to pay to the order of Bank, in lawful money of the United States of America, the aggregate unpaid principal amount of all Credit Extensions made by Bank to Borrower hereunder. Borrower shall also pay interest on the unpaid principal amount of such Credit Extensions at rates in accordance with the terms hereof.

2.2 Term Loan.

(a) Availability. Subject to the terms and conditions of this Agreement, during the Draw Period, Bank shall make Term Loans to Borrower at its election, in one or more Credit Extensions, in the aggregate amount of Ten Million Dollars (\$10,000,000) (such term loans are hereinafter referred to singly as a “Term Loan”, and collectively as the “Term Loans”). No Credit Extension shall be made in an amount of less than [***] Dollars (\$[***]). After repayment of Term Loans, the Term Loans may not be re-borrowed and no further Term Loans shall be made hereunder.

(b) Procedures for Borrowing. Whenever Borrower desires a Term Loan, other than the Term Loan made on the Closing Date, Borrower will notify Bank no later than 3:00 p.m. Pacific time, three (3) Business Days prior to the date the Term Loan is to be made. Each such notification shall be made (i) by telephone or in-person followed by written confirmation from Borrower within twenty-four (24) hours, (ii) by electronic mail or facsimile transmission, or (iii) by delivering to Bank a Loan Payment/Advance Request Form in substantially the form of Exhibit B-3 attached hereto. Notwithstanding the foregoing, in addition to any other requirements for borrowing a Term Loan, the Borrower must deliver to the Bank a Disbursement Letter and in the substantially the form of Exhibit B-1 attached hereto and a Loan Payment/Advance Request Form in substantially the form of Exhibit B-3 attached hereto, each dated as of the Funding Date of such term Loan. Bank shall be entitled to rely on any notice given by a person who Bank reasonably believes to be a Responsible Officer or a designee thereof, and Borrower shall indemnify and hold Bank harmless for any damages or loss suffered by Bank as a result of such reliance. Bank will credit the amount of Term Loan made under this Section 2.2(b) to Borrower’s deposit account maintained with the Bank as directed by Borrower in any Loan Payment/Advance Request.

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(c) **Repayment.** Borrower shall make monthly payments of interest only commencing on the first (1st) Payment Date following the Funding Date of each Term Loan, and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date of such Term Loan. Borrower agrees to pay, on the Funding Date of each Term Loan, any initial partial monthly interest payment otherwise due for the period between the Funding Date of such Term Loan and the first Payment Date thereof. Commencing on the Amortization Date for the Term Loans, and continuing on the Payment Date of each month thereafter, Borrower shall make equal monthly payments of principal, together with applicable interest, in arrears, as calculated by Bank (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of the Term Loans outstanding, (2) the effective rate of interest, as determined under Section 2.4(a), and (3) a repayment schedule equal to (A) thirty (30) months, if the Licensing Event does not occur, or (B) twenty-four (24) months, if the Licensing Event occurs. All unpaid principal and accrued and unpaid interest is due and payable in full on the Maturity Date with respect to the Term Loans. The Term Loans may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(d) **Mandatory Prepayments.** If the Term Loans are accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Bank, an amount equal to the sum of: (i) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (ii) the Final Payment, (iii) the Prepayment Fee, plus (iv) all other Obligations that are due and payable, including Bank's Expenses and interest at the Default Rate with respect to any past due amounts. Notwithstanding (but without duplication with the foregoing, on the Maturity Date, if the Final Payment had not previously been paid in full in connection with the prepayment of the Term Loans in full, Borrower shall pay Bank the Final Payment in respect of the Term Loan(s).

(e) **Permitted Prepayment of Term Loans.** Borrower shall have the option to prepay all, but not less than all, of the Term Loans advanced by Bank under this Agreement, provided Borrower (i) provides written notice to Bank of its election to prepay the Term Loans at least five (5) Business Days prior to such prepayment, and (ii) pays to the Bank on the date of such prepayment an amount equal to the sum of (A) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (B) the Final Payment, (C) the Prepayment Fee, plus (D) all other Obligations that are due and payable (other than strictly with respect to the Revolving Facility unless the Revolving Facility is also being simultaneously terminated), including Bank's Expenses and interest at the Default Rate with respect to any past due amounts. Notwithstanding anything herein to the contrary, no Prepayment Fee shall be due under this Section 2.2(e) if the Borrower is prepaying the Term Loans pursuant to a refinancing by the Bank of not less than aggregate principal amount of the Term Loans then outstanding; provided, further, that nothing herein is meant to be construed as an obligation for the Bank to refinance any portion of any of the Loans made hereunder.

2.3 Revolving Advances.

(a) **Availability.** Subject to and upon the terms and conditions of this Agreement, Borrower may request Revolving Advances in an aggregate outstanding amount not to exceed the lesser of (i) the Revolving Line or (ii) the Borrowing Base. Subject to the terms and conditions of this Agreement, amounts borrowed pursuant to this Section 2.3(a) may be repaid and reborrowed at any time prior to the Maturity Date, at which time all Advances under this Section 2.3(a) shall be immediately due and payable. Borrower may prepay any Revolving Advances without penalty or premium.

(b) **Borrowing Procedure.** Whenever Borrower desires a Revolving Advance, Borrower will notify Bank no later than 3:00 p.m. Pacific time, one (1) Business Day prior to the Business Day that the Revolving Advance is to be made. Each such notification shall be made (i) by telephone or in-person followed by written confirmation from Borrower within twenty four (24) hours, (ii) by electronic mail or facsimile transmission, or (iii) by delivering to Bank a Loan Payment/Advance Request Form in substantially the form of Exhibit B-3 attached hereto. Notwithstanding the foregoing, in addition to any other requirements for borrowing a Revolving Advance, the Borrower must deliver to the Bank a Revolving Loan Request in substantially the form of Exhibit B-2 attached hereto and a Loan Payment/Advance Request Form in substantially the form of Exhibit B-3 attached hereto, each dated as of the Funding Date of such Revolving Advance. Each such Revolving Loan Request will be effective upon receipt by the Bank, will be irrevocable, and must specify the date and amount of borrowing. Bank is authorized to make Revolving Advances under this Agreement, based upon instructions received from a Responsible Officer or a designee of a

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Responsible Officer, or without instructions if in Bank's discretion such Revolving Advances are necessary to meet Obligations which have become due and remain unpaid. Bank shall be entitled to rely on any notice given by a person who Bank reasonably believes to be a Responsible Officer or a designee thereof, and Borrower shall indemnify and hold Bank harmless for any damages or loss suffered by Bank as a result of such reliance. Bank will credit the amount of Revolving Advances made under this Section 2.3(b) to Borrower's deposit account maintained with the Bank at Borrower's direction.

(c) **Termination; Repayment.** The Revolving Facility terminates on the earliest of (i) Maturity Date, (ii) on such date when Borrower elects in writing to terminate the Revolving Facility (provided, however, Borrower must have notified the Bank at least five (5) Business Days in advance of such election becoming effective), or (iii) the date when the Obligations related to the Revolving Facility are accelerated following the occurrence and continuance of an Event of Default. Upon the termination of the Revolving Facility, the outstanding aggregate principal amount of all Revolving Advances, the unpaid interest thereon, and all other Obligations related to the Revolving Facility shall be immediately due and payable. Furthermore, in the event of Borrower's election to terminate the Revolving Facility (other than on the Maturity Date), the Revolving Facility Termination Fee shall also become immediately due and payable unless the Borrower is simultaneously with such termination transferring the Revolving Facility to another division of the Bank, or replacing the Revolving Facility with another revolving credit facility with substantially equivalent terms with the Bank or another division of the Bank.

(d) **Overadvances.** If, at any time, the outstanding aggregate principal amount of all of the Revolving Advances exceeds the lesser of (i) the Revolving Line or (ii) the Borrowing Base, Borrower shall promptly (and no later than the end of the immediately following Business Day) pay to the Bank, in cash, the amount of such excess.

2.4 Interest Rate, Payments, and Calculations.

(a) **Interest Rate.** Except as set forth in Section 2.4(b) below, the principal amount outstanding of each Credit Extension made hereunder shall accrue interest, at a floating per annum rate equal to the Effective Interest Rate.

(b) **Late Fee; Default Rate.** If any payment is not made within ten (10) days after the date such payment is due, Borrower shall pay Bank a late fee equal to the lesser of (i) five percent (5%) of the amount of such unpaid amount or (ii) the maximum amount permitted to be charged under applicable law, not in any case to be less than \$25.00. All Obligations shall bear interest from and after the occurrence and during the continuance of an Event of Default, at a rate equal to five (5) percentage points above the interest rate applicable immediately prior to the occurrence of the Event of Default.

(c) **Payments.** Interest hereunder shall be due and payable on the first calendar day of each month during the term hereof. Bank shall, at its option, charge such interest, all Bank Expenses, and all Periodic Payments or any other amounts Borrower owes to Bank under the Loan Documents when due against (and deduct from) any of Borrower's deposit accounts or against the Revolving Line, in which case those amounts shall thereafter accrue interest at the rate then applicable hereunder. Any interest not paid when due shall be compounded by becoming a part of the Obligations, and such interest shall thereafter accrue interest at the rate then applicable hereunder. All payments shall be free and clear of any taxes, withholdings, duties, impositions or other charges, to the end that Bank will receive the entire amount of any Obligations payable hereunder, regardless of source of payment.

(d) **Computation.** In the event the Index Rate is changed from time to time hereafter, the applicable rate of interest hereunder shall be increased or decreased, as set forth in the definition of "Effective Interest Rate." All interest chargeable under the Loan Documents shall be computed on the basis of a three hundred sixty (360) day year for the actual number of days elapsed.

2.5 **Crediting Payments.** Prior to the occurrence and continuation of an Event of Default, Bank shall credit a wire transfer of funds, check or other item of payment to such deposit account or Obligation as Borrower specifies. After the occurrence and during the continuation of an Event of Default, the receipt by Bank of any wire transfer of funds, check, or other item of payment shall be immediately applied to conditionally reduce Obligations,

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but shall not be considered a payment on account unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Bank after 2:00 p.m. Pacific time shall be deemed to have been received by Bank as of the opening of business on the immediately following Business Day. Whenever any payment to Bank under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

2.6 Fees. Borrower shall pay to Bank the following:

(a) **Loan Fees.** (i) A fully earned and non-refundable fee with respect to the Term Loans equal to Fifty Thousand Dollars (\$50,000) which was received by the Bank on June 8, 2017; and (ii) a fully earned and non-refundable fee with respect to the Revolving Facility equal to Seventeen Thousand Five Hundred Dollars (\$17,500.00) which was received by the Bank on June 8, 2017 and will be applied towards the facility fee described in Section 2.6(e) below.

(b) **Final Payment.** The Final Payment, when due hereunder;

(c) **Prepayment Fee.** The Prepayment Fee, when due hereunder;

(d) **Bank Expenses.** On the Closing Date, all Bank Expenses incurred through the Closing Date, including reasonable attorneys' fees and expenses and, after the Closing Date, all Bank Expenses, including reasonable attorneys' fees and expenses, as and when they are incurred by Bank;

(e) **Facility Fee.** On the Closing Date and on every anniversary of the Closing Date while the Revolving Facility is outstanding, a facility fee equal to Seventeen Thousand Five Hundred Dollars (\$17,500.00); and

(f) **Revolving Facility Termination Fee.** The Revolving Facility Termination Fee, when due hereunder.

2.7 Term. This Agreement shall become effective on the date hereof and, subject to Section 13.7, shall continue in full force and effect for so long as any Obligations (other than inchoate indemnity obligations) remain outstanding or Bank has any obligation to make Credit Extensions under this Agreement. Notwithstanding the foregoing, Bank shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice upon the occurrence and during the continuance of an Event of Default. Notwithstanding termination, Bank's Lien on the Collateral shall remain in effect for so long as any Obligations (other than inchoate indemnity obligations) are outstanding. Upon payment in full of all Obligations (other than inchoate indemnity obligations) and at such time as the Bank's obligation to make Credit Extensions has terminated, Bank shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower.

2.8 Secured Promissory Notes. The Term Loans and Revolving Advances shall be evidenced by Secured Promissory Notes in the form attached as **Exhibit E-1** hereto (for Term Loans) and as **Exhibit E-2** hereto (for Revolving Advances) (each a "Secured Promissory Note"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes the Bank to make or cause to be made, on or about the Funding Date of any Credit Extension or at the time of receipt of any payment of principal on the Secured Promissory Note, an appropriate notation on such Secured Promissory Note Record reflecting the making of such Term Loan, Revolving Advance or (as the case may be) the receipt of such payment. The outstanding amount of each Term Loan and each Revolving Advance set forth on such Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to the Bank, but the failure to record, or any error in so recording, any such amount on the Secured Promissory Note Record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of the Bank as to the loss, theft, destruction, or mutilation of its Secured Promissory Note, Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

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3. CONDITIONS OF LOANS.

3.1 Conditions Precedent to Initial Credit Extension. The obligation of Bank to make the initial Credit Extension is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, the following:

- (a) this Agreement, duly executed by Borrower on the Closing Date and delivered on the Closing Date;
- (b) a certificate of the Secretary of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Agreement, dated as of the Closing Date and delivered on the Closing Date;
- (c) UCC National Form Financing Statement to be filed on the Closing Date;
- (d) duly executed original Secured Promissory Notes in favor of the Bank, dated as of the Funding Date of the initial Credit Extension and delivered on such Funding Date;
- (e) agreement to provide insurance, dated as of the Closing Date and delivered on the Closing Date;
- (f) payment of the fees and Bank Expenses then due specified in Section 2.6 hereof;
- (g) current financial statements of Borrower delivered on or prior to the Closing Date;
- (h) completed perfection certificate of Borrower (the "Perfection Certificate"), dated as of the Closing Date and delivered on the Closing Date;
- (i) a Disbursement Letter in the form of Exhibit B-1 attached hereto with respect to any Term Loan being disbursed and a Revolving Loan Advance Request in the form of Exhibit B-2 attached hereto with respect to any Revolving Advance being disbursed, delivered on the date of such initial Credit Extension and dated as of such date;
- (j) a Loan Payment/Advance Request Form in the form of Exhibit B-3 attached hereto, dated as of the date of such initial Credit Extension and delivered on such date;
- (k) account control agreements in favor of the Bank, and in such form and substance as are reasonably acceptable to the Bank, with respect to each of Borrower's accounts maintained with Wells Fargo Bank and Morgan Stanley;
- (l) the certificate(s) for the Shares of each of Borrower's Subsidiaries, together with Assignment(s) Separate from Certificate, duly executed in blank, delivered on the Closing Date to the Bank;
- (m) such other documents, and completion of such other matters, as Bank may reasonably request.

3.2 Conditions Precedent to all Credit Extensions. The obligation of Bank to make each Credit Extension, including the initial Credit Extension, is further subject to the representations and warranties contained in Section 5 shall be true and correct in all material respects on and as of the effective date of each Credit Extension as though made at and as of each such date (provided, however, that those representations and warranties expressly referring to another date shall be true and correct in all material respects as of such date), and no Event of Default shall have occurred and be continuing, or would exist after giving effect to such Credit Extension. The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2. The making of each Credit Extension shall also be subject to the delivery by Borrower to the Bank, to the extent not delivered at the Closing, of duly executed original Secured

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Promissory Notes, in number, form and content acceptable to the Bank, with respect to such Credit Extension made by the Bank after the Closing Date. Furthermore, if on the date of the making of a Credit Extension (other than the first Credit Extension made hereunder), the Borrower has not been subject to the reporting provisions of Section 6.3 for a period of at least three (3) months, the Borrower shall provide to the Bank, prior to the making of such Credit Extension by the Bank, all reports and certificates that the Borrower would have been obligated to provide during the period of the immediately preceding three (3) months and through the date of the making of such Credit Extension, if throughout such period any amount of Term Loans or Revolving Advances remained outstanding.

3.3 Post-Closing Obligations. Notwithstanding any provision herein or in any other Loan Document to the contrary, to the extent not actually delivered on or prior to the Closing Date, Borrower shall (i) deliver to Bank within 90 days following the Closing Date (or such other date as Bank may agree) a landlord's consent for Borrower's headquarters in such form and substance as is reasonably acceptable to the Bank, (ii) use commercially reasonable efforts to deliver to Bank within 45 days following the Closing Date (or such other date as Bank may agree) (a) a landlord's consent for each of Borrower's other leased locations, if any and (b) a bailee waiver for each location within the United States where Borrower maintains Collateral having a book value in excess of [***] Dollars (\$[***]).

4. CREATION OF SECURITY INTEREST.

4.1 Grant of Security Interest. Borrower hereby grants and pledges to Bank a continuing security interest in all presently existing and hereafter acquired or arising Collateral in order to secure prompt repayment of any and all Obligations and in order to secure prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except as set forth in the Perfection Certificate, such security interest constitutes a valid, first priority security interest in the presently existing Collateral, and will constitute a valid, first priority security interest in Collateral acquired after the date hereof, in each case subject to the terms of the Loan Documents.

4.2 Delivery of Additional Documentation Required. Borrower shall from time to time execute and deliver to Bank, at the request of Bank, all Negotiable Collateral, all financing statements and other documents that Bank may reasonably request, in form reasonably satisfactory to Bank, to perfect and continue the perfection of Bank's security interests in the Collateral and in order to fully consummate all of the transactions contemplated under the Loan Documents. Borrower from time to time may deposit with Bank specific time deposit accounts to secure specific Obligations. Borrower authorizes Bank to hold such balances in pledge and to decline to honor any drafts thereon or any request by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the Obligations are outstanding. Borrower shall deliver to Bank any certificate(s) for the Shares of each of Borrower's Subsidiaries, together with assignment(s) separate from certificate, duly executed in blank; provided, however, delivery of such certificate(s) and assignment(s) shall not be required for the Shares of Codexis Laboratories India Pte., Ltd. for so long as such Subsidiary is in the process of liquidation or dissolution.

4.3 Right to Inspect. Bank (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours but no more than twice a year (unless an Event of Default has occurred and is continuing), to inspect Borrower's Books and to make copies thereof and to check, test, and appraise the Collateral in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

5. REPRESENTATIONS AND WARRANTIES.

Borrower hereby represents and warrants as follows:

5.1 Due Organization and Qualification. Borrower and each Subsidiary is a corporation or limited liability company duly existing under the laws of its state of incorporation or formation, as applicable, and qualified and licensed to do business in any state in which the conduct of its business or its ownership of property requires that it be so qualified and failure to be so qualified would reasonably be expected to result in a Material Adverse Effect.

5.2 Due Authorization; No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a

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breach of any provision contained in Borrower's Articles of Incorporation (or Certificate of Formation, as applicable) or Bylaws (or Limited Liability Company Agreement, as applicable), nor will they constitute an event of default under any material agreement to which Borrower is a party or by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound, which default would reasonably be expected to result in a Material Adverse Effect.

5.3 No Prior Encumbrances. Borrower has good and marketable title to its property, free and clear of Liens, except for Permitted Liens.

5.4 Bona Fide Eligible Accounts. The Eligible Accounts are bona fide existing obligations. The property and services giving rise to such Eligible Accounts has been delivered or rendered to the account debtor or to the account debtor's agent for immediate and unconditional acceptance by the account debtor. Borrower has not received notice of actual or imminent Insolvency Proceeding of any account debtor.

5.5 Merchantable Inventory. All Inventory is in all material respects of good and marketable quality, free from all material defects, except for Inventory for which adequate reserves have been made.

5.6 Intellectual Property. Borrower is the sole owner of the Intellectual Property set forth on the Perfection Certificate as being owned by the Borrower and either owns solely or has the right to use on commercially reasonable terms as a licensee all Intellectual Property necessary for the conduct of Borrower's business as currently conducted and as currently proposed to be conducted. Each of the Patents is valid and enforceable, and no part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and no claim has been made that any part of the Intellectual Property violates the rights of any third party, in each case to the extent likely to result in a Material Adverse Effect.

5.7 Name; Location of Chief Executive Office. As of the Closing Date, except as disclosed in the Perfection Certificate, Borrower has not done business under any name other than that specified on the signature page hereof. The chief executive office of Borrower is located at the address indicated in Section 10 hereof. All Borrower's Inventory and Equipment is located only at the location set forth in Section 10 hereof, other than Inventory or Equipment that is (i) in transit in the ordinary course of business or (ii) at a location (a) listed on the Perfection Certificate, (b) for which Borrower has provided proper notice and otherwise complied with Section 7.10 hereof, or (c) that contains less than [***] Dollars (\$[***]) in assets or property of Borrower or any of its Subsidiaries.

5.8 Litigation. Except as set forth in the Perfection Certificate or as disclosed to Bank in writing as required hereunder, there are no actions or proceedings pending by or against Borrower or any Subsidiary before any court or administrative agency in which an adverse decision could have a Material Adverse Effect, or a material adverse effect on Borrower's interest or Bank's security interest in the Collateral.

5.9 No Material Adverse Change in Financial Statements. All consolidated and consolidating, as applicable, financial statements related to Borrower and any Subsidiary that Bank has received from Borrower fairly present in all material respects Borrower's financial condition as of the date thereof and Borrower's consolidated and consolidating, as applicable, results of operations for the period then ended. There has not been a material adverse change in the consolidated or the consolidating financial condition of Borrower since the date of the most recent of such financial statements submitted to Bank.

5.10 Solvency, Payment of Debts. Borrower is solvent and able to pay its debts (including trade debts) as they mature.

5.11 Regulatory Compliance. Borrower and each Subsidiary have met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA, and no event has occurred resulting from Borrower's failure to comply with ERISA that could result in Borrower's incurring any material liability. Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940. Borrower is not engaged principally, or as one of the important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T and U of the Board of Governors of the Federal Reserve System). Borrower has complied with all the provisions of

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the Federal Fair Labor Standards Act. Borrower has not violated any statutes, laws, ordinances or rules applicable to it, violation of which could have a Material Adverse Effect.

None of Borrower, any of its Subsidiaries, or, to their knowledge, any of Borrower's or its Subsidiaries' Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower and any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.12 Environmental Condition. Except as disclosed in the Perfection Certificate, none of Borrower's or any Subsidiary's properties or assets has ever been used by Borrower or any Subsidiary or, to the best of Borrower's knowledge, by previous owners or operators, in the disposal of, or to produce, store, handle, treat, release, or transport, any hazardous waste or hazardous substance other than in accordance with applicable law; to the best of Borrower's knowledge, none of Borrower's properties or assets has ever been designated or identified in any manner pursuant to any environmental protection statute as a hazardous waste or hazardous substance disposal site, or a candidate for closure pursuant to any environmental protection statute; no lien arising under any environmental protection statute has attached to any revenues or to any real or personal property owned by Borrower or any Subsidiary; and neither Borrower nor any Subsidiary has received a summons, citation, notice, or directive from the Environmental Protection Agency or any other federal, state or other governmental agency concerning any action or omission by Borrower or any Subsidiary resulting in the releasing, or otherwise disposing of hazardous waste or hazardous substances into the environment.

5.13 Taxes. Borrower and each Subsidiary have filed or caused to be filed all tax returns required to be filed, and have paid, or have made adequate provision for the payment of, all taxes reflected therein, in each case except as permitted under Section 6.5.

5.14 Subsidiaries. As of the Closing Date and thereafter as explicitly permitted by the Bank in writing pursuant to the terms herein, Borrower does not own any stock, partnership interest or other equity securities of any Person, except for Permitted Investments.

5.15 Government Consents. Borrower and each Subsidiary have obtained all material consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted.

5.16 Accounts. All of Borrower's or any Subsidiary's operating, depository or investment accounts maintained or invested with a Person other than Bank are set forth on the Perfection Certificate. On and after the earlier of the (i) 60th day following the Closing Date and (ii) the date on which the first Credit Extension is made hereunder, at any time that the aggregate balance of Borrower's accounts held with Bank and Bank's Affiliates is less than \$***], none of Borrower's nor any domestic U.S. Subsidiary's operating, depository or investment accounts are maintained or invested with a Person other than Bank. Notwithstanding the foregoing, on and after the 60th day following the Closing Date, neither the Borrower nor any of its domestic Subsidiaries maintains any operating, depository or investment accounts maintained or invested with any Person other than the Bank unless such account is subject to an account control agreement in favor of the Bank in such form and substance as is reasonably acceptable to the Bank or is a deposit account exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's or any domestic U.S. Subsidiary's employees and identified to Bank by Borrower as such.

Furthermore, the aggregate amount of cash and cash equivalent assets held by direct and indirect Foreign Subsidiaries of Borrower in accounts not subject to a control agreement in favor of the Bank (and in such form and substance as is reasonably acceptable to the Bank) does not exceed ***] Dollars (\$***]) (of which no more than ***] Dollars (\$***]) may be maintained in accounts other than the accounts for Codexis Laboratories India Pte., Ltd.).

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5.17 Use of Proceeds. Borrower shall use the proceeds of the Term Loan solely as working capital and to fund its general business requirements in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes.

5.18 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Bank contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading.

6. AFFIRMATIVE COVENANTS.

Commencing on the Closing Date, Borrower shall do all of the following:

6.1 Good Standing. Borrower shall maintain its and each of its Subsidiaries' legal existence and good standing in its jurisdiction of incorporation or formation, as applicable, and maintain qualification in each jurisdiction in which it is required under applicable law and failure to be so qualified could reasonably be expected to result in a Material Adverse Effect. Borrower shall maintain, and shall cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which could have a Material Adverse Effect.

6.2 Government Compliance. Borrower shall meet, and shall cause each Subsidiary to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply, and shall cause each Subsidiary to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, noncompliance with which could have a Material Adverse Effect.

6.3 Financial Statements, Reports, Certificates. As long as there is any outstanding principal of the Term Loans or any Revolving Advance (for the avoidance of doubt, the requirements set forth in this Section 6.3 shall not be in effect prior to the first Funding Date):

(a) Borrower shall deliver the following to Bank: (i) as soon as available, but in any event within thirty (30) days after the end of each calendar month, a company prepared consolidating and consolidated balance sheet, income statement, and cash flow statement covering Borrower's consolidated operations during such period, prepared in accordance with GAAP, consistently applied, in a form reasonably acceptable to Bank and certified by a Responsible Officer; (ii) as soon as available, but in any event within one hundred eighty (180) days after the end of Borrower's fiscal year, audited consolidated financial statements of Borrower prepared in accordance with GAAP, consistently applied, together with an unqualified opinion on such financial statements of an independent certified public accounting firm reasonably acceptable to Bank; (iii) as soon as available, but in any event within two hundred seventy (270) days after the end of Borrower's fiscal year, Borrower's annual tax returns as prepared by Borrower's certified public accountant; (iv) copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and, if applicable, all reports on Forms 10-K and 10-Q filed with the Securities and Exchange Commission; (v) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened against Borrower or any Subsidiary that could result in damages or costs to Borrower or any Subsidiary of Two Hundred Fifty Thousand Dollars (\$250,000) or more; (vi) as soon as available, but in any event no later than the earlier to occur of thirty (30) days following the beginning of each fiscal year the then current draft of the annual operating budget and financial projections (including income statements, balance sheets and cash flow statements) for such fiscal year, presented in a monthly format; (vii) as soon as available, but in any event no later than the earlier to occur of sixty (60) days following the beginning of each fiscal year or the date of approval by Borrower's board of directors, the annual operating budget and financial projections (including income statements, balance sheets and cash flow statements) for such fiscal year, presented in a monthly format, approved by Borrower's board of directors, and in a form and substance reasonably acceptable to Bank; and (viii) such budgets, sales projections, operating plans or other financial information as Bank may reasonably request from time to time.

(b) Borrower shall deliver to Bank with the monthly financial statements required pursuant to Section 6.3(a)(i) hereof, a Compliance Certificate signed by a Responsible Officer in substantially the form of **Exhibit C** hereto.

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.**

(c) Borrower shall deliver to the Bank, simultaneously with each request for a Revolving Advance and within ten (10) days after the end of each month during which any Revolving Advances are outstanding, (i) aged listings of accounts receivable and accounts payable (by sales date), (ii) a deferred revenue report (if applicable), (iii) a billings report, (iv) a cash collections report and (v) a duly completed Borrowing Base Certificate signed by a Responsible Officer.

(d) Until the Cash Collateral Account has been established, Borrower shall deliver to the Bank, on third and fifth day of each week, Borrower's cash receipt journal and all cash receipts.

Bank shall have a right from time to time hereafter, with reasonable notice to Borrower, to audit Borrower's Accounts and appraise Collateral at Borrower's expense, provided that such audits will be conducted no more often than every six (6) months unless an Event of Default has occurred and is continuing; provided, further, that if an Event of Default has occurred and is continuing no notice from the Bank to the Borrower shall be required for Bank to audit Borrower's Accounts or appraise Collateral.

Notwithstanding the foregoing, documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the Securities and Exchange Commission) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the internet at Borrower's website address.

6.4 Inventory; Returns. Borrower shall keep all Inventory in good and marketable condition, free from all material defects except for Inventory for which adequate reserves have been made. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist at the time of the execution and delivery of this Agreement. Borrower shall promptly notify Bank of all returns and recoveries and of all disputes and claims, where the return, recovery, dispute or claim involves more than Two Hundred Fifty Thousand Dollars (\$250,000).

6.5 Taxes. Borrower shall make, and shall cause each Subsidiary to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, and will execute and deliver to Bank, on demand, appropriate certificates attesting to the payment or deposit thereof; and Borrower will make, and will cause each Subsidiary to make, timely payment or deposit of all material tax payments and withholding taxes required of it by applicable laws, including, but not limited to, those laws concerning F.I.C.A., F.U.T.A., state disability, and local, state, and federal income taxes, and will, upon request, furnish Bank with proof reasonably satisfactory to Bank indicating that Borrower or a Subsidiary has made such payments or deposits; provided that Borrower or a Subsidiary need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is reserved against (to the extent required by GAAP) by Borrower.

6.6 Insurance.

(a) Borrower, at its expense, shall keep the Collateral insured against loss or damage by fire, theft, explosion, sprinklers, and all other hazards and risks, and in such amounts, as ordinarily insured against by other owners in similar businesses conducted in the locations where Borrower's business is conducted on the date hereof. Borrower shall also maintain insurance relating to Borrower's business, ownership and use of the Collateral in amounts and of a type that are customary to businesses similar to Borrower's.

(b) All such policies of insurance shall be in such form, with such companies, and in such amounts as are reasonably satisfactory to Bank. All such policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Bank, showing Bank as an additional loss payee thereof, and all liability insurance policies shall show the Bank as an additional insured and shall specify that the insurer must give at least twenty (20) days' notice to Bank before canceling its policy for any reason (10 days' notice before cancelling for non-payment of premium). Upon Bank's request, Borrower shall deliver to Bank certified copies of such policies of insurance and evidence of the payments of all premiums therefor. All proceeds payable under any such policy shall, at the option of Bank, be payable to Bank to be applied on account of the Obligations.

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6.7 Accounts. Borrower shall, on and after the date that is the earlier of (i) 60th day following the Closing Date and (ii) the date on which the first Credit Extension is made hereunder, at any time that the aggregate balance of Borrower's accounts held with Bank and Bank's Affiliates is less than \$[***]; (i) maintain and shall cause each of its domestic U.S. Subsidiaries to maintain all of its depository, operating, and investment accounts with Bank and (ii) endeavor to utilize and shall cause each of its domestic U.S. Subsidiaries to endeavor to utilize Bank's International Banking Division for any international banking services required by Borrower, including, but not limited to, foreign currency wires, hedges and swaps. On and after the date that is the 60th day following the Closing Date For each account that Borrower or any domestic U.S. Subsidiary maintains outside of Bank, Borrower shall cause the applicable bank or financial institution at or with which any such account is maintained to execute and deliver an account control agreement or other appropriate instrument evidencing the perfection of Bank's security interest therein and control with respect thereto in form and substance reasonably satisfactory to Bank, other than deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's or any domestic U.S. Subsidiary's employees and identified to Bank by Borrower as such.

Furthermore, the aggregate amount of cash and cash equivalent assets held by direct and indirect Foreign Subsidiaries of Borrower in accounts not subject to a control agreement in favor of the Bank (and in such form and substance as is reasonably acceptable to the Bank) does not exceed [***] Dollars (\$[***]) (of which no more than [***] Dollars (\$[***]) may be maintained in accounts other than the accounts for Codexis Laboratories India Pte., Ltd.).

6.8 Intellectual Property Rights. On the Compliance Certificate next due hereunder, Borrower shall give Bank written notice of any applications or registrations of intellectual property rights filed with the United States Patent and Trademark Office, including the date of such filing and the registration or application numbers, if any. Borrower shall promptly give Bank written notice upon the filing of any applications or registrations with the United States Copyright Office, including the title of such intellectual property rights to be registered, as such title will appear on such applications or registrations, and the date such applications or registrations will be filed. Upon filing any such applications or registrations with the United States Copyright Office, Borrower shall promptly provide Bank with (i) a copy of such applications or registrations, without the exhibits, if any, thereto, (ii) evidence of the filing of any documents requested by Bank to be filed for Bank to maintain the perfection and priority of its security interest in such intellectual property rights, and (iii) the date of such filing.

Borrower and each of its Subsidiaries shall: (a) use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to Borrower's business; (b) promptly advise Bank in writing of infringement by a third party of its Intellectual Property that is material to Borrower's business; and (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Bank's prior written consent.

6.9 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its Subsidiaries, after the Closing Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral with, or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then Borrower or such Subsidiary, in the event that the Collateral at any new location is valued in excess of [***] Dollars (\$[***]) in the aggregate, Borrower or the applicable Subsidiary shall use commercially reasonable efforts to cause such bailee or landlord, as applicable, execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Bank prior to the addition of any new offices or business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.10 Performance-To-Plan.

(a) As of the end of each fiscal month between the date hereof and the Maturity Date, the aggregate consolidated product revenues of the Borrower for such month and the immediately preceding five (5) fiscal months shall exceed an amount equal to (i) through December 2018, the amount set forth on Exhibit F attached hereto and (ii) on and after January 2019, in an amount equal to 70% of the amount of projected consolidated product revenues for such month as set forth in the Borrower's financial projections delivered to Bank in accordance with Section 6.3(a)(vii) which financial projections have been approved by Borrower's board of directors and are in a form and substance reasonably acceptable to Bank.

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(b) Notwithstanding the foregoing, the Borrower shall not be required to comply with the covenant set forth in Section 6.10(a) for any particular fiscal month provided that at the end of such month the aggregate amount of cash and cash equivalents that the Borrower that is maintained in accounts with the Bank or Bank's Affiliates is equal to or greater than six times the Operating Burn as determined at the end of such fiscal month.

6.11 Creation/Acquisition of Subsidiaries. In the event Borrower, or any of its Subsidiaries creates or acquires any Subsidiary after the Closing Date, Borrower shall provide prior written notice to Bank of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Bank to cause each such Subsidiary to become a co-Borrower hereunder or to guarantee the Obligations of Borrower under the Loan Documents and, in each case, grant a continuing pledge and security interest in and to the assets of such Subsidiary (substantially as described on **Exhibit A** hereto); and Borrower (or its Subsidiary, as applicable) shall grant and pledge to Bank a perfected security interest in the all of the equity interests of each such newly created Subsidiary; provided, however, that solely in the circumstance in which Borrower or any Subsidiary creates or acquires a Foreign Subsidiary, (i) such Foreign Subsidiary shall not be required to guarantee the Obligations of Borrower under the Loan Documents and grant a continuing pledge and security interest in and to the assets of such Foreign Subsidiary, and (ii) Borrower shall not be required to grant and pledge to the Bank a perfected security interest in more than sixty-five percent (65%) of the stock, units or other evidence of ownership of such Foreign Subsidiary.

6.12 Litigation Cooperation. Commencing on the Closing Date and continuing through the termination of this Agreement, without expense to Bank, Borrower shall make available to Bank each of Borrower's officers, employees and agents that are employed by the Borrower or any of its Subsidiaries, a contractor of the Borrower or any of its Subsidiaries or otherwise under the direction or control of the Borrower or any of its Subsidiaries at such time, and Borrower's Books, to the extent that Bank may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

6.13 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Bank to effect the purposes of this Agreement.

6.14 Accounts Receivable.

(a) **Schedules and Documents Relating to Accounts.** Borrower shall deliver to the Bank transaction reports and schedules of collections, as provided in Sections 6.3(c) and (d), on the Bank's standard forms, if any; provided, however, that Borrower's failure to execute and deliver the same shall not affect or limit the Bank's Lien and other rights in all of Borrower's Accounts, nor shall the Bank's failure to advance or lend against a specific Account affect or limit the Bank's Lien and other rights therein. If reasonably requested by the Bank, Borrower shall furnish the Bank with copies (or, at the Bank's request, originals) of all contracts, orders, invoices, and other similar documents, and all shipping instructions, delivery receipts, bills of lading, and other evidence of delivery, for any goods the sale or disposition of which gave rise to such Accounts. In addition, Borrower shall deliver to the Bank on any reasonable request, the originals of all instruments, chattel paper, security agreements, guarantees and other documents and property evidencing or securing any Accounts, in the same form as received, with all necessary indorsements, and copies of all credit memos.

(b) **Disputes.** Borrower shall promptly notify the Bank of all disputes or claims relating to Accounts in excess of Two Hundred Thousand Dollars (\$200,000.00). Borrower may forgive (completely or partially), compromise, or settle any Account for less than payment in full, or agree to do any of the foregoing so long as (i) Borrower does so in good faith, in a commercially reasonable manner, in the ordinary course of business, in arm's-length transactions, and reports the same to the Bank within five (5) Business Days; (ii) no Event of Default has occurred and is continuing; and (iii) after taking into account all such discounts, settlements and forgiveness, the aggregate principal amount of all outstanding Revolving Advances will not exceed the lesser of (i) the Revolving Line or (ii) the Borrowing Base.

(c) **Collection of Accounts.** Borrower shall have the right to collect all Accounts, unless and until an Event of Default has occurred and is continuing and Bank instructs it to stop collecting its Accounts. Borrower shall via wire transfer, ACH or electronic deposit capture all proceeds of Accounts into a Collateral Account that is a

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“blocked account” as specified by the Bank (the “Cash Collateral Account”). Whether or not an Event of Default has occurred and is continuing, Borrower shall immediately deliver or cause to be delivered all payments on and proceeds of Accounts to the Cash Collateral Account. So long as no Event of Default shall have occurred and be continuing, such payments on and proceeds of Accounts shall be transferred to a deposit account of Borrower maintained with the Bank. It will be considered an immediate Event of Default if the Cash Collateral Account is not established and operational prior to the later of (i) the initial Revolving Advance and (ii) within thirty (30) days of the Closing Date, and in either case, at all times thereafter.

Notwithstanding anything herein to the contrary, the Bank shall have the right to notify Borrower’s account debtors of Bank’s security interest in the Accounts at the Bank’s sole discretion.

(d) Verification. The Bank (or its agents or representatives) may, from time to time, verify directly with the respective account debtors the validity, amount and other matters relating to the Accounts, in the name of the Bank, and notify any account debtor of the Bank’s security interest in such Account; provided, however, that so long as no Event of Default has occurred and is continuing, the Bank will endeavor in good faith to notify Borrower in advance of such verification, provided that the failure to do so shall not be a breach of this Agreement or give rise to any liability to the Bank. Without limiting the foregoing, the Bank may, at its reasonable discretion at any given time, verify Borrower’s invoices issued to Borrower’s customers. Bank may use such methods of verification that it considers appropriate in its reasonable discretion, which methods may include, without limitation, proof of delivery, access to customers’ online A/P systems, matching purchase orders or contracts to invoices, analyzing customer payment history, and direct telephonic or written confirmation with customers.

(e) No Liability. The Bank shall not be responsible or liable for any shortage or discrepancy in, damage to, or loss or destruction of, any goods, the sale or other disposition of which gives rise to an Account, or for any error, act, omission, or delay of any kind occurring in the settlement, failure to settle, collection or failure to collect any Account, or for settling any Account in good faith for less than the full amount thereof, nor shall the Bank be deemed to be responsible for any of Borrower’s obligations under any contract or agreement giving rise to an Account. Nothing herein shall, however, relieve the Bank from liability for its own gross negligence or willful misconduct.

7. NEGATIVE COVENANTS.

Commencing on the Closing Date, Borrower will not do any of the following:

7.1 Dispositions. Convey, sell, lease, transfer or otherwise dispose of (collectively, a “Transfer”), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, other than: (i) Transfers of Inventory in the ordinary course of business; (ii) Transfers consisting of Permitted Licenses; (iii) Transfers of worn-out, surplus or obsolete Equipment which was not financed by Bank; (iv) Transfers in connection with and consisting of Permitted Liens or Permitted Investments; (v) Transfers of cash and cash equivalents in connection with transactions not prohibited hereunder and in the ordinary course of business; (vi) distributions permitted under Section 7.6; (vii) Transfers of other assets for fair market value not to exceed [***] Dollars (\$[***]) in the aggregate per year; and (viii) Transfers of [***] held by the Borrower on the Closing Date.

7.2 Change in Business or Executive Office. Engage in any business, or permit any of its Subsidiaries to engage in any business, other than the businesses currently engaged in by Borrower and any business substantially similar or related thereto (or incidental thereto); or cease to conduct business in the manner conducted by Borrower as of the Closing Date; or without thirty (30) days prior written notification to Bank, relocate its chief executive office or state of incorporation or change its legal name; or without Bank’s prior written consent, change the date on which its fiscal year ends.

7.3 Change in Control; Mergers or Acquisitions. Without Bank’s consent, suffer or permit a Change in Control; or merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or any material portion of property of another Person, other than mergers or consolidations for which the cash consideration does not exceed [***] Dollars (\$[***]) in the aggregate per year. A Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a “co-Borrower” hereunder or has provided

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a secured guaranty of Borrower's Obligations hereunder) or with (or into) Borrower provided Borrower is the surviving legal entity, and as long as no Event of Default is occurring prior thereto or arises as a result therefrom and such merger does not materially and adversely impact the financial condition of the Borrower.

7.4 Indebtedness. Create, incur, assume or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness.

7.5 Encumbrances. Create, incur, assume or suffer to exist any Lien with respect to any of its Collateral (including without limitation, its Intellectual Property), or assign or otherwise convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, or agree with any Person other than Bank not to grant a security interest in, or otherwise encumber, any of its property (including without limitation, its Intellectual Property), or permit any Subsidiary to do so, except as otherwise permitted in Section 7.1 and the definition of "Permitted Liens" herein.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock, or permit any of its Subsidiaries to do so, except that Borrower may (i) repurchase the stock of former employees, officers, managers or consultants pursuant to stock repurchase agreements as long as an Event of Default does not exist prior to such repurchase or would not exist after giving effect to such repurchase, (ii) pay any dividends or other distribution solely of capital stock, (iii) purchase or repurchase capital stock in connection with the exercise of stock options or stock appreciation in the ordinary course of business and (iv) make any purchases of fractional shares of capital stock arising out of stock dividends, splits or combinations or business combinations; provided, however, the aggregate amount of payments made under this clause (iv) shall not exceed [***] Dollars (\$[***]) in the aggregate in any given year.

7.7 Investments. Directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments; or maintain or invest any of its domestic depository, operating, and investment accounts with a Person other than Bank or permit any of its Subsidiaries to do so unless such Person has entered into an account control agreement with Bank in form and substance satisfactory to Bank or as otherwise permitted under Section 6.8; or suffer or permit any Subsidiary to be a party to, or be bound by, an agreement that restricts such Subsidiary from paying dividends or otherwise distributing property to Borrower.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for (i) transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person, (ii) Subordinated Debt made in accordance with the terms hereof or equity investments by Borrower's investors in Borrower, (iii) compensation and benefit arrangements (including the granting of options or other equity compensation arrangements) and any indemnification arrangements with employees, officers, managers or consultants approved by, or pursuant to, any plan approved by the board of managers of Borrower and (iv) distributions permitted hereunder to be made to Affiliates.

7.9 Subordinated Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt, or amend any provision contained in any documentation relating to the Subordinated Debt without Bank's prior written consent.

7.10 Inventory and Equipment. Store the Inventory or the Equipment other than in accordance with Section 6.9 hereof.

7.11 Compliance. Become an "investment company" or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose. Fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur, fail to comply with the Federal Fair Labor Standards Act or violate any law or regulation, which violation could have a Material Adverse Effect,

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or a material adverse effect on the Collateral or the priority of Bank's Lien on the Collateral, or permit any of its Subsidiaries to do any of the foregoing.

7.12 Aggregate Assets of Foreign Subsidiaries. Allow the aggregate assets of Codexis Laboratories India Pte., Ltd. to exceed [***] Dollars (\$[***]) or allow the aggregate assets of all of the Borrower's direct and indirect Foreign Subsidiaries other than Codexis Laboratories India Pte., Ltd. to exceed [***] Dollars (\$[***]) in the aggregate.

7.13 Compliance with Anti-Terrorism Laws. Bank hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Bank's policies and practices, Bank is required to obtain, verify and record certain information and documentation that identifies Borrower and each of its Subsidiaries and their principals, which information includes the name and address of Borrower and each of its Subsidiaries and their principals and such other information that will allow Bank to identify such party in accordance with Anti-Terrorism Laws. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Borrower and each of its Subsidiaries shall immediately notify Bank if Borrower or such Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

8. EVENTS OF DEFAULT.

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations; within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1(a) hereof). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Sections 6.3, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12 or 6.14 or violates any of the covenants contained in Article 7 of this Agreement; or

(b) If Borrower fails or neglects to perform or observe any other material term, provision, condition, covenant contained in this Agreement, in any of the Loan Documents, or in any other present or future agreement between Borrower and Bank and as to any default under such other term, provision, condition or covenant that can be cured, has failed to cure such default within fifteen days after Borrower receives notice thereof or any officer of Borrower becomes aware thereof; provided, however, that if the default cannot by its nature be cured within the fifteen day period or cannot after diligent attempts by Borrower be cured within such fifteen day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional reasonable period (which shall not in any case exceed 30 days) to attempt to cure such default, and within such reasonable time period the failure to have cured such default shall not be deemed an Event of Default but no Credit Extensions will be made;

8.3 Material Adverse Effect. If there occurs a Material Adverse Effect;

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8.4 Attachment. If any portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within fifteen (15) days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within fifteen (15) days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be required to be made during such cure period);

8.5 Insolvency. If Borrower becomes insolvent, or if an Insolvency Proceeding is commenced by Borrower, or if an Insolvency Proceeding is commenced against Borrower and is not dismissed or stayed within forty-five (45) days (provided that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.6 Other Agreements. If there is a default or other failure to perform in any agreement to which Borrower is a party or by which it is bound resulting in a right by a third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Two Hundred Fifty Thousand Dollars (\$250,000) or which could have a Material Adverse Effect;

8.7 Judgments. If a judgment or judgments for the payment of money (not covered by insurance and regardless of whether or not Bank has been notified about related litigation or such judgment) in an amount, individually or in the aggregate, of at least Two Hundred Fifty Thousand Dollars (\$250,000) shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of fifteen (15) days (provided that no Credit Extensions will be made prior to the satisfaction or stay of such judgment); or

8.8 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth herein or in any certificate delivered to Bank by any Responsible Officer pursuant to this Agreement or to induce Bank to enter into this Agreement or any other Loan Document.

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower or any of its Subsidiaries and any creditor of Borrower or any of its Subsidiaries that signed a subordination, intercreditor, or other similar agreement with Bank, or any creditor that has signed such an agreement with Bank breaches any terms of such agreement.

8.10 Governmental Approvals. Any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any governmental authority shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course for a full term and such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Effect.

9. BANK'S RIGHTS AND REMEDIES.

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all or any portion of the Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence and continuance of an Event of Default described in Section 8.5, all Obligations shall become immediately due and payable without any action by Bank);

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(b) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Bank;

(c) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order that Bank reasonably considers advisable;

(d) Make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Bank so requires, and to make the Collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Bank's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Bank a license to enter into possession of such premises and to occupy the same, without charge, in order to exercise any of Bank's rights or remedies provided herein, at law, in equity, or otherwise;

(e) Set off and apply to the Obligations any and all (i) balances and deposits of Borrower held by Bank, or (ii) indebtedness at any time owing to or for the credit or the account of Borrower held by Bank;

(f) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Bank is hereby granted a license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Bank's benefit;

(g) Dispose of the Collateral by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Bank determines is commercially reasonable, and apply any proceeds to the Obligations in whatever manner or order Bank deems appropriate;

(h) Bank may credit bid and purchase at any public sale; and

(i) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

9.2 Power of Attorney. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Bank (and any of Bank's designated officers, or employees) as Borrower's true and lawful attorney to: (a) send requests for verification of Accounts or notify account debtors of Bank's security interest in the Accounts; (b) endorse Borrower's name on any checks or other forms of payment or security that may come into Bank's possession; (c) sign Borrower's name on any invoice or bill of lading relating to any Account, drafts against account debtors, schedules and assignments of Accounts, verifications of Accounts, and notices to account debtors; (d) dispose of any Collateral; (e) make, settle, and adjust all claims under and decisions with respect to Borrower's policies of insurance; (f) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Bank determines to be reasonable; and (g) to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral. The appointment of Bank as Borrower's attorney in fact, and each and every one of Bank's rights and powers, being coupled with an interest, is irrevocable until all of the Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Bank's obligation to provide Credit Extensions hereunder is terminated.

9.3 Accounts Collection. At any time after the occurrence of an Event of Default that is continuing, Bank may notify any Person owing funds to Borrower of Bank's security interest in such funds and verify the amount of such Account. At any time after the occurrence and continuance of an Event of Default that is continuing, Borrower shall collect all amounts owing to Borrower for Bank, receive in trust all payments as Bank's trustee, and

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immediately deliver such payments to Bank in their original form as received from the account debtor, with proper endorsements for deposit.

9.4 Bank Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Bank may do any or all of the following after reasonable notice to Borrower: (a) make payment of the same or any part thereof; (b) set up such reserves under a loan facility in Section 2.1 as Bank deems necessary to protect Bank from the exposure created by such failure; or (c) obtain and maintain insurance policies of the type discussed in Section 6.6 of this Agreement, and take any action with respect to such policies as Bank deems prudent. Any amounts so paid or deposited by Bank shall constitute Bank Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Bank shall not constitute an agreement by Bank to make similar payments in the future or a waiver by Bank of any Event of Default under this Agreement.

9.5 Bank's Liability for Collateral. So long as Bank complies with reasonable banking practices, Bank shall not in any way or manner be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage thereto occurring or arising in any manner or fashion from any cause; (c) any diminution in the value thereof; or (d) any act or default of any carrier, warehouseman, bailee, forwarding agency, or other person whomsoever. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 Remedies Cumulative. Bank's rights and remedies under this Agreement, the Loan Documents and all other agreements shall be cumulative. Bank shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election, or acquiescence by it. No waiver by Bank shall be effective unless made in a written document signed on behalf of Bank and then shall be effective only in the specific instance and for the specific purpose for which it was given.

9.7 Demand; Protest. Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees at any time held by Bank on which Borrower may in any way be liable.

10. NOTICES.

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail or facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Bank or Borrower may change its mailing or electronic mail address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower: CODEXIS, INC.

200 Penobscot Drive
Redwood City, CA 94063
Attn: Gordon Sangster, CFO
FAX: 650-421-8350
EMAIL: gordon.sangster@codexis.com

If to Bank: Bridge Bank, a division of Western Alliance Bank

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12220 El Camino Real, Suite 100
San Diego, CA 92130
Attn: Bill Wickline
EMAIL: bill.wickline@bridgebank.com

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER.

This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Each of Borrower and Bank hereby submits to the exclusive jurisdiction of the state and Federal courts located in the County of Santa Clara, State of California. BORROWER AND BANK EACH HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS. EACH PARTY RECOGNIZES AND AGREES THAT THE FOREGOING WAIVER CONSTITUTES A MATERIAL INDUCEMENT FOR IT TO ENTER INTO THIS AGREEMENT. EACH PARTY REPRESENTS AND WARRANTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

12. JUDICIAL REFERENCE PROVISION.

12.1 In the event the jury trial waiver set forth above is not enforceable, the parties elect to proceed under this Judicial Reference Provision.

12.2 With the exception of the items specified in Section 12.3, below, any controversy, dispute or claim (each, a "**Claim**") between the parties arising out of or relating to this Agreement or any other Loan Document, will be resolved by a reference proceeding in California in accordance with the provisions of Sections 638 et seq. of the California Code of Civil Procedure ("**CCP**"), or their successor sections, which shall constitute the exclusive remedy for the resolution of any Claim, including whether the Claim is subject to the reference proceeding. Except as otherwise provided in the Loan Documents, venue for the reference proceeding will be in the state or federal court in the county or district where the real property involved in the action, if any, is located or in the state or federal court in the county or district where venue is otherwise appropriate under applicable law (the "**Court**").

12.3 The matters that shall not be subject to a reference are the following: (i) nonjudicial foreclosure of any security interests in real or personal property, (ii) exercise of self-help remedies (including, without limitation, set-off), (iii) appointment of a receiver and (iv) temporary, provisional or ancillary remedies (including, without limitation, writs of attachment, writs of possession, temporary restraining orders or preliminary injunctions). This reference provision does not limit the right of any party to exercise or oppose any of the rights and remedies described in clauses (i) and (ii) or to seek or oppose from a court of competent jurisdiction any of the items described in clauses (iii) and (iv). The exercise of, or opposition to, any of those items does not waive the right of any party to a reference pursuant to this reference provision as provided herein.

12.4 The referee shall be a retired judge or justice selected by mutual written agreement of the parties. If the parties do not agree within ten (10) days of a written request to do so by any party, then, upon request of any party, the referee shall be selected by the Presiding Judge of the Court (or his or her representative). A request for appointment of a referee may be heard on an ex parte or expedited basis, and the parties agree that irreparable harm would result if ex parte relief is not granted. Pursuant to CCP § 170.6, each party shall have one peremptory challenge to the referee selected by the Presiding Judge of the Court (or his or her representative).

12.5 The parties agree that time is of the essence in conducting the reference proceedings. Accordingly, the referee shall be requested, subject to change in the time periods specified herein for good cause shown, to (i) set the matter for a status and trial-setting conference within fifteen (15) days after the date of selection of the

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referee, (ii) if practicable, try all issues of law or fact within one hundred twenty (120) days after the date of the conference and (iii) report a statement of decision within twenty (20) days after the matter has been submitted for decision.

12.6 The referee will have power to expand or limit the amount and duration of discovery. The referee may set or extend discovery deadlines or cutoffs for good cause, including a party's failure to provide requested discovery for any reason whatsoever. Unless otherwise ordered based upon good cause shown, no party shall be entitled to "priority" in conducting discovery, depositions may be taken by either party upon seven (7) days written notice, and all other discovery shall be responded to within fifteen (15) days after service. All disputes relating to discovery which cannot be resolved by the parties shall be submitted to the referee whose decision shall be final and binding.

12.7 Except as expressly set forth herein, the referee shall determine the manner in which the reference proceeding is conducted including the time and place of hearings, the order of presentation of evidence, and all other questions that arise with respect to the course of the reference proceeding. All proceedings and hearings conducted before the referee, except for trial, shall be conducted without a court reporter, except that when any party so requests, a court reporter will be used at any hearing conducted before the referee, and the referee will be provided a courtesy copy of the transcript. The party making such a request shall have the obligation to arrange for and pay the court reporter. Subject to the referee's power to award costs to the prevailing party, the parties will equally share the cost of the referee and the court reporter at trial.

12.8 The referee shall be required to determine all issues in accordance with existing case law and the statutory laws of the State of California. The rules of evidence applicable to proceedings at law in the State of California will be applicable to the reference proceeding. The referee shall be empowered to enter equitable as well as legal relief, enter equitable orders that will be binding on the parties and rule on any motion which would be authorized in a court proceeding, including without limitation motions for summary judgment or summary adjudication. The referee shall issue a decision at the close of the reference proceeding which disposes of all claims of the parties that are the subject of the reference. Pursuant to CCP § 644, such decision shall be entered by the Court as a judgment or an order in the same manner as if the action had been tried by the Court and any such decision will be final, binding and conclusive. The parties reserve the right to appeal from the final judgment or order or from any appealable decision or order entered by the referee. The parties reserve the right to findings of fact, conclusions of laws, a written statement of decision, and the right to move for a new trial or a different judgment, which new trial, if granted, is also to be a reference proceeding under this provision.

12.9 If the enabling legislation which provides for appointment of a referee is repealed (and no successor statute is enacted), any dispute between the parties that would otherwise be determined by reference procedure will be resolved and determined by arbitration. The arbitration will be conducted by a retired judge or justice, in accordance with the California Arbitration Act §1280 through §1294.2 of the CCP as amended from time to time. The limitations with respect to discovery set forth above shall apply to any such arbitration proceeding.

12.10 THE PARTIES RECOGNIZE AND AGREE THAT ALL CONTROVERSIES, DISPUTES AND CLAIMS RESOLVED UNDER THIS REFERENCE PROVISION WILL BE DECIDED BY A REFEREE AND NOT BY A JURY. AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS, HIS OR HER OWN CHOICE, EACH PARTY KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, AGREES THAT THIS REFERENCE PROVISION WILL APPLY TO ANY CONTROVERSY, DISPUTE OR CLAIM BETWEEN OR AMONG THEM ARISING OUT OF OR IN ANY WAY RELATED TO, THIS AGREEMENT OR THE OTHER LOAN DOCUMENTS.

13. GENERAL PROVISIONS.

13.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Bank's prior written consent, which consent may be granted or withheld in Bank's sole discretion. Bank shall have the right without the consent of or notice to Borrower to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights and benefits hereunder. Notwithstanding anything to the contrary contained herein, so long as no Event of Default has occurred and is continuing,

[*] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.**

Bank may not make an assignment, without Borrower's consent, to a direct competitor of Borrower, or a vulture fund, each as determined by Bank.

13.2 Indemnification. Borrower shall defend, indemnify and hold harmless Bank and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement; and (b) all losses or Bank Expenses in any way suffered, incurred, or paid by Bank as a result of or in any way arising out of, following, or consequential to transactions between Bank and Borrower whether under this Agreement, or otherwise (including without limitation reasonable attorneys' fees and expenses), except for losses caused by Bank's gross negligence or willful misconduct.

13.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

13.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

13.5 Amendments in Writing, Integration. Neither this Agreement nor the Loan Documents can be amended or terminated orally. All prior agreements, understandings, representations, warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement and the Loan Documents, if any, are merged into this Agreement and the Loan Documents.

13.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

13.7 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations (other than inchoate indemnity obligations) remain outstanding or Bank has any obligation to make Credit Extensions to Borrower. The obligations of Borrower to indemnify Bank with respect to the expenses, damages, losses, costs and liabilities described in Section 13.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Bank have run.

13.8 Confidentiality. In handling any confidential information Bank and all employees and agents of Bank, including but not limited to accountants, shall exercise the same degree of care that it exercises with respect to its own proprietary information of the same types to maintain the confidentiality of any non-public information thereby received or received pursuant to this Agreement except that disclosure of such information may be made (i) to the subsidiaries or affiliates of Bank in connection with their present or prospective business relations with Borrower, (ii) to prospective transferees or purchasers of any interest in the Credit Extensions provided that they have been advised of the confidential nature of such information and to keep such information confidential, (iii) as required by law, regulations, rule or order, subpoena, judicial order or similar order, (iv) as may be required in connection with the examination, audit or similar investigation of Bank and (v) as Bank may determine in connection with the enforcement of any remedies hereunder. Confidential information hereunder shall not include information that either: (a) is in the public domain or in the knowledge or possession of Bank when disclosed to Bank, or becomes part of the public domain after disclosure to Bank through no fault of Bank; or (b) is disclosed to Bank by a third party, provided Bank does not have actual knowledge that such third party is prohibited from disclosing such information.

13.9 Patriot Act Notice. Bank hereby notifies Borrower that, pursuant to the requirements of the USA Patriot Act, Title III of Pub. L. 107-56 (signed into law on October 26, 2001) (the "Patriot Act"), it is required to obtain, verify and record information that identifies Borrower, which information includes names and addresses and other information that will allow Bank, as applicable, to identify the Borrower in accordance with the Patriot Act.

14. NOTICE OF FINAL AGREEMENT.

BY SIGNING THIS AGREEMENT EACH PARTY REPRESENTS AND AGREES THAT: (A) THIS WRITTEN AGREEMENT REPRESENTS THE FINAL AGREEMENT BETWEEN THE PARTIES, (B)

*****] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.**

THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES, AND (C) THIS WRITTEN AGREEMENT MAY NOT BE CONTRADICTED BY EVIDENCE OF ANY PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OR UNDERSTANDINGS OF THE PARTIES.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

CODEXIS, INC., A DELAWARE CORPORATION

By: /s/ Gordon Sangster

Title: CFO

WESTERN ALLIANCE BANK, AN ARIZONA CORPORATION

By: /s/ Fred Lee

Title: Senior Vice President, Life Sciences

EXHIBIT A

DEBTOR: CODEXIS, INC.

SECURED PARTY: WESTERN ALLIANCE BANK, an Arizona corporation

**COLLATERAL DESCRIPTION ATTACHMENT
TO LOAN AND SECURITY AGREEMENT**

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), general intangibles (including payment intangibles and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records; and

(b) any and all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the California Uniform Commercial Code, as amended or supplemented from time to time.

Notwithstanding the foregoing, the Collateral shall not include: (i) any copyrights, patents, trademarks, servicemarks and applications therefor, now owned or hereafter acquired, or any claims for damages by way of any past, present and future infringement of any of the foregoing (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of the Closing Date, include the Intellectual Property to the extent necessary to permit perfection of Bank's security interest in the rights to Payment; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock or equity securities of any Foreign Subsidiary; or (iii) any license or contract, in each case if the granting of a Lien in such license or contract is prohibited by or would constitute a default under the agreement governing such license or contract (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Division 9 of the Code); provided that upon the termination, lapsing or expiration of any such prohibition, such license or contract, as applicable, shall automatically be subject to the security interest granted in favor of the Bank hereunder and become part of the "Collateral."

EXHIBIT B-1

DISBURSEMENT LETTER

[] __, 201[-]

The undersigned, being the duly elected and acting _____ of **CODEXIS, INC.**, a Delaware corporation ("**Borrower**"), does hereby certify to **WESTERN ALLIANCE BANK**, an Arizona corporation ("**Bank**"), in connection with that certain Loan and Security Agreement dated as of June __, 2017, by and among Borrower and Bank (the "**Loan Agreement**"; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement) that:

1. The representations and warranties made by Borrower in Section 5 of the Loan Agreement and in the other Loan Documents are true and correct in all material respects as of the date hereof.
2. No event or condition has occurred that would constitute an Event of Default under the Loan Agreement or any other Loan Document.
3. Borrower is in compliance with the covenants and requirements contained in Sections 5, 6 and 7 of the Loan Agreement.
4. All conditions referred to in Section 3 of the Loan Agreement to the making of the Loan to be made on or about the date hereof have been satisfied or waived by Bank.
5. No Material Adverse Effect has occurred.
6. The undersigned is a Responsible Officer.

[Balance of Page Intentionally Left Blank]

7. The proceeds of the Term Loan shall be disbursed as follows:

Disbursement from Bank:

Loan Amount	\$[_____]
Plus:	
--Deposit Received	\$[_____]
Less:	
--Loan Fee	(\$[_____])
--Interim Interest	(\$[_____])
--Bank's Legal Fees	(\$[_____])*

TOTAL TERM LOAN NET PROCEEDS \$_____

8. The aggregate net proceeds of the Term Loans shall be transferred to the Designated Deposit Account as follows:

Account Name:	CODEXIS, INC.
Bank Name:	[_____]
Bank Address:	[_____ _____]
Account Number:	_____
ABA Number:	[_____]

[Balance of Page Intentionally Left Blank]

* Legal fees and costs are through the Closing Date. Post-closing legal fees and costs, payable after the Closing Date, to be invoiced and paid post-closing.

Dated as of the date first set forth above.

BORROWER:

CODEXIS, INC.,
a Delaware corporation

By _____
Name: _____
Title: _____

BANK:

WESTERN ALLIANCE BANK,
an Arizona corporation

By _____
Name: _____
Title: _____

[Signature Page to Disbursement Letter]

BOS 48349558v13

US-DOCS\91983530.2

EXHIBIT B-2

FORM OF REVOLVING LOAN REQUEST

Date: _____, 20__

Reference is made to the Loan and Security Agreement dated as of June __, 2017, by and among CODEXIS, INC., Delaware corporation (“Borrower”) and WESTERN ALLIANCE BANK, an Arizona corporation (“Bank”) (the “Loan Agreement”; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement).

Capitalized terms used herein without definition shall have the meanings set forth in the Loan Agreement. Borrower hereby notifies the Bank, pursuant to Section 2.3(b) of the Loan Agreement of Borrower’s request of the following borrowing:

- (1) Borrowing date (must be a Business Day): _____
- (2) Aggregate amount of the borrowing: \$ _____
- (3) Attached hereto is a true, correct and complete Borrowing Base Certificate

The undersigned officer hereby certifies to the Bank that both before and after giving effect to the request above (i) the undersigned is an Authorized Officer of Borrower and has been, and continues to be, a Responsible Officer, as defined in the Loan Agreement, (ii) all representations and warranties contained in the Loan Agreement and in the other Loan Documents are true and correct in all material respects as of the date hereof, except to the extent that such representations and warranties expressly relate solely to an earlier date (in which case such representations and warranties shall have been true and accurate on and as of such earlier date); provided that any such representation and warranty that is qualified as to “materiality,” “Material Adverse Effect” or similar language shall be true and correct (after giving effect to any qualification therein) in all respects on such respective dates, (iii) no Event of Default has occurred and is continuing on the date hereof, and (iv) no Material Adverse Effect has occurred and is continuing since the date of the Loan Agreement.

IN WITNESS WHEREOF, the undersigned officer has executed and delivered this certificate this _____ day of _____, 20__.

CODEXIS, INC.

By: _____
Name: _____
Title: _____

BOS 48349558v13

US-DOCS\91983530.2

EXHIBIT B-3

Loan Payment/Advance Request Form

To be submitted no later than 3:00 PM to be considered for same day processing)

To: Western Alliance Bank, an Arizona corporation

Fax: [(408) 282-1681]

Date: _____

From: _____
Borrower's Name

Authorized Signature

Authorized Signer's Name (please print)

Phone Number

To Account # _____

Borrower hereby requests funding in the amount of \$ _____ in accordance with the [Term Loan][Revolving Advance] as defined in the Loan and Security Agreement dated _____, 2017.

Borrower hereby authorizes the Bank to rely on facsimile stamp signatures and treat them as authorized by Borrower for the purpose of requesting the above advance.

All representations and warranties of Borrower stated in the Loan and Security Agreement are true, correct and complete in all material respects as of the date of this request; provided that those representations and warranties expressly referring to another date shall be true, correct and complete in all material respects as of such date.

Capitalized terms used herein and not otherwise defined have the meanings set forth in the Loan and Security Agreement.

EXHIBIT C

**BORROWING BASE CERTIFICATE
WESTERN ALLIANCE BANK, an Arizona Corporation
55 Almaden Boulevard, San Jose, CA 95113**

Company:

ACCOUNTS RECEIVABLE BORROWING BASE CALCULATION:

As of Date: _____

1.	Add: Accounts Receivable Aged Current to 30 Days			\$0
2.	Add: Accounts Receivable Aged 31 to 60 Days			\$0
3.	Add: Accounts Receivable Aged 61 to 90 Days			\$0
4.	Add: Accounts Receivable Aged 91 Days and Over			\$0
5.	GROSS ACCOUNTS RECEIVABLE			\$0
6.	Less: Accounts Receivable Aged over	90 *		\$0
		([***) for (***)	days	
7.	Less: U.S. Government Receivables (Net of > 90s*)			\$0
8.	Less: Foreign Receivables (other than specified account debtors) (Net of > 90*s)			\$0
9.	Less: Affiliate or Related Accounts Receivables (Net of > 90s*)			\$0
10.	Less: Account concentration in excess of	25%	\$0	\$0
11.	Less: Cross Aging	35%		\$0
12.	Less: Contra Accounts			\$0
13.	Less: Over 90 day A/R credits			\$0
14.	Add: Lines 6 through 13 - Total Ineligible Accounts			\$0
15.	NET ELIGIBLE ACCOUNTS RECEIVABLE			\$0
16.	Account Receivable Advance Rate			80%
17.	ACCOUNTS RECEIVABLE BORROWING BASE			\$0
	MAXIMUM AVAILABLE LINE OF CREDIT			\$0
18.	Less: Outstanding Loan Balance			\$0
19.	AVAILABLE FOR DRAW/NEED TO PAY			\$0

If line #19 is a negative number, this amount must be remitted to the Bank immediately to bring loan balance into compliance. By signing this form you authorize the bank to deduct any advance amounts directly from the company's checking account at Bridge Bank in the event there is an Overadvance.

The undersigned represents and warrants that the foregoing is true, complete and correct, and that the information reflected in this Borrowing Base Certificate complies with the representations and warranties set forth in the Loan and Security Agreement between the undersigned and Western Alliance Bank.

Prepared By: _____

Date: _____

Date: _____

EXHIBIT D

COMPLIANCE CERTIFICATE

TO: WESTERN ALLIANCE BANK, an Arizona corporation

FROM: _____

The undersigned authorized officer of CODEXIS, INC. hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"), (i) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below and (ii) all representations and warranties of Borrower stated in the Agreement are true and correct in all material respects as of the date hereof. Attached herewith are the required documents supporting the above certification. The Officer further certifies that these are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes.

Please indicate compliance status by circling Yes/No under "Complies" column.

<u>Reporting Covenant</u>	<u>Required</u>	<u>Complies</u>	
Annual financial statements (CPA Audited)	FYE within 180 days	Yes	No
Annual Tax Filings	FYE within 270 days	Yes	No
Monthly financial statements and Compliance Certificate	Prior to each Credit Extension, and monthly within 30 days	Yes	No
Monthly cash balances statement	Prior to each Credit Extension, and monthly within 30 days	Yes	No
A/R & A/P agings	Monthly	Yes	No
10K and 10Q	Within 5 days of filing	Yes	No
Annual operating budget, sales projections and operating plans approved by board of directors	Draft annually no later than 30 days prior to the beginning of each fiscal year and board approved within 60 days of the beginning of each fiscal year	Yes	No
Legal actions pending or threatened > \$250k	Promptly		
<u>Financial Covenant</u>			
(a) Six Months Trailing Revenue	\$ _____		
(b) Amount set forth on Exhibit F (or determined in accordance with Section 6.10(a)(ii), as applicable).	\$ _____		

(c) Unrestricted cash balance at the end of month \$ _____
(d) Six times the Operating Burn \$ _____

Is (a) equal to or greater than (b); OR is (c) equal to or greater than (d)

Yes No

Deposit balances with Bank \$ _____
Deposit balance outside Bank \$ _____

Comments Regarding Exceptions: See Attached.

Sincerely,

SIGNATURE

TITLE

DATE

BANK USE ONLY

Received by: _____
AUTHORIZED SIGNER

Date: _____

Verified: _____
AUTHORIZED SIGNER

Date: _____

Compliance Status Yes No

EXHIBIT E-1

**SECURED PROMISSORY NOTE
(Term Loan)**

[\$_____] Dated: [_____]

FOR VALUE RECEIVED, the undersigned, CODEXIS, INC., a Delaware corporation with offices located at 200 Penobscot Drive, CA 94063 (“**Borrower**”) HEREBY PROMISES TO PAY to the order of WESTERN ALLIANCE BANK (“**Bank**”) the principal amount of [_____] DOLLARS (\$[_____] or such lesser amount as shall equal the outstanding principal balance of the Term Loan made to Borrower by the Bank, plus interest on the aggregate unpaid principal amount of such Term Loan, at the rates and in accordance with the terms of the Loan and Security Agreement dated June [], 2017 by and between Borrower and the Bank (as amended, restated, supplemented or otherwise modified from time to time, the “**Loan Agreement**”). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the Term Loan, are payable in lawful money of the United States of America to the Bank as set forth in the Loan Agreement and this Secured Promissory Note (this “**Note**”). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by the Bank and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of a secured Term Loan by the Bank to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

This Note may not be prepaid except as set forth in Section 2.2 (c) and Section 2.2(d) of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of the Term Loan, interest on the Term Loan and all other amounts due to the Bank under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including, without limitation, reasonable attorneys’ fees and costs, incurred by the Bank in the enforcement or attempt to enforce any of Borrower’s obligations hereunder not performed when due.

This Note shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of California.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by the Bank or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

[Balance of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

CODEXIS, INC.

By _____
Name: _____
Title: _____

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By
-------------	-----------------------------	----------------------	-------------------------------------	--------------------

EXHIBIT E-2

Form of Secured Promissory Note (Revolving Facility)

[see attached]

**SECURED PROMISSORY NOTE
(Revolving Line)**

\$5,000,000.00

Dated: June __, 2017

FOR VALUE RECEIVED, the undersigned, a Delaware corporation with offices located at 200 Penobscot Drive, CA 94063 ("Borrower") HEREBY PROMISES TO PAY to the order of WESTERN ALLIANCE BANK ("Bank") the principal amount of FIVE MILLION DOLLARS (\$5,000,000.00) or such lesser amount as shall equal the outstanding principal balance of the Revolving Advances made to Borrower by the Bank, plus interest on the aggregate unpaid principal amount of such Revolving Advances, at the rates and in accordance with the terms of the Loan and Security Agreement dated June [__], 2017, by and between Borrower and the Bank (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**"). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the Revolving Advances, are payable in lawful money of the United States of America to the Bank as set forth in the Loan Agreement and this Secured Promissory Note (this "**Note**"). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by the Bank and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of secured Revolving Advances by the Bank to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

Amounts due under this Note may be repaid and reborrowed as provided in the Loan Agreement. This Note and the obligation of Borrower to repay the unpaid principal amount of the Revolving Advances, interest on the Revolving Advances and all other amounts due the Bank under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including, without limitation, reasonable attorneys' fees and costs, incurred by the Bank in the enforcement or attempt to enforce any of Borrower's obligations hereunder not performed when due.

This Note shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of California.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by the Bank or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

[Balance of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

CODEXIS, INC.

By _____
Name: _____
Title: _____

Revolving Loan Secured Promissory Note

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By
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Exhibit F

Financial Projections

Please see attached.

CERTIFICATION

I, John J. Nicols, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codexis, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2017

/s/ John J. Nicols

John J. Nicols

President and Chief Executive Officer
(principal executive officer)

CERTIFICATION

I, Gordon Sangster, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codexis, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2017

/s/ Gordon Sangster

Gordon Sangster
Senior Vice President and Chief Financial Officer
(principal financial and accounting officer)

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

In connection with the Quarterly Report of Codexis, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended June 30, 2017, as filed with the Securities and Exchange Commission (the "Report"), John J. Nicols, President and Chief Executive Officer of the Company and Gordon Sangster, Senior Vice President and Chief Financial Officer of the Company, respectively, do each hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 9, 2017

/s/ John J. Nicols

John J. Nicols

President and Chief Executive Officer
(principal executive officer)

/s/ Gordon Sangster

Gordon Sangster

Senior Vice President and Chief Financial Officer
(principal financial and accounting officer)

