

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2019

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: 001-35703

PUMA BIOTECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

77-0683487
(I.R.S. Employer
Identification Number)

10880 Wilshire Boulevard, Suite 2150, Los Angeles, CA 90024

(Address of principal executive offices) (Zip code)

(424) 248-6500

(Registrant's telephone number, including area code)

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

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	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 extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act .

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

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.0001 per share	PBYI	The NASDAQ Stock Market LLC (NASDAQ Global Select Market)

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date. 38,897,095 shares of Common Stock, par value \$0.0001 per share, were outstanding as of August 1, 2019.

PUMA BIOTECHNOLOGY, INC.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions, future events or performance are not historical facts and may be forward looking. These forward-looking statements include, but are not limited to, statements about:

- the commercialization of NERLYNX® (neratinib);
- the development of our drug candidates, including when we expect to undertake, initiate and complete clinical trials of our product candidates;
- the anticipated timing of regulatory filings;
- the regulatory approval of our drug candidates;
- our use of clinical research organizations and other contractors;
- our ability to find collaborative partners for research, development and commercialization of potential products;
- efforts of our licensees to obtain regulatory approval and commercialize NERLYNX in areas outside the United States;
- our ability to market any of our products;
- our history of operating losses;
- our expectations regarding our costs and expenses;
- our anticipated capital requirements and estimates regarding our needs for additional financing;
- our ability to compete against other companies and research institutions;
- our ability to secure adequate protection for our intellectual property;
- our intention and ability to vigorously defend against any litigation to which we are or may become party;
- our estimates for damages that we may be required to pay in connection with the lawsuits to which we are a party;
- our ability to attract and retain key personnel; and
- our ability to obtain adequate financing.

These statements are often, but not always, made through the use of words or phrases such as “anticipate,” “estimate,” “plan,” “project,” “continuing,” “ongoing,” “expect,” “believe,” “intend” and similar words or phrases. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Discussions containing these forward-looking statements may be found throughout this Quarterly Report on Form 10-Q, including, in Part I, the section entitled “Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations.” These forward-looking statements involve risks and uncertainties, including the risks discussed in Part I, Item 1A. “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2018 that could cause our actual results to differ materially from those in the forward-looking statements. Such risks should be considered in evaluating our prospects and future financial performance. We undertake no obligation to update the forward-looking statements or to reflect events or circumstances after the date of this document.

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)
(unaudited)

	June 30, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 27,164	\$ 108,419
Marketable securities	90,501	57,002
Accounts receivable, net	25,346	20,773
Inventory	3,260	2,625
Prepaid expenses, current	11,008	12,397
Other current assets	330	1,787
Total current assets	157,609	203,003
Lease right-of-use assets	20,651	—
Property and equipment, net	3,432	3,963
Intangible assets, net	42,434	44,408
Restricted cash	13,172	4,319
Prepaid expenses and other, long-term	2,560	3,429
Total assets	\$ 239,858	\$ 259,122
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 15,071	\$ 20,684
Accrued expenses	74,251	46,431
Lease liabilities	2,339	—
Total current liabilities	91,661	67,115
Deferred rent	—	5,815
Lease liabilities, long-term	23,992	—
Post-marketing commitment liability	9,000	—
Long-term debt	93,434	151,886
Total liabilities	218,087	224,816
Stockholders' equity:		
Common stock - \$.0001 par value per share; 100,000,000 shares authorized; 38,738,707 shares issued and outstanding at June 30, 2019 and 38,325,037 issued and outstanding at December 31, 2018	4	4
Additional paid-in capital	1,271,209	1,236,355
Receivable from exercise of stock options	—	—
Accumulated other comprehensive income (loss)	110	(12)
Accumulated deficit	(1,249,552)	(1,202,041)
Total stockholders' equity	21,771	34,306
Total liabilities and stockholders' equity	\$ 239,858	\$ 259,122

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)
(unaudited)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2019	2018	2019	2018
Revenue:				
Product revenue, net	\$ 53,864	\$ 50,767	\$ 99,431	\$ 86,783
License revenue	—	—	53,500	30,500
Royalty revenue	55	—	55	—
Total revenue	53,919	50,767	152,986	117,283
Operating costs and expenses:				
Cost of sales	9,317	8,831	17,302	15,214
Selling, general and administrative	33,527	40,135	79,033	76,737
Research and development	36,855	43,245	72,583	90,169
Total operating costs and expenses	79,699	92,211	168,918	182,120
Loss from operations	(25,780)	(41,444)	(15,932)	(64,837)
Other (expenses) income:				
Interest income	908	329	1,780	503
Interest expense	(4,448)	(2,587)	(8,891)	(3,666)
Legal verdict expense	—	—	(16,350)	—
Loss on debt extinguishment	(8,103)	—	(8,103)	—
Other expenses	(1)	(633)	(15)	(679)
Total other expenses:	(11,644)	(2,891)	(31,579)	(3,842)
Net loss	\$ (37,424)	\$ (44,335)	\$ (47,511)	\$ (68,679)
Net loss applicable to common stockholders	\$ (37,424)	\$ (44,335)	\$ (47,511)	\$ (68,679)
Net loss per share of common stock—basic and diluted	\$ (0.97)	\$ (1.17)	\$ (1.23)	\$ (1.82)
Weighted-average shares of common stock outstanding—basic and diluted	38,647,775	37,819,767	38,565,258	37,759,729

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)
(unaudited)

	<u>For the Three Months Ended</u> <u>June 30,</u>		<u>For the Six Months Ended June 30,</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Net loss	\$ (37,424)	\$ (44,335)	\$ (47,511)	\$ (68,679)
Other comprehensive loss				
Unrealized (loss) gain on available-for-sale securities	90	(1)	122	(1)
Comprehensive loss	<u>\$ (37,334)</u>	<u>\$ (44,336)</u>	<u>\$ (47,389)</u>	<u>\$ (68,680)</u>

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

For the Three Months Ended June 30, 2019

	Common Stock		Additional Paid-in Capital	Receivables from Exercises of Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance at March 31, 2019	38,573,118	\$ 4	\$ 1,255,586	\$ (11)	\$ 20	\$ (1,212,128)	\$ 43,471
Stock-based compensation	—	—	15,440	—	—	—	15,440
Shares issued or restricted stock units vested under employee stock plans	165,589	—	183	11	—	—	194
Unrealized gain on available-for-sale securities	—	—	—	—	90	—	90
Net loss	—	—	—	—	—	(37,424)	(37,424)
Balance at June 30, 2019	38,738,707	\$ 4	\$ 1,271,209	\$ —	\$ 110	\$ (1,249,552)	\$ 21,771

For the Three Months Ended June 30, 2018

	Common Stock		Additional Paid-in Capital	Receivables from Exercises of Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance at March 31, 2018	37,762,519	\$ 4	\$ 1,170,331	\$ (68)	\$ —	\$ (1,112,810)	\$ 57,457
Stock-based compensation	—	—	22,184	—	—	—	22,184
Shares issued or restricted stock units vested under employee stock plans	127,701	—	3,085	(91)	—	—	2,994
Unrealized loss on available-for-sale securities	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	(44,335)	(44,335)
Balance at June 30, 2018	37,890,220	\$ 4	\$ 1,195,600	\$ (159)	\$ (1)	\$ (1,157,145)	\$ 38,299

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

For the Six Months Ended June 30, 2019

	Common Stock		Additional Paid-in Capital	Receivables from Exercises of Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance at December 31, 2018	38,325,037	\$ 4	\$ 1,236,355	\$ —	\$ (12)	\$ (1,202,041)	\$ 34,306
Stock-based compensation	—	—	33,578	—	—	—	33,578
Shares issued or restricted stock units vested under employee stock plans	413,670	—	1,276	—	—	—	1,276
Unrealized gain on available-for-sale securities	—	—	—	—	122	—	122
Net loss	—	—	—	—	—	(47,511)	(47,511)
Balance at June 30, 2019	38,738,707	\$ 4	\$ 1,271,209	\$ —	\$ 110	\$ (1,249,552)	\$ 21,771

For the Six Months Ended June 30, 2018

	Common Stock		Additional Paid-in Capital	Receivables from Exercises of Options	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total
	Shares	Amount					
Balance at December 31, 2017	37,594,851	\$ 4	\$ 1,142,213	\$ (449)	\$ —	\$ (1,088,466)	\$ 53,302
Stock-based compensation	—	—	47,536	—	—	—	47,536
Shares issued or restricted stock units vested under employee stock plans	295,369	—	5,851	290	—	—	6,141
Unrealized loss on available-for-sale securities	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	(68,679)	(68,679)
Balance at June 30, 2018	37,890,220	\$ 4	\$ 1,195,600	\$ (159)	\$ (1)	\$ (1,157,145)	\$ 38,299

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	For the Six Months Ended June 30,	
	2019	2018
Operating activities:		
Net loss	\$ (47,511)	\$ (68,679)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	4,235	3,224
Stock-based compensation	33,578	47,536
Disposal of property and equipment	54	—
Loss on debt extinguishment	8,047	—
Debt modification fees	—	289
Changes in operating assets and liabilities:		
Accounts receivable, net	(4,573)	(11,673)
Inventory	(635)	(446)
Prepaid expenses and other	2,258	705
Other current assets	1,457	—
Accounts payable	(5,613)	(5,506)
Accrued expenses	27,820	10,543
Post-marketing commitment liability	9,000	—
Deferred rent	—	117
Net cash provided by (used in) operating activities	<u>28,117</u>	<u>(23,890)</u>
Investing activities:		
Purchase of property and equipment	—	(245)
Purchase of available-for-sale securities	(127,974)	(38,600)
Sale/maturity of available-for-sale securities	94,597	—
Net cash used in investing activities	<u>(33,377)</u>	<u>(38,845)</u>
Financing activities:		
Net proceeds from shares issued under employee stock plans	1,276	6,141
Proceeds from long-term debt	25,000	75,000
Payment of debt	(80,000)	—
Payment of debt extinguishment costs	(7,793)	—
Payment of debt issuance costs	(5,625)	(4,192)
Net cash (used in) provided by financing activities	<u>(67,142)</u>	<u>76,949</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	<u>(72,402)</u>	<u>14,214</u>
Cash, cash equivalents and restricted cash, beginning of period	112,738	86,015
Cash, cash equivalents and restricted cash, end of period	<u>\$ 40,336</u>	<u>\$ 100,229</u>
Supplemental disclosures of non-cash investing and financing activities:		
Property and equipment purchases in accounts payable	\$ —	\$ 150
Receivables related to stock option exercises	\$ —	\$ 159
Supplemental disclosure of cash flow information:		
Interest paid	\$ 7,914	\$ 2,445

See Accompanying Notes to the Unaudited Condensed Consolidated Financial Statements

PUMA BIOTECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Note 1—Business and Basis of Presentation:

Business:

Puma Biotechnology, Inc., or the Company, is a biopharmaceutical company based in Los Angeles, California with a focus on the development and commercialization of innovative products to enhance cancer care. The Company in-licenses the global development and commercialization rights to three drug candidates—PB272 (neratinib (oral)), PB272 (neratinib (intravenous)) and PB357. Neratinib is a potent irreversible tyrosine kinase inhibitor that blocks signal transduction through the epidermal growth factor receptors HER1, HER2 and HER4. Currently, the Company is primarily focused on the U.S. commercialization of NERLYNX (neratinib), its first U.S. Food and Drug Administration, or FDA, approved product, and on the further development of the oral version of neratinib for additional indications in the treatment of HER2-positive breast cancer. The Company believes that neratinib has clinical application in the treatment of several other cancers as well, including tumor types that over-express or have a mutation in HER2, such as breast cancer, lung cancer or other solid tumors.

The Company has two subsidiaries, Puma Biotechnology Ltd., a United Kingdom company, and Puma Biotechnology, B.V., a Netherlands company. These subsidiaries were established for the purpose of legal representation in the European Union.

Basis of Presentation:

The Company is focused on developing and commercializing neratinib for the treatment of patients with human epidermal growth factor receptor type 2, or HER2-positive, breast cancer, HER2 mutated breast cancer and non-small cell lung cancer, and other solid tumors that have an activating mutation in HER2. The Company has reported a net loss of approximately \$37.4 million and \$47.5 million for the three and six months ended June 30, 2019, and cash flows from operations of approximately \$28.1 million for the six months ended June 30, 2019. The Company believes that it will continue to incur net losses and may incur negative net cash flows from operating activities through the drug development process and global commercialization.

The Company has incurred significant operating losses and negative cash flows from operations since its inception. On July 17, 2017, the Company received FDA approval for its first product, NERLYNX® (neratinib), formerly known as PB272 (neratinib (oral)), for the extended adjuvant treatment of adult patients with early stage HER2-overexpressed/amplified breast cancer following adjuvant trastuzumab-based therapy. Following FDA approval in July 2017, NERLYNX became available by prescription in the United States, and the Company commenced commercialization.

The Company in-licenses PB272 (neratinib (oral)), PB272 (neratinib (intravenous)) and PB357, as well as certain related compounds, from Pfizer Inc., or Pfizer. The Company is required to make substantial payments to Pfizer upon the achievement of certain milestones and has contractual obligations for clinical trial contracts.

Additionally, the Company has entered into exclusive license agreements with Specialised Therapeutics Asia Pte Ltd., or STA, Medison Pharma Ltd., or Medison, CANbridgepharma Limited, or CANbridge, Pint Pharma International SA, or Pint, and, most recently, Knight Therapeutics Inc., or Knight, and Pierre Fabre Medicament SAS, or Pierre Fabre, to pursue regulatory approval and/or commercialize NERLYNX, if approved, in various specified regions outside of the United States. The Company plans to continue to pursue commercialization of NERLYNX in additional countries outside the United States, if approved, and is evaluating various commercialization options in those countries, including developing a direct salesforce, contracting with third parties to provide sales and marketing capabilities, or some combination of these two options. In September 2018, the European Commission, or EC, granted marketing authorisation for NERLYNX for the extended adjuvant treatment of adult patients with early stage hormone receptor positive HER2-overexpressed/amplified breast cancer and who are less than one year from the completion of prior adjuvant trastuzumab based therapy.

The Company's commercialization, research and development, or R&D, or marketing efforts may require funding in addition to the cash and cash equivalents totaling approximately \$27.2 million and marketable securities totaling approximately \$90.5 million available at June 30, 2019. The Company believes that its existing cash and cash equivalents and marketable securities as of June 30, 2019 and proceeds that will become available to the Company through product sales and upfront license payments are sufficient to satisfy its operating cash and needs for at least one year after the filing of the Quarterly Report on Form 10-Q in which these financial statements are included. The Company continues to remain dependent on its ability to obtain sufficient funding to sustain operations and continue to successfully commercialize neratinib in the United States. While the Company has been successful in raising capital in the past, there can be no assurance that it will be able to do so in the future. The Company's ability to obtain funding may be adversely impacted by uncertain market conditions, unfavorable decisions of regulatory authorities or adverse clinical trial results. The outcome of these matters cannot be predicted at this time.

Since its inception through June 30, 2019, the Company's financing has primarily been proceeds from product and license revenue, public offerings of its common stock, private equity placements, and borrowings under its loan and security agreement.

Note 2—Significant Accounting Policies:

The significant accounting policies followed in the preparation of these unaudited condensed consolidated financial statements are as follows:

Financial Instruments:

The carrying value of financial instruments, such as cash equivalents, accounts receivable and accounts payable, approximate their fair value because of their short-term nature. The carrying value of long-term debt approximates its fair value as the principal amounts outstanding are subject to variable interest rates that are based on market rates, which are regularly reset.

Use of Estimates:

The preparation of consolidated financial statements in conformity with Generally Accepted Accounting Principles, or GAAP, requires management to make estimates and assumptions that affect reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the balance sheet, and reported amounts of expenses for the period presented. Accordingly, actual results could differ from those estimates.

Significant estimates include estimates for variable consideration for which reserves were established. These estimates are included in the calculation of net revenues and include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between the Company and its customers, payors, and other indirect customers relating to the Company's sale of its products.

Principles of Consolidation:

The unaudited condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Investment Securities:

The Company classifies all investment securities (short-term and long-term) as available-for-sale, as the sale of such securities may be required prior to maturity to implement management's strategies. These securities are carried at fair value, with the unrealized gains and losses, reported as a component of accumulated other comprehensive loss in stockholders' equity until realized. Realized gains and losses from the sale of available-for-sale securities, if any, are determined on a specific identification basis. A decline in the market value of any available-for-sale security below cost that is determined to be other than temporary results in the revaluation of its carrying amount to fair value. The impairment is charged to earnings and a new cost basis for the security is established. Premiums and discounts are amortized or accreted over the life of the related security as an adjustment to yield using the straight-line method. Interest income is recognized when earned.

License Fees and Intangible Assets:

The Company expenses amounts paid to acquire licenses associated with products under development when the ultimate recoverability of the amounts paid is uncertain and the technology has no alternative future use when acquired. Acquisitions of technology licenses are charged to expense or capitalized based upon the asset achieving technological feasibility in accordance with management's assessment regarding the ultimate recoverability of the amounts paid and the potential for alternative future use. The Company has determined that technological feasibility for its product candidates is reached when the requisite regulatory approvals are obtained to make the product available for sale. The Company capitalizes technology licenses upon reaching technological feasibility.

The Company maintains definite-lived intangible assets related to the Company's license with Pfizer. These assets are amortized over their remaining useful lives, which are estimated based on the shorter of the remaining patent life or the estimated useful life of the underlying product. Intangible assets are amortized using the economic consumption method if anticipated future revenues can be reasonably estimated. The straight-line method is used when future revenues cannot be reasonably estimated. Amortization costs are recorded as part of cost of sales.

The Company assesses its intangible assets for impairment if indicators are present or changes in circumstance suggest that impairment may exist. Events that could result in an impairment, or trigger an interim impairment assessment, include the receipt of additional clinical or nonclinical data regarding one of the Company's drug candidates or a potentially competitive drug candidate, changes in the clinical development program for a drug candidate, or new information regarding potential sales of the drug. If impairment indicators are present or changes in circumstance suggest that impairment may exist, the Company performs a recoverability test by comparing the sum of the estimated undiscounted cash flows of each intangible asset to its carrying value on the consolidated balance sheet. If the undiscounted cash flows used in the recoverability test are less than the carrying value, the Company would determine the fair value of the intangible asset and recognize an impairment loss if the carrying value of the intangible asset exceeds its fair value. The FDA approval of NERLYNX in July 2017 triggered a one-time milestone payment pursuant to the Company's license agreement with the Pfizer. The Company capitalized the milestone payment as an intangible asset and is amortizing the asset to cost of sales on a straight-line basis through 2030, the estimated useful life of the licensed patent. The Company recorded amortization expense related to its intangible asset of \$1.0 million and \$2.0 million for the three and six months ended June 30, 2019, respectively. As of June 30, 2019, estimated future amortization expense related to the Company's intangible asset was approximately \$1.9 million for the remainder of 2019, approximately \$3.9 million for each year starting 2020 through 2029, and approximately \$1.0 million for 2030.

Royalties:

Royalties incurred in connection with the Company's license agreement with Pfizer, as disclosed in Note 13 Commitments and Contingencies, are expensed to cost of sales as revenue from product sales is recognized.

Leases:

In February 2016, the FASB issued an accounting standards update which requires lessees to recognize most leases on the balance sheet with a corresponding right-of-use asset. Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Right-of-use assets and lease liabilities are recognized at the lease commencement date based on the estimated present value of fixed lease payments over the lease term. Leases will be classified as financing or operating which will drive the expense recognition pattern. For lessees, the income statement presentation and expense recognition pattern for financing and operating leases is similar to the current model for capital and operating leases, respectively. The Company has elected to exclude short-term leases. The update also requires additional disclosures that will better enable users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases. The Company adopted this guidance as of January 1, 2019, the required effective date, using the effective date transition method. As permitted under the effective date transition method, financial information and disclosure for periods prior to the date of initial application will not be updated. An adjustment to opening retained earnings was not required in conjunction with our adoption. For additional information, see Note 6—Leases. We have elected not to reassess whether expired or existing contracts contain leases, nor did we reassess the classification of existing leases as of the adoption date.

The Company leases office space and copy machines, all of which are operating leases. Most leases include the option to renew and the exercise of the renewals options is at the Company's sole discretion. Options to extend or terminate a lease are considered in the lease term to the extent that the option is reasonably certain of exercise. The leases do not include the options to purchase the leased property. The depreciable life of assets and leasehold improvements are limited by the expected lease term. Covenants imposed by the leases include letters of credit required to be obtained by the lessee.

The incremental borrowing rate presents the rate of interest that the Company would expect to pay on a collateralized basis to borrow an amount equal to the lease payments under similar terms. When determinable, the Company uses the rate implicit in the lease to determine the present value of lease payments. As the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The Company's average incremental borrowing rate, or IBR, for existing leases on the transition date (January 1, 2019) was calculated as 10.9%.

Inventory:

The Company values its inventories at the lower of cost and estimated net realizable value. The Company determines the cost of its inventories, which includes amounts related to materials and manufacturing overhead, on a first-in, first-out basis. The Company performs an assessment of the recoverability of capitalized inventory during each reporting period, and it writes down any excess and obsolete inventories to their estimated realizable value in the period in which the impairment is first identified. Such impairment charges, should they occur, are recorded within the cost of sales. The determination of whether inventory costs will be realizable requires estimates by management. If actual market conditions are less favorable than projected by management, additional write-downs of inventory may be required, which would be recorded as a cost of sales in the consolidated statements of operations and comprehensive loss.

The Company capitalizes inventory costs associated with the Company's products after regulatory approval, if any, when, based on management's judgment, future commercialization is considered probable and the future economic benefit is expected to be realized. The Company previously expensed \$4.5 million of product prior to receipt of marketing approval, which was recorded as R&D expense at the time it was incurred. Inventory that can be used in either the production of clinical or commercial product is recorded as R&D expense when selected for use in a clinical trial. Starter kits, provided to patients prior to insurance approval, are expensed by the Company to sales and marketing expense as incurred.

As of June 30, 2019, the Company's inventory balance consisted primarily of raw materials purchased subsequent to FDA approval of NERLYNX.

Revenue Recognition:

The Company adopted ASC Topic 606 - Revenue from Contracts with Customers, or ASC 606, on January 1, 2017. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements, and financial instruments. Under ASC 606, when its customer obtains control of the promised goods or services, an entity recognizes revenue in an amount that reflects the consideration which the entity expects to be entitled in exchange for those goods or services. The Company had no contracts with customers until after the FDA approved NERLYNX in July 2017. Subsequent to receiving FDA approval, the Company entered into a limited number of arrangements with specialty pharmacies and specialty distributors in the United States to distribute NERLYNX. These arrangements are the Company's initial contracts with customers. The Company has determined that these sales channels with customers are similar.

To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identifies the contract(s) with a customer, (ii) identifies the performance obligations in the contract, (iii) determines the transaction price, (iv) allocates the transaction price to the performance obligations in the contract, and (v) recognizes revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to arrangements that meet the definition of a contract under ASC 606, including when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. For a complete discussion of accounting for product revenue, see *Product Revenue, Net* (below).

Product Revenue, Net:

The Company sells NERLYNX to a limited number of specialty pharmacies and specialty distributors in the United States. These customers subsequently resell the Company's products to patients and certain medical centers or hospitals. In addition to distribution agreements with these customers, the Company enters into arrangements with health care providers and payors that provide for government mandated and/or privately negotiated rebates, chargebacks and discounts with respect to the purchase of the Company's products.

The Company recognizes revenue on product sales when the specialty pharmacy or specialty distributor, as applicable, obtains control of the Company's product, which occurs at a point in time (upon delivery). Product revenue is recorded net of applicable reserves for variable consideration, including discounts and allowances. The Company's payment terms range between 10 and 68 days.

Shipping and handling costs for product shipments occur prior to the customer obtaining control of the goods, and are recorded in cost of sales.

If taxes should be collected from these customers relating to product sales and remitted to governmental authorities, they will be excluded from revenue. The Company expenses incremental costs of obtaining a contract when incurred, if the expected amortization period of the asset that the Company would have recognized is one year or less. However, no such costs were incurred during the three months ended June 30, 2019.

Product revenue from customers who individually accounted for 10% or more of the Company's total revenue for the three months ended June 30, 2019 consisted of the following, shown as a percentage of total revenue:

	Three Months Ended June 30, 2019
CVS/Caremark	32%
Accredo/Acaria	22%
Diplomat	10%

License Revenue:

The Company also recognizes license revenue under certain of the Company's sub-license agreements that are within the scope of ASC Topic 606. The terms of these agreements may contain multiple performance obligations, which may include licenses and research and development activities. The Company evaluates these agreements under ASC Topic 606 to determine the distinct performance obligations. Non-refundable, upfront fees that are not contingent on any future performance and require no consequential continuing involvement by the Company, are recognized as revenue when the license term commences and the licensed data, technology or product is delivered. The Company defers recognition of non-refundable upfront license fees if the performance obligations are not satisfied.

Prior to recognizing revenue, the Company makes estimates of the transaction price, including variable consideration that is subject to a constraint. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur and when the uncertainty associated with the variable consideration is subsequently resolved.

If there are multiple distinct performance obligations, the Company allocates the transaction price to each distinct performance obligation based on its relative standalone selling price. The standalone selling price is generally determined based on the prices charged to customers or using expected cost plus margin. Revenue is recognized by measuring the progress toward complete satisfaction of the performance obligations using an input measure.

Knight Agreement

During the first quarter of 2019, the Company entered into a sub-license agreement, or the Knight Agreement, with Knight. Pursuant to the Knight Agreement, the Company granted to Knight, under certain of the Company's intellectual property rights relating to neratinib, an exclusive, sublicensable (under certain circumstances) license (i) to commercialize any product containing neratinib and certain related compounds in Canada, (ii) to seek and maintain regulatory approvals for the licensed products in Canada and (iii) to manufacture the licensed products anywhere in the world solely for the development and commercialization of the licensed products in Canada for human use, subject to the terms of the Knight Agreement and the related supply agreement. During the first quarter of 2019, a non-refundable, upfront license fee was received and recognized as license revenue in accordance with ASC Topic 606. The Company satisfied the necessary performance obligations to recognize this license revenue under the terms of the arrangement. This license agreement met the contract existence criteria and contained distinct, identifiable performance obligations for which the stand-alone selling prices were readily determinable and allocable. As a separate promise under the terms of the license agreement, the Company is obligated to supply Knight with the licensed product in accordance with the supply agreement entered in connection with the license agreement. The Company is also obligated to participate in a Joint Steering Committee, which was identified as a separate performance obligation. To determine the stand-alone selling price, the Company estimated the transaction prices, including any variable consideration, at contract inception and determined the fair value of such obligations based on similar arrangements. When determining the transaction prices, the Company assumed that the goods or services will be transferred to the customer based on the terms of the existing contract, and did not take into consideration the possibility of a contract being canceled, renewed, or modified. The Company noted there was no additional variable consideration, significant financing components, non-cash consideration, or consideration payable to the customer in this agreement. This license agreement also includes potential future milestone and royalty payments due to the Company upon successful completion of certain separate, distinct performance obligations. Pursuant to the Knight Agreement, the Company will potentially receive upfront, regulatory and commercial milestone payments totaling up to \$7.2 million. In addition, the Company is entitled to receive significant double-digit royalties calculated as a percentage of net sales of the licensed products in Canada. At this time, the Company cannot estimate when these milestone-related performance obligations are expected to be achieved.

Additionally, during the first quarter of 2019, the Company entered into a sub-license agreement, or the Pierre Fabre Agreement, with Pierre Fabre Medicament SAS, or Pierre Fabre. The Pierre Fabre Agreement granted intellectual property rights and set forth the parties' respective obligations with respect to development, commercialization and supply of the licensed product in European countries excluding Russia and Ukraine, along with countries in North Africa and francophone countries of West Africa. During the first quarter of 2019, a non-refundable, upfront license fee of \$51.0 million was recognized as license revenue in accordance with ASC Topic 606. The Company satisfied the necessary performance obligations to recognize this license revenue under the terms of the arrangement. The Pierre Fabre Agreement met the contract existence criteria and contained distinct, identifiable performance obligations for which the stand-alone selling prices were readily determinable and allocable. As a separate promise under the terms of the Pierre Fabre Agreement, the Company is obligated to supply Pierre Fabre with the licensed product in accordance with the related supply agreement. The Company is also obligated to participate in a Joint Steering Committee and Transition Plan, which were identified as separate performance obligations. To determine the respective stand-alone selling prices, the Company estimated the transaction prices, including any variable consideration, at contract inception and determined the fair value of such obligations based on similar arrangements. When determining the transaction prices, the Company assumed that the goods or services will be transferred to the customer based on the terms of the existing contract, and did not take into consideration the possibility of a contract being canceled, renewed, or modified. The Company noted there was approximately \$9.0 million of additional variable consideration in this agreement related to a post-marketing commitment liability, while there were no significant financing components, non-cash consideration, or consideration payable to the customer. The Pierre Fabre Agreement also includes potential future milestone and royalty payments due to the Company upon successful completion of certain separate, distinct performance obligations. Pursuant to the Pierre Fabre Agreement, the Company will potentially receive additional regulatory and commercial milestone payments totaling up to \$345 million. In addition, the Company will receive significant double-digit royalties on NERLYNX sales throughout the territory covered by the Pierre Fabre Agreement. At this time, the Company cannot estimate when these milestone-related performance obligations are expected to be achieved.

Royalty Revenue:

Royalty revenue consists of consideration earned related to international sales of NERLYNX made by the Company's sub-license partners in their respective territories. The Company recognizes royalty revenue when the performance obligations have been satisfied.

Reserves for Variable Consideration:

Revenue from product sales are recorded at the net sales price (transaction price), which includes estimates of variable consideration for which reserves are established. Components of variable consideration include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between the Company and its customers, payors, and other indirect customers relating to the Company's sale of its products. These reserves, as detailed below, are based on the related sales, and are classified as reductions of accounts receivable or as a current liability. These estimates take into consideration a range of possible outcomes that are probability-weighted in accordance with the expected value method in ASC Topic 606 for relevant factors such as current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns. Overall, these reserves reflect the Company's best estimates of the amount of consideration to which it is entitled based on the terms of the respective underlying contracts.

The amount of variable consideration that is included in the transaction price may be constrained, and is included in the net sales price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized under the contract will not occur in a future period. The Company's analyses also contemplated application of the constraint in accordance with the guidance, under which it determined a material reversal of revenue would not occur in a future period for the estimates detailed below as of June 30, 2019 and, therefore, the transaction price was not reduced further during the quarter ended June 30, 2019. Actual amounts of consideration ultimately received may differ from the Company's estimates. If actual results in the future vary from the Company's estimates, the Company will adjust these estimates, which would affect net product revenue and earnings in the period such variances become known.

Trade Discounts and Allowances:

The Company generally provides customers with discounts, which include incentive fees that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. The reserve for discounts is established in the same period that the related revenue is recognized, together with reductions to trade receivables, net on the consolidated balance sheets. In addition, the Company compensates its customers for sales order management, data, and distribution services. The Company has determined such services received to date are not distinct from the Company's sale of products to its customers and, therefore, these payments have been recorded as a reduction of revenue within the statement of operations and comprehensive loss through June 30, 2019.

Product Returns:

Consistent with industry practice, the Company offers the specialty pharmacies and specialty distributors that are its customers limited product return rights for damaged and expiring product, provided it is within a specified period around the product expiration date as set forth in the applicable individual distribution agreement. The Company estimates the amount of its product sales that may be returned by its customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized, as well as a reduction to trade receivables, net on the consolidated balance sheets. The Company currently estimates product returns using available industry data and its own sales information, including its visibility into the inventory remaining in the distribution channel. The Company has an insignificant amount of returns to date and believes that returns of its products will continue to be minimal.

Provider Chargebacks and Discounts:

Chargebacks for fees and discounts to providers represent the estimated obligations resulting from contractual commitments to sell products to qualified healthcare providers at prices lower than the list prices charged to its customers who directly purchase the product from the Company. Customers charge the Company for the difference between what they pay for the product and the ultimate selling price to the qualified healthcare providers. The reserve for chargebacks is established in the same period that the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability. Chargeback amounts are generally determined at the time of resale to the qualified healthcare provider by customers, and the Company generally issues payments for such amounts within a few weeks of the customer's notification to the Company of the resale. Reserves for chargebacks consist of payments the Company expects to issue for units that remain in the distribution channel at each reporting period-end that the Company expects will be sold to qualified healthcare providers and chargebacks that customers have claimed, but for which the Company has not yet issued a payment.

Government Rebates:

The Company is subject to discount obligations under state Medicaid programs and Medicare. These reserves are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability, which is included in accrued expenses and other current liabilities on the consolidated balance sheets. The Company's liability for these rebates consists of invoices received for claims from prior quarters that have not been paid or for which an invoice has not yet been received, estimates of claims for the current quarter, and estimates of future claims that will be made for product that has been recognized as revenue, but which remains in the distribution channel at the end of each reporting period.

Payor Rebates:

The Company contracts with certain private payor organizations, primarily insurance companies and pharmacy benefit managers, for the payment of rebates with respect to utilization of its products. The Company estimates these rebates and records such estimates in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability.

Other Incentives:

Other incentives the Company offers include voluntary patient assistance programs, such as the co-pay assistance program, which are intended to provide financial assistance to qualified commercially-insured patients with prescription drug co-payments required by payors. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the cost per claim that the Company expects to receive associated with product that has been recognized as revenue, but remains in the distribution channel at the end of each reporting period. The adjustments are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability, which is included as a component of accrued expenses and other current liabilities on the consolidated balance sheets.

Assets Measured at Fair Value on a Recurring Basis:

ASC, 820, *Fair Value Measurement*, or ASC 820, provides a single definition of fair value and a common framework for measuring fair value as well as new disclosure requirements for fair value measurements used in financial statements. Under ASC 820, fair value is determined based upon the exit price that would be received by a company to sell an asset or paid by a company to transfer a liability in an orderly transaction between market participants, exclusive of any transaction costs. Fair value measurements are determined by either the principal market or the most advantageous market. The principal market is the market with the greatest level of activity and volume for the asset or liability. Absent a principal market to measure fair value, the Company uses the most advantageous market, which is the market from which the Company would receive the highest selling price for the asset or pay the lowest price to settle the liability, after considering transaction costs. However, when using the most advantageous market, transaction costs are only considered to determine which market is the most advantageous and these costs are then excluded when applying a fair value measurement. ASC 820 creates a three-level hierarchy to prioritize the inputs used in the valuation techniques to derive fair values. The basis for fair value measurements for each level within the hierarchy is described below, with Level 1 having the highest priority and Level 3 having the lowest.

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.

Level 3: Valuations derived from valuation techniques in which one or more significant inputs are unobservable.

Following are the major categories of assets measured at fair value on a recurring basis as of June 30, 2019 and December 31, 2018, using quoted prices in active markets for identical assets (Level 1), significant other observable inputs (Level 2), and significant unobservable inputs (Level 3) (in thousands):

June 30, 2019	Level 1	Level 2	Level 3	Total
Cash equivalents	\$ 1,419	\$ —	\$ —	\$ 1,419
Commercial paper	—	17,974	—	17,974
Corporate bonds	—	41,543	—	41,543
U.S. government securities	30,984	—	—	30,984
Totals	\$ 32,403	\$ 59,517	\$ —	\$ 91,920

December 31, 2018	Level 1	Level 2	Level 3	Total
Cash equivalents	\$ 83,329	\$ 2,987	\$ —	\$ 86,316
Commercial paper	—	35,941	—	35,941
Corporate bonds	—	18,077	—	18,077
U.S. government securities	2,984	—	—	2,984
Totals	\$ 86,313	\$ 57,005	\$ —	\$ 143,318

The Company's investments in commercial paper, corporate bonds and U.S. government securities are exposed to price fluctuations. The fair value measurements for commercial paper, corporate bonds and U.S. government securities are based upon the quoted prices of similar items in active markets multiplied by the number of securities owned.

The following tables summarize the Company's short-term investments (in thousands):

June 30, 2019	Maturity (in years)	Amortized cost	Unrealized		Estimated fair value
			Gains	Losses	
Cash equivalents		\$ 1,419	\$ —	\$ —	\$ 1,419
Commercial paper	Less than 1	17,974	—	—	17,974
Corporate bonds	Less than 1	41,448	95	—	41,543
U.S. government securities	Less than 1	30,969	15	—	30,984
Totals		\$ 91,810	\$ 110	\$ —	\$ 91,920

December 31, 2018	Maturity (in years)	Amortized cost	Unrealized		Estimated fair value
			Gains	Losses	
Cash equivalents		\$ 86,316	\$ —	\$ —	\$ 86,316
Commercial paper	Less than 1	35,941	—	—	35,941
Corporate bonds	Less than 1	18,089	—	(12)	18,077
U.S. government securities	Less than 1	2,984	—	—	2,984
Totals		\$ 143,330	\$ —	\$ (12)	\$ 143,318

Concentration of Risk:

Financial instruments, which potentially subject the Company to concentrations of credit risk, principally consist of cash and cash equivalents and accounts receivable. The Company's cash and cash equivalents and restricted cash in excess of the Federal Deposit Insurance Corporation and the Securities Investor Protection Corporation insured limits at June 30, 2019, were approximately \$83.3 million. The Company does not believe it is exposed to any significant credit risk due to the quality nature of the financial instruments in which the money is held. Pursuant to the Company's internal investment policy, investments must be rated A-1/P-1 or better by Standard and Poor's Rating Service and Moody's Investors Service at the time of purchase.

The Company sells its products in the United States primarily through specialty pharmacies and specialty distributors. Therefore, wholesale distributors and large pharmacy chains account for a large portion of its trade receivables and net product revenues. The creditworthiness of its customers is continuously monitored, and the Company has internal policies regarding customer credit limits. The Company estimates an allowance for doubtful accounts primarily based on the credit worthiness of our customers, historical payment patterns, aging of receivable balances and general economic conditions.

The Company's success depends on its ability to successfully commercialize NERLYNX. The Company currently has a single product with limited commercial sales experience, which makes it difficult to evaluate its current business, predict its future prospects and forecast financial performance and growth. The Company has invested a significant portion of its efforts and financial resources in the development and commercialization of the lead product, NERLYNX, and expects NERLYNX to constitute the vast majority of product revenue for the foreseeable future. The Company's success depends on its ability to effectively commercialize NERLYNX.

The Company relies exclusively on third parties to formulate and manufacture NERLYNX and its drug candidates. The commercialization of NERLYNX and any other drug candidates, if approved, could be stopped, delayed or made less profitable if those third parties fail to provide sufficient quantities of product or fail to do so at acceptable quality levels or prices. The Company has no experience in drug formulation or manufacturing and does not intend to establish its own manufacturing facilities. The Company lacks the resources and expertise to formulate or manufacture NERLYNX and other drug candidates. While the drug candidates were being developed by Pfizer, both the drug substance and drug product were manufactured by third-party contractors. The Company is using the same third-party contractors to manufacture, supply, store and distribute drug supplies for clinical trials and the commercialization of NERLYNX. If the Company is unable to continue its relationships with one or more of these third-party contractors, it could experience delays in the development or commercialization efforts as it locates and qualifies new manufacturers. The Company intends to rely on one or more third-party contractors to manufacture the commercial supply of drugs.

Research and Development Expenses:

R&D expenses are charged to operations as incurred. The major components of R&D costs include clinical manufacturing costs, clinical trial expenses, consulting and other third-party costs, salaries and employee benefits, stock-based compensation expense, supplies and materials, and allocations of various overhead costs. Clinical trial expenses include, but are not limited to, investigator fees, site costs, comparator drug costs, and clinical research organization, or CRO, costs. In the normal course of business, the Company contracts with third parties to perform various clinical trial activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation and variations from contract to contract and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful enrollment of patients and the completion of portions of the clinical trial or similar conditions. The Company's accruals for clinical trials are based on estimates of the services received and efforts expended pursuant to contracts with numerous clinical trial sites, cooperative groups and CROs. As actual costs become known, the Company adjusts its accruals in that period.

In instances where the Company enters into agreements with third parties for clinical trials and other consulting activities, upfront amounts are recorded to prepaid expenses and other in the accompanying Consolidated Balance Sheets and expensed as services are performed or as the underlying goods are delivered. If the Company does not expect the services to be rendered or goods to be delivered, any remaining capitalized amounts for non-refundable upfront payments are charged to expense immediately. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments and payments upon the completion of milestones or receipt of deliverables.

Costs related to the acquisition of technology rights and patents for which development work is still in process are charged to operations as incurred and considered a component of R&D costs.

Stock-Based Compensation:

Stock option awards:

ASC 718, *Compensation-Stock Compensation*, or ASC 718, requires the fair value of all share-based payments to employees, including grants of stock options, to be recognized in the statement of operations over the requisite service period. Under ASC 718, employee option grants are generally valued at the grant date and those valuations do not change once they have been established. The fair value of each option award is estimated on the grant date using the Black-Scholes Option Pricing Method. As allowed by ASC 718, the Company's estimate of expected volatility is based on its average volatilities using its past six years of publicly traded history. Beginning in 2018, the Company estimated its expected volatility based on its average volatilities using its past six years of publicly traded stock history, including industry, stage of life cycle, size and financial leverage. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant valuation. Option forfeitures are calculated when the option is granted to reduce the option expense to be recognized over the life of the award and updated upon receipt of further information as to the amount of options expected to be forfeited. The option expense is "trued-up" upon the actual forfeiture of a stock option grant. Due to its limited history of stock option exercises, the Company uses the simplified method to determine the expected life of the option grants.

Restricted stock units:

Restricted stock units, or RSUs, are valued on the grant date and the fair value of the RSUs is equal to the market price of the Company's common stock on the grant date. The RSU expense is recognized over the requisite service period. When the requisite service period begins prior to the grant date (because the service inception date occurs prior to the grant date), the Company is required to begin recognizing compensation cost before there is a measurement date (i.e., the grant date). The service inception date is the beginning of the requisite service period. If the service inception date precedes the grant date, accrual of compensation cost for periods before the grant date shall be based on the fair value of the award at the reporting date. In the period in which the grant date occurs, cumulative compensation cost shall be adjusted to reflect the cumulative effect of measuring compensation cost based on fair value at the grant date rather than the fair value previously used at the service inception date (or any subsequent reporting date).

Income Taxes:

The Company follows ASC 740, *Income Taxes*, or ASC 740, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Under this method, deferred tax assets and liabilities are based on the differences between the consolidated financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent management concludes it is more likely than not that the asset will not be realized. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

The standard addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the consolidated financial statements. Under ASC 740, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position should be measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. ASC 740 also provides guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. As of June 30, 2019, the Company has established a reserve of 20% of its R&D credit carryover balance.

Segment Reporting:

Management has determined that the Company operates in one business segment, which is the development and commercialization of innovative products to enhance cancer care.

Net Loss per Common Share:

Basic net loss per share of common stock is computed by dividing net loss applicable to common stockholders by the weighted average number of shares of common stock outstanding during the periods presented, as required by ASC 260, *Earnings per Share*. For purposes of calculating diluted loss per share of common stock, the denominator includes both the weighted average number of shares of common stock outstanding and the number of dilutive common stock equivalents, such as stock options, RSUs and warrants. A common stock equivalent is not included in the denominator when calculating diluted earnings per common share if the effect of such common stock equivalent would be anti-dilutive. For the three and six months ended June 30, 2019, potentially dilutive securities excluded from the calculations were 5,291,407 shares issuable upon exercise of options, 2,116,250 shares issuable upon exercise of a warrant, and 1,905,241 shares underlying RSUs that were subject to vesting and were antidilutive. For the three and six months ended June 30, 2018, potentially dilutive securities excluded from the calculations were 5,919,688 shares issuable upon exercise of options, 2,116,250 shares issuable upon exercise of a warrant, and 1,652,141 shares underlying RSUs that were subject to vesting and were antidilutive.

Recently Adopted Accounting Standards:

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. The amendments in ASU 2016-02 require organizations that lease assets, with lease terms of more than 12 months, to recognize on their balance sheet the assets and liabilities for the rights and obligations created by those leases. Consistent with GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily depends on its classification as a finance or operating lease. However, unlike previous GAAP that requires only capital leases to be recognized on the balance sheet, ASU No. 2016-02 requires both types of leases to be recognized on the balance sheet. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. For lessees, the income statement presentation and expense recognition pattern for financing and operating leases is similar to the current model for capital and operating leases, respectively. Companies may elect to exclude short-term leases. The update also requires additional disclosures that will better enable users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases. The Company adopted ASU No. 2016-02 in the first quarter of 2019 using the effective date transition method. As permitted under the effective date transition method, financial information and disclosure for periods prior to the date of initial application will not be updated. The adoption of ASU No. 2016-02 resulted in an increase in its assets and liabilities on its consolidated balance sheets related to recording right-of-use assets and corresponding lease liabilities of approximately \$21.6 million and \$27.4 million, respectively. The difference between the additional lease assets and lease liabilities represent deferred rent for leases that existed as of the date of adoption. As a result of the adoption there was no material impact to the consolidated statement of operations or statement of cash flows.

Note 3—Accounts Receivable:

Accounts receivable consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Accounts receivable	\$ 25,346	\$ 20,773
Less: allowance for doubtful accounts	—	—
Total accounts receivable, net	<u>\$ 25,346</u>	<u>\$ 20,773</u>

Accounts receivable consists entirely of amounts owed from our customers related to product sales.

Note 4—Prepaid Expenses and Other:

Prepaid expenses and other consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Current:		
CRO services	\$ 5,478	\$ 5,824
Other clinical development	994	888
Insurance	1,084	2,446
Professional fees	829	272
Other	2,623	2,967
	<u>11,008</u>	<u>12,397</u>
Long-term:		
CRO services	1,029	1,073
Other clinical development	411	650
Other	1,120	1,706
	<u>2,560</u>	<u>3,429</u>
Totals	<u>\$ 13,568</u>	<u>\$ 15,826</u>

Other prepaid amounts consist primarily of deposits, licenses, subscriptions, software, and professional fees.

Note 5—Other Current Assets:

Other current assets consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Insurance receivable	\$ —	\$ 1,175
Other	330	612
Totals	<u>\$ 330</u>	<u>\$ 1,787</u>

Other current asset amounts consist primarily of insurance reimbursements related to one of the lawsuits to which the Company is a party, and to tenant improvement allowances.

Note 6—Leases:

Components of lease expense include fixed lease expense and variable lease expense of approximately \$2.4 million and \$0.2 million, respectively, for the six months ended June 30, 2019. For purposes of determining straight-line rent expense, the lease term is calculated from the date the Company first takes possession of the facility, including any periods of free rent and any renewal option periods that the Company is reasonably certain of exercising. Our office and equipment leases generally have contractually specified minimum rent and annual rent increases are included in the measurement of the right-of-use asset and related lease liability. Additionally, under these lease arrangements, we may be required to pay directly, or reimburse the lessors, for real estate taxes, insurance, utilities, maintenance and other operating costs. Such amounts are generally variable and therefore not included in the measurement of the ROU asset and related lease liability but are instead recognized as variable lease expense in our Consolidated Statements of Income when they are incurred.

Supplemental cash flow information related to leases for the six months ended June 30, 2019:

Operating cash flows from operating leases (in thousands)	\$ 2,723
Right-of-use assets obtained in exchange for new operating lease liabilities	—
Weighted average remaining lease term (in years)	6.7
Weighted average discount rate	10.9%

The maturity of lease liabilities as of June 30, 2019 were as follows (in thousands):

	Amount
2019 (remaining)	\$ 2,477
2020	5,196
2021	5,355
2022	5,477
2023	5,631
Thereafter	13,296
Total	\$ 37,432
Less: imputed interest	(11,101)
Total lease liabilities	\$ 26,331

The future minimum lease payments as of December 31, 2018 under ASC 840 were as follows (in thousands):

	Amount
2019	\$ 4,924
2020	5,141
2021	5,300
2022	5,464
2023	5,631
Thereafter	13,296
Total	\$ 39,756

Note 7—Property and Equipment:

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

	June 30, 2019	December 31, 2018
Leasehold improvements	\$ 3,780	\$ 4,048
Computer equipment	2,400	2,402
Telephone equipment	340	343
Furniture and fixtures	2,346	2,346
	8,866	9,139
Less: accumulated depreciation	(5,434)	(5,176)
Totals	\$ 3,432	\$ 3,963

Note 8—Intangible assets, net:

Intangible assets, net consisted of the following (dollars in thousands):

	June 30, 2019	Estimated Useful Life
Acquired and in-licensed rights	\$ 50,000	13 Years
Less: accumulated amortization	(7,566)	
Total intangible asset, net	\$ 42,434	

Note 9—Accrued Expenses:

Accrued expenses consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Accrued legal verdict expense	\$ 31,350	\$ 9,000
Accrued CRO services	13,214	10,187
Accrued royalties	8,088	9,162
Accrued variable consideration	5,492	3,818
Accrued compensation	4,088	4,435
Accrued professional fees	576	2,175
Accrued other clinical development	4,496	2,380
Accrued bonus	3,894	1,705
Accrued legal fees	550	1,379
Accrued manufacturing costs	573	788
Other	1,930	1,402
Totals	<u>\$ 74,251</u>	<u>\$ 46,431</u>

Accrued CRO services, accrued other clinical development expenses, and accrued legal fees represent the Company's estimates of such costs. Accrued compensation includes sales commissions and vacation. Accrued royalties represent royalties incurred in connection with the Company's license agreement with Pfizer. Accrued compensation includes accrued bonuses and accrued vacation, which is accrued at the rate the employee earns vacation and reduced as vacation is used by the employee.

Accrued variable consideration represents estimates of adjustments to net revenue for which reserves are established. Other accrued expenses consist primarily of accrued contractor/consultant costs, business license fees, taxes, insurance, and marketing fees.

Accrued legal verdict expense represents an initial estimate of a range between \$9.0 million and \$18.0 million that may be owed to class action participants as a result of the recent jury verdict in *Hsu v. Puma Biotechnology, Inc.*, and an initial estimate of \$22.4 million that may be owed to the plaintiff as a result of the recent jury verdict in *Eshelman v. Puma Biotechnology, Inc., et al.* The total amount of damages in *Hsu* and *Eshelman* is uncertain and will be ascertained only after an extensive claims process in *Hsu*, and the completion of post-trial proceedings, and the exhaustion of any appeals in both cases. It is also reasonably possible that the total damages will be higher than these estimates.

All accrued expenses are adjusted in the period the actual costs become known.

Note 10—Debt:

Long term debt consisted of the following at June 30, 2019 (dollars in thousands):

	June 30, 2019	Maturity Date
Long term debt	\$ 100,000	June 1, 2024
Accretion of final interest payment	1,285	
Less: deferred financing costs	(7,851)	
Total long term debt, net	<u>\$ 93,434</u>	

In October 2017, the Company entered into a loan and security agreement with Silicon Valley Bank, or SVB, as administrative agent, and the lenders party thereto from time to time, or the original lenders, including Oxford Finance LLC, or Oxford, and SVB. Pursuant to the terms of the credit facility provided for by the loan and security agreement, or the original credit facility, the Company borrowed \$50.0 million.

In May 2018, the Company entered into an amendment to the loan and security agreement, which provided for an amended credit facility, or the amended credit facility. Under the amended credit facility, the original lenders agreed to make term loans available to the Company in an aggregate amount of \$155.0 million, consisting of (i) an aggregate amount of \$125.0 million, the proceeds of which, in part, were used to repay the \$50.0 million borrowed under the original credit facility, and (ii) an aggregate amount of \$30.0 million that the Company drew in December 2018, which was available under the amended credit facility as a result of achieving a specified minimum revenue milestone. The Company was in compliance with all applicable financial covenants during the entire term of the amended credit facility.

Prior to the amendment and restatement of the loan and security agreement in June 2019, which provided for a new credit facility, or the new credit facility, the term loans under the amended credit facility bore interest at an annual rate equal to the greater of (i) 8.25% and (ii) the sum of (a) the “prime rate,” as reported in The Wall Street Journal on the last business day of the month that immediately preceded the month in which the interest accrued, plus (b) 3.5%. The Company was required to make monthly interest-only payments on each term loan commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month thereafter through July 1, 2020. Commencing on July 1, 2020, and continuing on the first calendar day of each calendar month thereafter, the Company would have been required to make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each original lender, calculated pursuant to the amended credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan would have been due and payable in full on May 1, 2023. Upon repayment of the term loans, the Company was also required to make a final payment to the original lenders equal to 7.5% of the original principal amount of term loans funded.

The Company was also permitted to prepay the outstanding principal balance of any term loan under the amended credit facility, in whole but not in part, subject to a prepayment fee of 3.0% of any amount prepaid if the prepayment were to occur through and including the first anniversary of the funding date of such term loan, 2.0% of any amount prepaid if the prepayment were to occur after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan, and 1.0% of the amount prepaid if the prepayment were to occur after the second anniversary of the funding date of such term loan and prior to May 1, 2023.

On June 28, 2019, or the Effective Date, the Company entered into the new credit facility with Oxford, as collateral agent, and the lenders party thereto from time to time, including Oxford, pursuant to which the Company repaid the \$155.0 million outstanding under the amended credit facility, as well as all applicable exit and prepayment fees owed to the original lenders under the amended credit facility, using cash on hand and \$100.0 million in new borrowings from the new credit facility. Under the new credit facility, the Company issued to Oxford new and/or replacement secured promissory notes in an aggregate principal amount for all such promissory notes of \$100.0 million evidencing the new credit facility. No additional money remains available to the Company under the new credit facility.

The new credit facility is secured by substantially all of the Company’s personal property other than its intellectual property. The Company also pledged 65% of the issued and outstanding capital stock of its subsidiaries, Puma Biotechnology Ltd. and Puma Biotechnology B.V. The new credit facility limits the Company’s ability to grant any interest in its intellectual property to certain permitted licenses and permitted encumbrances set forth in the agreement.

The term loans under the new credit facility bear interest at an annual rate equal to the greater of (i) 9.0% and (ii) the sum of (a) the “prime rate,” as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. The Company is required to make monthly interest-only payments on each term loan under the new credit facility commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month thereafter through August 1, 2021 or, the Amortization Date. Commencing on the Amortization Date, and continuing on the first calendar day of each calendar month thereafter, the Company will make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each lender under the new credit facility, calculated pursuant to the new credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan under the new credit facility is due and payable in full on June 1, 2024, or the Maturity Date. Upon repayment of such term loans, the Company is also required to make a final payment to the lenders equal to 7.5% of the aggregate principal amount of such term loans outstanding as of the Effective Date.

At the Company’s option, the Company may prepay the outstanding principal balance of any term loan in whole but not in part, subject to a prepayment fee of 3.0% of any amount prepaid if the prepayment occurs through and including the first anniversary of the funding date of such term loan, 2.0% of the amount prepaid if the prepayment occurs after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan, and 1.0% of the amount prepaid if the prepayment occurs after the second anniversary of the funding date of such term loan and prior to the Maturity Date.

The new credit facility includes affirmative and negative covenants applicable to the Company, its current subsidiary and any subsidiaries the Company creates in the future. The affirmative covenants include, among others, covenants requiring the Company to maintain its legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. The Company must also achieve certain product revenue targets, measured as of the last day of each fiscal quarter on a trailing year to date basis, for the periods ending June 30, 2019, September 30, 2019 and December 31, 2019. New minimum revenue levels will be established for each subsequent fiscal year by mutual agreement of the Company, Oxford, as collateral agent, and the new lenders. The negative covenants include, among others, 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, selling assets and suffering a change in control, in each case subject to certain exceptions.

The new credit facility also includes events of default, the occurrence and continuation of which could cause interest to be charged at the rate that is otherwise applicable plus 5.0% and would provide Oxford, as collateral agent, with the right to exercise remedies against the Company and the collateral securing the new credit facility, including foreclosure against the property securing the new credit facility, including its cash. These events of default include, among other things, the Company's failure to pay principal or interest due under the new credit facility, a breach of certain covenants under the new credit facility, the Company's insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than \$500,000 and one or more judgments against the Company in an amount greater than \$500,000 individually or in the aggregate that remains unsatisfied, unvacated, or unstayed for a period of 10 days after its entry.

As of June 30, 2019, there was \$100.0 million in term loans outstanding under the new credit facility, representing all of the Company's long-term debt outstanding as of that date, and the Company was in compliance with all applicable covenants under the new credit facility.

Note 11—Stockholders' Equity:

Common Stock:

The Company issued 67,625 and 162,706 shares of common stock upon exercise of stock options during the six months ended June 30, 2019 and 2018, respectively. The Company issued 346,045 and 136,022 shares of common stock upon vesting of RSUs during the six months ended June 30, 2019 and 2018, respectively.

Authorized Shares:

The Company has 100,000,000 shares of stock authorized for issuance, all of which are common stock, par value \$0.0001 per share.

Warrants:

In October 2011, the Company issued an anti-dilutive warrant to Alan Auerbach, the Company's founder and chief executive officer. The warrant was issued to provide Mr. Auerbach with the right to maintain ownership of at least 20% of the Company's common stock in the event that the Company raised capital through the sale of its securities in the future.

In connection with the closing of a public offering in October 2012, the exercise price and number of shares underlying the warrant issued to Mr. Auerbach were established and, accordingly, the final value of the warrant became fixed. Pursuant to the terms of the warrant, Mr. Auerbach may exercise the warrant to acquire 2,116,250 shares of the Company's common stock at \$16 per share until October 4, 2021.

Stock Options and Restricted Stock Units:

The Company's 2011 Incentive Award Plan, as amended, or the 2011 Plan, was adopted by the Company's board of directors on September 15, 2011. Pursuant to the 2011 Plan, the Company may grant incentive stock options and nonqualified stock options, as well as other forms of equity-based compensation. Incentive stock options may be granted only to employees, while consultants, employees, officers and directors are eligible for the grant of nonqualified options under the 2011 Plan. The maximum term of stock options granted under the 2011 Plan is 10 years. The exercise price of incentive stock options granted under the 2011 Plan must be at least equal to the fair value of such shares on the date of grant. Through June 30, 2019, a total of 12,529,412 shares of the Company's common stock had been reserved for issuance under the 2011 Plan.

As of June 30, 2019, 6,664,801 shares of the Company's common stock are issuable upon the exercise of outstanding awards granted under the 2011 Plan and 2,459,792 shares of the Company's common stock are available for future issuance under the 2011 Plan. The fair value of options granted to employees was estimated using the Black-Scholes Option Pricing Method (see Note 2) with the following weighted-average assumptions used during the six months ended June 30, 2019 and 2018:

	2019	2018
Dividend yield	0.0%	0.0%
Expected volatility	99.9%	95.5%
Risk-free interest rate	2.5%	2.5%
Expected life in years	5.76	5.85

The Company's 2017 Employment Inducement Incentive Award Plan, or the 2017 Plan, was adopted by the Company's Board of Directors on April 27, 2017. Pursuant to the 2017 Plan, the Company may grant stock options and RSUs, as well as other forms of equity-based compensation to employees, as an inducement to join the Company. The maximum term of stock options granted under the 2017 Plan is 10 years. The exercise price of stock options granted under the 2017 Plan must be at least equal to the fair market value of such shares on the date of grant. As of June 30, 2019, a total of 1,000,000 shares of the Company's common stock have been reserved for issuance under the 2017 Plan. As of June 30, 2019, 537,501 shares have been awarded under the 2017 Plan.

Stock-based compensation was as follows for the three and six months ended June 30 (in thousands):

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2019	2018	2019	2018
Stock-based compensation:				
Options -				
Selling, general, and administrative	\$ 1,952	\$ 4,118	\$ 4,938	\$ 8,589
Research and development	1,882	7,229	4,215	17,301
Restricted stock units -				
Selling, general, and administrative	5,500	4,454	12,389	8,949
Research and development	6,106	6,383	12,036	12,697
Total stock-based compensation expense	<u>\$ 15,440</u>	<u>\$ 22,184</u>	<u>\$ 33,578</u>	<u>\$ 47,536</u>

Activity with respect to options granted under the 2011 Plan and 2017 Plan is summarized as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2018	5,708,544	\$ 87.49	6.1	\$ 7,762
Granted	129,734	\$ 27.76	9.6	
Forfeited	(59,452)	\$ 41.10		
Exercised	(67,625)	\$ 18.87		\$ 885
Expired	(419,794)	\$ 94.13		
Outstanding at June 30, 2019	<u>5,291,407</u>	<u>\$ 86.90</u>	<u>5.7</u>	<u>\$ 3,429</u>
Nonvested at June 30, 2019	<u>505,584</u>	<u>\$ 41.95</u>	<u>8.6</u>	

At June 30, 2019, total estimated unrecognized employee compensation cost related to non-vested stock options granted prior to that date was approximately \$13.1 million, which is expected to be recognized over a weighted-average period of 1.5 years. At June 30, 2019, the total estimated unrecognized employee compensation cost related to non-vested RSUs was approximately \$65.8 million, which is expected to be recognized over a weighted-average period of 1.8 years. The weighted-average grant date fair value of options granted during the six months ended June 30, 2019 and 2018 was \$21.82 and \$56.46 per share, respectively. The weighted average grant date fair value of RSUs awarded during the six months ended June 30, 2019 and 2018 was \$22.14 and \$65.80 per share, respectively.

Stock Option Rollforward

Stock options	Shares	Weighted Average Grant-Date Fair Value
Nonvested shares at December 31, 2018	<u>779,292</u>	<u>\$ 33.75</u>
Granted	129,734	21.82
Vested/Issued	(343,990)	35.83
Forfeited	(59,452)	25.41
Nonvested shares at June 30, 2019	<u>505,584</u>	<u>\$ 30.25</u>

Restricted Stock Unit Rollforward

Restricted stock units	Shares	Weighted Average Grant-Date Fair Value
Nonvested shares at December 31, 2018	1,838,670	\$ 60.08
Granted	665,354	22.14
Vested/Issued	(346,045)	74.61
Forfeited	(252,738)	58.53
Nonvested shares at June 30, 2019	1,905,241	\$ 44.39

Note 12—401(k) Savings Plan:

The Company maintains a 401(k) savings plan for the benefit of its employees. The Company is required to make matching contributions to the 401(k) plan equal to 100% of the first 3% of wages deferred by each participating employee and 50% on the next 2% of wages deferred by each participating employee. The Company incurred expenses for employer matching contributions of approximately \$0.8 million and \$0.9 million for the six months ended June 30, 2019 and 2018, respectively.

Note 13—Commitments and Contingencies:

Contractual Obligations:

Contractual obligations represent future cash commitments and liabilities under agreements with third parties, and exclude contingent liabilities for which the Company cannot reasonably predict future payment. The Company's contractual obligations result primarily from obligations for various contract manufacturing organizations and clinical research organizations, which include potential payments we may be required to make under our agreements. The contracts also contain variable costs and milestones that are hard to predict as they are based on such things as patients enrolled and clinical trial sites. The timing of payments and actual amounts paid under contract manufacturing organization, or CMO, and CRO agreements may be different depending on the timing of receipt of goods or services or changes to agreed-upon terms or amounts for some obligations. Also, those agreements are cancelable upon written notice by the Company and, therefore, not long-term liabilities.

License Agreement:

In August 2011, the Company entered into an agreement pursuant to which Pfizer agreed to grant it a worldwide license for the development, manufacture and commercialization of PB272 neratinib (oral), PB272 neratinib (intravenous) and PB357, and certain related compounds. The license is exclusive with respect to certain patent rights owned by or licensed to Pfizer. Under the agreement, the Company is obligated to commence a new clinical trial for a product containing one of these compounds within a specified period of time and to use commercially reasonable efforts to complete clinical trials and to achieve certain milestones as provided in a development plan. From the closing date of the agreement through December 31, 2011, Pfizer continued to conduct the existing clinical trials on behalf of the Company at Pfizer's sole expense. At the Company's request, Pfizer has agreed to continue to perform certain services in support of the existing clinical trials at the Company's expense. These services will continue through the completion of the transitioned clinical trials. The license agreement "capped" the out of pocket expense the Company would be responsible for completing the then existing clinical trials. All agreed upon costs incurred by the Company above the "cost cap" would be reimbursed by Pfizer. The Company exceeded the "cost cap" during the fourth quarter of 2012. In accordance with the license agreement, the Company billed Pfizer for agreed upon costs above the "cost cap" until December 31, 2013.

On July 18, 2014, the Company entered into an amendment to the license agreement with Pfizer. The amendment amends the agreement to (1) reduce the royalty rate payable by the Company to Pfizer on sales of licensed products; (2) release Pfizer from its obligation to pay for certain out-of-pocket costs incurred or accrued on or after January 1, 2014 to complete certain ongoing clinical studies; and (3) provide that Pfizer and the Company will continue to cooperate to effect the transfer to the Company of certain records, regulatory filings, materials and inventory controlled by Pfizer as promptly as reasonably practicable.

As consideration for the license, the Company is required to make substantial payments upon the achievement of certain milestones totaling approximately \$187.5 million if all such milestones are achieved. In connection with the FDA approval of NERLYNX in July of 2017, the Company triggered a one-time milestone payment pursuant to the agreement. Should the Company commercialize any more of the compounds licensed from Pfizer or any products containing any of these compounds, the Company will be obligated to pay to Pfizer annual royalties at a fixed rate in the low-to-mid teens of net sales of all such products, subject to certain reductions and offsets in some circumstances. The Company's royalty obligation continues, on a product-by-product and country-by-country basis, until the later of (1) the last to expire licensed patent covering the applicable licensed product in such country, or (2) the earlier of generic competition for such licensed product reaching a certain level in such country or expiration of a certain time period after first commercial sale of such licensed product in such country. In the event that the Company sublicenses the rights granted to the Company under the license agreement with Pfizer to a third party, the same milestone and royalty payments are required. The Company can terminate the license agreement at will, or for safety concerns, in each case upon specified advance notice.

Legal Proceedings:

The Company and certain of its executive officers were named as defendants in the lawsuits detailed below. The Company records a liability in the consolidated financial statements for loss contingencies when a loss is known or considered probable and the amount can be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a loss is reasonably possible but not known or probable, and can be reasonably estimated, the estimated loss or range of loss is disclosed. When determining the estimated loss or range of loss, significant judgment is required to estimate the amount and timing of a loss to be recorded. Currently, the Company has accrued estimated losses of \$9 million related to *Hsu v. Puma Biotechnology, Inc.* and \$22.4 million related to *Eshelman v. Puma Biotechnology, Inc., et al.* as detailed below. For certain legal expenses related to the verdicts listed below, the Company has received reimbursements from its insurers.

Hsu v. Puma Biotechnology, Inc.

On June 3, 2015, Hsingching Hsu, individually and on behalf of all others similarly situated, filed a class action lawsuit against the Company and certain of its executive officers in the United States District Court for the Central District of California (Case No. 8:15-cv-00865-AG-JCG). On October 16, 2015, lead plaintiff Norfolk Pension Fund filed a consolidated complaint on behalf of all persons who purchased the Company's securities between July 22, 2014 and May 29, 2015. A trial on the claims relating to four statements alleged to have been false or misleading was held from January 15 to January 29, 2019. At trial, the jury found that three of the four challenged statements were not false or misleading, and thus found in the defendants' favor on those claims. The jury found liability as to one statement and awarded a maximum of \$4.50 per share in damages, which represents approximately 5% of the total claimed damages of \$87.20 per share. The total amount of aggregate class-wide damages is uncertain and will be ascertained only after an extensive claims process and the exhaustion of any appeals. Trading models suggest that approximately ten million shares traded during the class period may be eligible to claim damages. Based on prior lawsuits, the Company believes that the number of stockholders who submit proof of claims sufficient to recover damages is typically in the range of 20% to 40% of the total eligible shares. Based on these assumptions, total damages after claims could range from \$9 million to \$18 million. It is also reasonably possible that the total damages will be higher than this estimate, however, at this time, the amount is not estimable.

On June 14, 2019, the plaintiffs filed motions for prejudgment interest and for approval of the plaintiffs' proposed notice and claims process. A hearing on these motions is scheduled for September 9, 2019. A final judgment has not been entered.

Eshelman v. Puma Biotechnology, Inc., et al.

In February 2016, Fredric N. Eshelman filed a lawsuit against the Company's Chief Executive Officer and President, Alan H. Auerbach, and the Company in the United States District Court for the Eastern District of North Carolina (Case No. 7:16-cv-00018-D). The complaint generally alleged that Mr. Auerbach and the Company made defamatory statements regarding Dr. Eshelman in connection with a proxy contest. In May 2016, Dr. Eshelman filed a notice of voluntary dismissal of the claims against Mr. Auerbach. A trial on the remaining defamation claims against the Company took place from March 11 to March 15, 2019. At trial, the jury found the Company liable and awarded Dr. Eshelman \$15.9 million in compensatory damages and \$6.5 million in punitive damages. The plaintiff has since filed motions seeking attorneys' fees and pre-judgment interest, which if granted could increase the judgment amount. The Company strongly disagrees with the verdict and, on April 22, 2019, filed a motion for a new trial or, in the alternative, a reduced damages award. If the verdict is upheld, pending the outcome of that motion, the Company intends to appeal the verdict. The Company estimates the high end of potential damages in the matter could be approximately \$26.3 million; however, the actual amount of damages payable by the Company is still uncertain and will be ascertained only after completion of post-trial proceedings and the exhaustion of any appeals, and such amount could be greater than the amount of expense already recognized or the high end of the estimate.

Derivative Actions

On April 12 and April 14, 2016, stockholders filed two derivative lawsuits purportedly on behalf of the Company against certain of its officers and directors in the Superior Court of the State of California, Los Angeles, captioned *Xie v. Auerbach*, No. BC616617, and *McKenney v. Auerbach*, No. BC617059. The complaints asserted claims for breach of fiduciary duty, unjust enrichment, abuse of control, mismanagement and waste of corporate assets. *McKenney* was consolidated with *Xie* on June 21, 2016. The complaints sought an unspecified sum of damages and equitable relief.

Separately, on February 9, 2018, another purported stockholder filed a derivative lawsuit purportedly on behalf of the Company against certain of our officers and directors in the United States District Court, Central District of California, captioned *Van Der Gracht De Rommerswael v. Auerbach*, No. 8:18-cv-00236. The complaint asserted claims for violation of securities laws, breach of fiduciary duty, waste of corporate assets, and unjust enrichment.

On May 30, 2018, another stockholder filed a derivative lawsuit purportedly on behalf of the Company against certain of its officers and directors in the United States District Court, Central District of California, captioned *Duran v. Auerbach*, No. 2:18-cv-04802. The complaint asserted claims for violations of securities laws, breach of fiduciary duties, unjust enrichment, abuse of control, gross mismanagement, and waste of corporate assets. The complaint seeks an unspecified sum of damages, declaratory judgment, corporate reforms, restitution, and costs and disbursements associated with the lawsuit.

On July 30, 2018, the parties reached a settlement in principle of the *Xie*, *Rommerswael* and *Duran* lawsuits. On January 7, 2019, the Court approved the settlement and entered final judgment in the *Rommerswael* case. On March 1, 2019, the Court approved the parties' stipulation and dismissed the *Duran* lawsuit with prejudice. On April 8, 2019, the Court approved the parties' stipulation and dismissed the *Xie* lawsuit with prejudice.

Note 14—Subsequent Events:

The Company noted no events or transactions subsequent to the balance-sheet date that would have a material effect on the financial statements.

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 our unaudited condensed consolidated financial statements and the notes thereto included in Item 1 in this Quarterly Report on Form 10-Q. The following discussion should also be read in conjunction with our audited consolidated financial statements and the notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the year ended December 31, 2018.

Unless otherwise provided in this Quarterly Report, references to the "Company," "we," "us," and "our" refer to Puma Biotechnology, Inc., a Delaware corporation, together with its wholly owned subsidiaries.

Overview

We are a biopharmaceutical company with a focus on the development and commercialization of innovative products to enhance cancer care. We in-license from Pfizer, Inc. or Pfizer, the global development and commercialization rights to three drug candidates—PB272 (neratinib (oral)), PB272 (neratinib (intravenous)) and PB357. Neratinib is a potent irreversible tyrosine kinase inhibitor, or TKI, that blocks signal transduction through the epidermal growth factor receptors, HER1, HER2 and HER4. Currently, we are primarily focused on the development and commercialization of the oral version of neratinib, and our most advanced drug candidates are directed at the treatment of HER2-positive breast cancer. We believe neratinib has clinical application in the treatment of several other cancers as well, including other tumor types that over-express or have a mutation in HER2, such as breast cancer, lung cancer or other solid tumors.

Prior to 2017, our efforts and resources had been focused primarily on acquiring and developing our pharmaceutical technologies, raising capital and recruiting personnel. During 2017, the United States Food and Drug Administration, or FDA, approved NERLYNX (neratinib), formally known as PB272 (neratinib (oral)), for the extended adjuvant treatment of adult patients with early stage HER2-overexpressed/amplified breast cancer following adjuvant trastuzumab-based therapy. In September 2018, the European Commission, or EC, granted marketing authorisation for NERLYNX in the European Union, and in July 2019, our licensing partner, Knight Therapeutics, received marketing authorization for NERLYNX in Canada.

We have entered into exclusive sub-license agreements with various partners to pursue regulatory approval, if necessary, and commercialize NERLYNX, if approved, in Europe (excluding Russia and Ukraine), Canada, South East Asia, Israel, greater China, Mexico, various countries in North Africa and West Africa, and various countries and territories in Central and South America, respectively. We plan to continue to pursue commercialization of NERLYNX in other countries outside the United States, if approved, and will evaluate various commercialization options in those countries, including developing a direct salesforce, contracting with third parties to provide sales and marketing capabilities, or some combination of these two options. We expect that our expenses will continue to increase as we continue commercialization efforts.

Our expenses to date have been related to hiring staff, commencing company-sponsored clinical trials and the build out of our corporate infrastructure and, since 2017, the commercial launch of NERLYNX. Accordingly, our success depends not only on the safety and efficacy of our product candidates, but also on our ability to finance product development. To date, our major sources of working capital have been proceeds from product and license revenue, public offerings of our common stock, proceeds from our credit facility and sales of our common stock in private placements.

Critical Accounting Policies

As of the date of the filing of this Quarterly Report, we believe there have been no material changes to our critical accounting policies and estimates during the three and six months ended June 30, 2019 from our accounting policies at December 31, 2018, as reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, with the exception of the sub-license agreements described below:

License Revenue:

We recognize license revenue under certain of our license agreements that are within the scope of ASC 606. The terms of these agreements may contain multiple performance obligations, which may include licenses and research and development activities. We evaluate these agreements under ASC 606 to determine the distinct performance obligations. Non-refundable, up-front fees that are not contingent on any future performance and require no consequential continuing involvement by us, are recognized as revenue when the license term commences and the licensed data, technology or product is delivered. We defer recognition of non-refundable upfront license fees if the performance obligations are not satisfied.

Prior to recognizing revenue, we make estimates of the transaction price, including variable consideration that is subject to a constraint. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur and when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration may include nonrefundable upfront license fees, payments for research and development activities, reimbursement of certain third-party costs, payments based upon the achievement of specified milestones, and royalty payments based on product sales derived from the collaboration.

If there are multiple distinct performance obligations, we allocate the transaction price to each distinct performance obligation based on its relative standalone selling price. The standalone selling price is generally determined based on the prices charged to customers or using expected cost plus margin. Revenue is recognized by measuring the progress toward complete satisfaction of the performance obligations.

Knight Agreement

On January 9, 2019, we entered into a sub-license agreement, or the Knight Agreement, with Knight. Pursuant to the Knight Agreement, we granted to Knight, under certain of our intellectual property rights relating to neratinib, an exclusive, sublicensable (under certain circumstances) license (i) to commercialize any product containing neratinib and certain related compounds in Canada, (ii) to seek and maintain regulatory approvals for the licensed products in Canada and (iii) to manufacture the licensed products anywhere in the world solely for the development and commercialization of the licensed products in Canada for human use, subject to the terms of the Knight Agreement and the related supply agreement. During the first quarter of 2019, we received a non-refundable, upfront license fee, which we recognized as license revenue in accordance with ASC Topic 606. We satisfied the necessary performance obligations to recognize this license revenue under the terms of the arrangement. The Knight Agreement met the contract existence criteria and contained distinct, identifiable performance obligations for which the stand-alone selling prices were readily determinable and allocable. As a separate promise under the terms of the Knight Agreement, we are obligated to supply Knight with the licensed product in accordance with the supply agreement entered in connection with the license agreement. We are also obligated to participate in a Joint Steering Committee, which was identified as a separate performance obligation. To determine the stand-alone selling price, we estimated the transaction prices, including any variable consideration, at contract inception and determined the fair value of such obligations based on similar arrangements. When determining the transaction prices, we assumed that the goods or services will be transferred to the customer based on the terms of the existing contract, and did not take into consideration the possibility of a contract being canceled, renewed, or modified. We noted there was no additional variable consideration, significant financing components, non-cash consideration, or consideration payable to the customer in this agreement. The Knight Agreement also includes potential future milestone and royalty payments due to us upon successful completion of certain separate, distinct performance obligations. Pursuant to the Knight Agreement, we will potentially receive upfront, regulatory and sales-based milestone payments totaling up to \$7.2 million. In addition, we are entitled to receive significant double-digit royalties calculated as a percentage of net sales of the licensed products in Canada. At this time, we cannot estimate when these milestone-related performance obligations are expected to be achieved.

Pierre Fabre Agreement

Additionally, during the first quarter of 2019, we entered into a sub-license agreement, or the Pierre Fabre Agreement, with Pierre Fabre Medicament SAS, or Pierre Fabre. The Pierre Fabre Agreement granted intellectual property rights and set forth the parties' respective obligations with respect to development, commercialization and supply of the licensed product in European countries excluding Russia and Ukraine, along with countries in North Africa and francophone countries of West Africa. During the first quarter of 2019, we recognized a non-refundable, upfront license fee of \$51.0 million as license revenue in accordance with ASC Topic 606. We satisfied the necessary performance obligations to recognize this license revenue under the terms of the arrangement. The Pierre Fabre Agreement met the contract existence criteria and contained distinct, identifiable performance obligations for which the stand-alone selling prices were readily determinable and allocable. As a separate promise under the terms of the Pierre Fabre Agreement, we are obligated to supply Pierre Fabre with the licensed product in accordance with the related supply agreement. This supply arrangement has been identified as a separate promise. We are also obligated to participate in a Joint Steering Committee and Transition Plan, which were identified as separate performance obligations. To determine the respective stand-alone selling prices, we estimated the transaction prices, including any variable consideration, at contract inception and determined the fair value of such obligations based on similar arrangements. When determining the transaction prices, we assumed that the goods or services will be transferred to the customer based on the terms of the existing contract, and did not take into consideration the possibility of a contract being canceled, renewed, or modified. We noted approximately \$9.0 million in additional variable consideration related to a post-marketing commitment liability, while no significant financing components, non-cash consideration, or consideration payable to the customer were noted. The Pierre Fabre Agreement also includes potential future milestone and royalty payments due to us upon successful completion of certain separate, distinct performance obligations. Pursuant to the Pierre Fabre Agreement, we will potentially receive additional regulatory and sales based milestone payments totaling up to \$345 million. In addition, we will receive significant double-digit royalties on NERLYNX sales throughout the territory covered by the Pierre Fabre Agreement. At this time, we cannot estimate when these milestone-related performance obligations are expected to be achieved.

Summary of Income and Expenses

Product revenue, net:

Product revenue, net consists of revenue from sales of NERLYNX. We sell NERLYNX to a limited number of specialty pharmacies and specialty distributors in the United States. We record revenue at the net sales price, which includes an estimate for variable consideration for which reserves are established. Variable consideration consists of trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates and other incentives.

License revenue:

License revenue consists of consideration earned for performance obligations satisfied pursuant to our license agreements.

Royalty revenue:

Royalty revenue consists of consideration earned related to product sales made by our license partners in their respective territories pursuant to our license agreements.

Cost of sales:

Cost of sales consists of third-party manufacturing costs, freight, and indirect overhead costs associated with sales of NERLYNX. Cost of product sales also includes period costs related to royalty charges payable to Pfizer, the amortization of a milestone payment made to Pfizer after obtaining FDA approval of NERLYNX, certain inventory manufacturing services, inventory adjustment charges, unabsorbed manufacturing and overhead costs, and manufacturing variances.

Selling, general and administration expenses:

Selling, general and administrative, or SG&A, expenses consist primarily of salaries and related personnel costs, including stock-based compensation expense, professional fees, business insurance, rent, general legal activities, and other corporate expenses. Internal expenses primarily consist of payroll-related costs, but also include facilities and equipment costs, travel expenses and supplies. External expenses primarily consist of legal fees, insurance expenses and consulting for activities such as sales, marketing and software implementations to support corporate growth.

We expect overall SG&A expenses to remain higher in 2019 than 2018 due to sales and marketing expenses relating to commercialization. Additionally, we are currently appealing the verdicts in two trials and may incur substantial legal expenses in connection with these appeals. However, we are currently unable to estimate the magnitude of such legal expenses and when these expenses will cease.

Research and development expenses:

R&D expenses include costs associated with services provided by consultants who conduct clinical services on our behalf, contract organizations for the manufacturing of clinical materials and clinical trials. During the three and six months ended June 30, 2019 and 2018, our R&D expenses consisted primarily of clinical research organization, or CRO, fees; fees paid to consultants; salaries and related personnel costs; and stock-based compensation. We expense our R&D costs as they are incurred. Internal R&D expenses primarily consist of payroll-related costs, but also include equipment costs, travel expenses and supplies. External expenses primarily consist of clinical trial expenses and consultant and contractor expense, and also include costs such as legal fees, insurance costs and manufacturing expense.

While we expect clinical R&D expenses to decline in 2019 as compared to 2018, some areas of R&D are expected to increase, such as medical affairs, pharmacovigilance and regulatory affairs as we prepare to apply for global regulatory approval of NERLYNX both in the current and future indications.

Results of Operations

Three Months Ended June 30, 2019 Compared to Three Months Ended June 30, 2018

Total revenue:

For the three months ended June 30, 2019, total revenue was approximately \$53.9 million, compared to \$50.8 million for the three months ended June 30, 2018.

Product revenue, net:

Product revenue, net was approximately \$53.9 million for the three months ended June 30, 2019, compared to \$50.8 million for the three months ended June 30, 2018. The increase in product revenue, net was primarily attributable to a 10% increase in gross selling price that occurred in the first quarter of 2019, partially offset by an increase in variable consideration of approximately 11% in the second quarter of 2019 as compared to approximately 8% in the second quarter of 2018.

Royalty revenue:

Royalty revenue was \$0.1 million for the three months ended June 30, 2019, compared to no royalty revenue for the three months ended June 30, 2018. The increase was due to royalty revenue recognized related to product sales by two of our license partners as they begin to sell in their respective territories.

Cost of sales:

For the three months ended June 30, 2019, cost of sales was approximately \$9.3 million compared to \$8.8 million for the three months ended June 30, 2018. The increase in cost of sales was primarily attributable to increased royalty expenses due to Pfizer, directly related to the increase in product revenue.

Selling, general and administrative expenses:

For the three months ended June 30, 2019, SG&A expenses were approximately \$33.5 million, compared to approximately \$40.1 million for the three months ended June 30, 2018. SG&A expenses for the three months ended June 30, 2019 and 2018 were as follows:

Selling, general, and administrative expenses in thousands	For the Three Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Payroll and related costs	\$ 10,646	\$ 10,922	\$ (276)	-2.5%
Professional fees and expenses	9,577	13,466	(3,889)	-28.9%
Travel and meetings	2,712	4,471	(1,759)	-39.3%
Facilities and equipment costs	1,499	1,481	18	1.2%
Other	1,641	1,223	418	34.2%
Stock-based compensation	7,452	8,572	(1,120)	-13.1%
	<u>\$ 33,527</u>	<u>\$ 40,135</u>	<u>\$ (6,608)</u>	<u>-16.5%</u>

For the three months ended June 30, 2019, SG&A expenses decreased by approximately \$6.6 million compared to the same period in 2018, primarily attributable to the following:

- a decrease in professional fees and expenses of approximately \$3.9 million, comprised of a decrease of approximately \$2.2 million in legal fees in connection with various lawsuits and a decrease of approximately \$1.7 million for consulting fees related to marketing and commercialization support;
- a decrease in travel and meeting expenses of approximately \$1.8 million related primarily to commercialization efforts;
- a decrease in employee stock-based compensation expense of approximately \$1.1 million, due primarily to a decrease of approximately \$2.1 million for stock options and RSUs that have fully vested, a decrease of approximately \$1.3 million from a reduction in headcount, offset by an increase of approximately \$2.3 million from new grants; and
- a decrease of approximately \$0.3 million in payroll and payroll-related expenses.

These decreases were partially offset by an increase of approximately \$0.4 million in bank fees.

Research and development expenses:

For the three months ended June 30, 2019, R&D expenses were approximately \$36.9 million, compared to approximately \$43.2 million for the three months ended June 30, 2018. R&D expenses for the three months ended June 30, 2019 and 2018 were as follows:

Research and development expenses in thousands	For the Three Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Clinical trial expense	\$ 15,656	\$ 13,984	\$ 1,672	12.0%
Internal R&D	9,829	11,293	(1,464)	-13.0%
Consultant and contractors	3,382	4,356	(974)	-22.4%
Stock-based compensation	7,988	13,612	(5,624)	-41.3%
	<u>\$ 36,855</u>	<u>\$ 43,245</u>	<u>\$ (6,390)</u>	<u>-14.8%</u>

For the three months ended June 30, 2019, R&D expenses decreased approximately \$6.4 million compared to the same period in 2018, primarily attributable to the following:

- a decrease in employee stock-based compensation expense of approximately \$5.6 million, due primarily to approximately \$3.2 million in stock options that fully vested and a reduction in headcount, which reduced stock-based compensation expense by approximately \$2.4 million;
- a decrease in internal R&D expense of approximately \$1.5 million, due primarily to decreases of approximately \$1.3 million in payroll and payroll related expense related to a reduction in headcount and a decrease of approximately \$0.2 million in other expenses such as office supplies and software; and
- a decrease in consultant and contractor expenses of approximately \$1.0 million related primarily to a reduction in clinical research associates for certain clinical trials, as these trials are concluding.

These decreases were partially offset by an increase in clinical trial expenses of approximately \$1.7 million primarily attributable to increases in CRO-related costs.

Other (expenses) income:

Other (expenses) income in thousands	For the Three Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Interest income	\$ 908	\$ 329	\$ 579	176.0%
Interest expense	(4,448)	(2,587)	(1,861)	71.9%
Loss on debt extinguishment	(8,103)	—	(8,103)	100.0%
Other expenses	(1)	(633)	632	-99.8%
	<u>\$ (11,644)</u>	<u>\$ (2,891)</u>	<u>\$ (8,753)</u>	<u>302.8%</u>

Interest income:

For the three months ended June 30, 2019, we recognized approximately \$0.9 million in interest income compared to approximately \$0.3 million of interest income for the three months ended June 30, 2018. The increase in interest income reflects more cash in money market accounts and “high yield” savings accounts in 2019 compared to 2018.

Interest expense:

For the three months ended June 30, 2019, we recognized approximately \$4.4 million in interest expense, compared to \$2.6 million of interest expense for the three months ended June 30, 2018. The increase in interest expense was the result of increased borrowings as well as a higher interest rate.

Loss on debt extinguishment:

For the three months ended June 30, 2019, we recognized approximately \$8.1 million in loss on debt extinguishment related to the fees paid in connection with our debt refinancing during the second quarter of 2019 that resulted in the reduction by \$55.0 million of our long-term debt.

Other expense:

For the three months ended June 30, 2018, we recognized approximately \$0.6 million in other expense, which consisted primarily of fees from the modification of debt.

Six Months Ended June 30, 2019 Compared to Six Months Ended June 30, 2018

Total revenue:

For the six months ended June 30, 2019, total revenue was approximately \$153.0 million, compared to \$117.3 million for the six months ended June 30, 2018.

Product revenue, net:

Product revenue, net was approximately \$99.4 million for the six months ended June 30, 2019, compared to \$86.8 million for the six months ended June 30, 2018. The increase in product revenue, net was primarily attributable to an increase of approximately 10% in sales of NERLYNX and a 10% increase in gross selling price that occurred in the first quarter of 2019, partially offset by an increase in variable consideration of approximately 14% for the six months ended June 30, 2019 as compared to approximately 9% for the six months ended June 30, 2018.

License revenue:

License revenue was \$53.5 million for the six months ended June 30, 2019, compared to \$30.5 million for the six months ended June 30, 2018. The increase was primarily due to the satisfaction of performance obligations related to two license agreements as well as the satisfaction of a performance-based milestone.

Royalty revenue:

Royalty revenue was \$0.1 million for the six months ended June 30, 2019, compared no royalty revenue for the six months ended June 30, 2018. The increase was due to royalty revenue recognized related to product sales by two of our license partners.

Cost of sales:

For the six months ended June 30, 2019, cost of sales was approximately \$17.3 million compared to \$15.2 million for the six months ended June 30, 2018. The increase in cost of sales was primarily attributable to the increase in sales of NERLYNX for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018.

Selling, general and administrative expenses:

For the six months ended June 30, 2019, SG&A expenses were approximately \$79.0 million, compared to approximately \$76.7 million for the six months ended June 30, 2018. SG&A expenses for the six months ended June 30, 2019 and 2018 were as follows:

Selling, general, and administrative expenses in thousands	For the Six Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Payroll and related costs	\$ 21,823	\$ 21,434	\$ 389	1.8%
Professional fees and expenses	28,692	25,792	2,900	11.2%
Facilities and equipment costs	2,939	2,877	62	2.2%
Travel and meetings	5,455	6,844	(1,389)	-20.3%
Other	2,797	2,252	545	24.2%
Stock-based compensation	17,327	17,538	(211)	-1.2%
	<u>\$ 79,033</u>	<u>\$ 76,737</u>	<u>\$ 2,296</u>	<u>3.0%</u>

For the six months ended June 30, 2019, SG&A expenses increased by approximately \$2.3 million compared to the same period in 2018, primarily attributable to the following:

- an increase in professional fees and expenses of approximately \$2.9 million, comprised of an increase of approximately \$3.3 million in legal fees in connection with various lawsuits; partially offset by a decrease of approximately \$0.4 million for consultancy efforts related to marketing and commercialization support;
- an increase in other expenses of approximately \$0.6 million, comprised of an increase of approximately \$0.2 million in office expenses, and approximately \$0.4 million in bank fees; and
- an increase of approximately \$0.4 million in payroll and payroll-related expenses due to increases in headcount.

These increases were partially offset by a decrease of approximately \$1.4 million in travel and meeting-related expenses related primarily to commercialization efforts and a decrease of approximately \$0.2 million in employee stock-based compensation expense.

Research and development expenses:

For the six months ended June 30, 2019, R&D expenses were approximately \$72.6 million, compared to approximately \$90.2 million for the six months ended June 30, 2018. R&D expenses for the six months ended June 30, 2019 and 2018 were as follows:

Research and development expenses in thousands	For the Six Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Clinical trial expense	\$ 29,414	\$ 29,206	\$ 208	0.7%
Internal R&D	19,973	23,499	(3,526)	-15.0%
Consultant and contractors	6,945	7,466	(521)	-7.0%
Stock-based compensation	16,251	29,998	(13,747)	-45.8%
	<u>\$ 72,583</u>	<u>\$ 90,169</u>	<u>\$ (17,586)</u>	<u>-19.5%</u>

For the six months ended June 30, 2019, R&D expenses decreased approximately \$17.6 million compared to the same period in 2018, primarily attributable to the following:

- a decrease in employee stock-based compensation of approximately \$13.8 million, due primarily to approximately \$9.7 million in stock options that fully vested in 2018, and a reduction in headcount, which reduced stock-based compensation expense by approximately \$4.1 million;
- a decrease of approximately \$0.5 million in consulting fees related primarily to a reduction in clinical research associates for certain clinical trials; and
- a decrease in internal R&D expense of approximately \$3.5 million primarily attributable to decreases in payroll and payroll related expense due to reduction in headcount.

These decreases were partially offset by an increase in clinical trial expenses of \$0.2 million primarily attributable to increases in CRO-related costs.

Other (expenses) income:

Other (expenses) income in thousands	For the Six Months Ended		Change	
	June 30,		\$	%
	2019	2018	2019/2018	2019/2018
Interest income	\$ 1,780	\$ 503	\$ 1,277	253.9%
Interest expense	(8,891)	(3,666)	(5,225)	142.5%
Legal verdict expense	(16,350)	—	(16,350)	100.0%
Loss on debt extinguishment	(8,103)	—	(8,103)	100.0%
Other expenses	(15)	(679)	664	-97.8%
	<u>\$ (31,579)</u>	<u>\$ (3,842)</u>	<u>\$ (27,737)</u>	<u>721.9%</u>

Interest income:

For the six months ended June 30, 2019, we recognized approximately \$1.8 million in interest income compared to approximately \$0.5 million of interest income for the six months ended June 30, 2018. The increase in interest income reflects more cash in money market accounts and “high yield” savings accounts in 2019 compared to 2018.

Interest expense:

For the six months ended June 30, 2019, we recognized approximately \$8.9 million in interest expense, compared to \$3.7 million of interest expense for the six months ended June 30, 2018. The increase in interest expense was the result of increased borrowings as well as a higher interest rate.

Legal verdict expense:

For the six months ended June 30, 2019, we recognized approximately \$16.4 million in legal verdict expense related to the *Eshelman v. Puma Biotechnology, Inc., et al.* verdict. The legal verdict expense of \$16.4 million is the result of our estimate of the total damages payable in the matter of \$22.4 million, net of \$6.0 million in insurance reimbursements.

Loss on debt extinguishment:

For the six months ended June 30, 2019, we recognized approximately \$8.1 million in loss on debt extinguishment related to the fees paid in connection with our debt refinancing during the second quarter of 2019 that resulted in the reduction by \$55.0 million of our long-term debt.

Other expense:

For the six months ended June 30, 2018, we recognized approximately \$0.7 million in other expense, which primarily consisted of fees from the modification of debt.

Liquidity and Capital Resources

The following table summarizes our liquidity and capital resources as of June 30, 2019 and December 31, 2018, and for the six months ended June 30, 2019 and 2018, and is intended to supplement the more detailed discussion that follows:

Liquidity and capital resources (in thousands)	June 30, 2019		December 31, 2018	
Cash and cash equivalents	\$	27,164	\$	108,419
Marketable securities	\$	90,501	\$	57,002
Working capital	\$	65,948	\$	135,888
Stockholders' equity	\$	21,771	\$	34,306

	Six Months Ended June 30, 2019		Six Months Ended June 30, 2018	
Cash provided by (used in):				
Operating activities	\$	28,117	\$	(23,890)
Investing activities		(33,377)		(38,845)
Financing activities		(67,142)		76,949
Increase (decrease) in cash and cash equivalents	\$	(72,402)	\$	14,214

Operating Activities:

For the six months ended June 30, 2019, we reported a net loss of approximately \$47.5 million, compared to approximately \$68.7 million for the same period in 2018. Additionally, cash provided by operating activities for the six months ended June 30, 2019 was approximately \$28.1 million compared to approximately \$23.9 million of cash used in operating activities for the same periods in 2018, respectively.

Cash provided by operating activities for the six months ended June 30, 2019 consisted of a net loss of approximately \$47.5 million, an increase in prepaid expenses and other of \$2.2 million, an increase in other current assets of \$1.5 million, an increase of \$27.8 million in accrued expenses, an increase of approximately \$9.0 million in a post-marketing commitment liability, and \$45.9 million of non-cash items such as stock-based compensation, depreciation and amortization, and debt extinguishment fees; offset by an increase in net accounts receivable of approximately \$4.6 million, an increase in inventory of \$0.6 million, and a decrease in accounts payable of \$5.6 million.

Cash used in operating activities for the six months ended June 30, 2018 consisted of a net loss of approximately \$68.7 million, an increase in net accounts receivable of approximately \$11.7 million, an increase of approximately \$10.5 million in accrued expenses and an increase of approximately \$0.4 million in inventory, offset by a decrease of approximately \$5.5 million in accounts payable, a \$0.7 million decrease in prepaid expenses and other and \$51.0 million of non-cash items such as stock-based compensation, depreciation and amortization, and loss on modification of debt.

Investing Activities:

During the six months ended June 30, 2019, net cash used in investing activities was approximately \$33.4 million, compared to net cash used by investing activities of \$38.8 million for the same period in 2018. Net cash used in investing activities during the six months ended June 30, 2019 consisted of approximately \$128.0 million of cash invested in available-for-sale securities, offset by \$94.6 million of sales or maturities of available-for-sale securities. This difference of approximately \$33.4 million represents excess cash being invested in short-term investments according to our investment policy. Net cash used in investing activities during the six months ended June 30, 2018 was made up of approximately \$38.6 million of cash invested in available-for-sale securities and \$0.2 million of cash used to purchase property and equipment.

Financing Activities:

During the six months ended June 30, 2019, cash used in financing activities was approximately \$67.1 million, which consisted of approximately \$80.0 million in debt repayments, \$7.8 million in debt extinguishment costs and \$5.6 million in debt issuance costs, offset by \$25.0 million in proceeds from long-term debt and \$1.3 million in proceeds from the exercise of stock options. During the same period in 2018, cash provided by financing activities was approximately \$76.9 million, comprised of \$75.0 million in proceeds from long-term debt, and \$6.1 million in net proceeds from the exercise of stock options, offset by \$4.2 million in payments related to debt issuance costs.

Loan and Security Agreement:

In October 2017, we entered into a loan and security agreement with Silicon Valley Bank, or SVB, as administrative agent, and the lenders party thereto from time to time, or the original lenders, including SVB and Oxford. Pursuant to the terms of the credit facility provided for by the original loan and security agreement, or the original credit facility, we borrowed \$50 million. In May 2018, we entered into an amendment to the loan and security agreement, which provided for an amended credit facility, or the amended credit facility. Under the amended credit facility, the original lenders agreed to make term loans available to us in an aggregate amount of \$155 million, consisting of (i) a term loan in an aggregate amount of \$125 million, the proceeds of which, in part, were used to repay the \$50 million we borrowed under the original credit facility, and (ii) a term loan in an aggregate amount of \$30 million that we drew in December 2018, which was available to us under the amended credit facility as a result of achieving a specified minimum revenue milestone. The Company was in compliance with all applicable financial covenants during the entire term of the amended credit facility.

Prior to the amendment and restatement of the loan and security agreement in June 2019, which provided for a new credit facility, or the new credit facility, the term loans under the amended credit facility bore interest at an annual rate equal to the greater of (i) 8.25% and (ii) the sum of (a) the “prime rate,” as reported in The Wall Street Journal on the last business day of the month that immediately preceded the month in which the interest accrued, plus (b) 3.5%. We were required to make monthly interest-only payments on each term loan commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month thereafter through July 1, 2020. Commencing on July 1, 2020, and continuing on the first calendar day of each calendar month thereafter, we would have been required to make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each original lender, calculated pursuant to the amended credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan would have been due and payable in full on May 1, 2023. Upon repayment of the term loans, we were also required to make a final payment to the original lenders equal to 7.5% of the original principal amount of term loans funded.

We were also permitted to prepay the outstanding principal balance of any term loan in whole but not in part, subject to a prepayment fee of 3.0% of any amount prepaid if the prepayment were to occur through and including the first anniversary of the funding date of such term loan, 2.0% of any amount prepaid if the prepayment were to occur after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan, and 1.0% of the amount prepaid if the prepayment were to occur after the second anniversary of the funding date of such term loan and prior to May 1, 2023.

On June 28, 2019, or the Effective Date, we entered into the new credit facility with Oxford, as collateral agent, and the lenders party thereto from time to time, including Oxford, pursuant to which we repaid the \$155.0 million outstanding under the amended credit facility, as well as all applicable exit and prepayment fees owed to the original lenders under the amended credit facility, using cash on hand and \$100.0 million in new borrowings from the new credit facility. Under the new credit facility, we issued to Oxford new and/or replacement secured promissory notes in an aggregate principal amount for all such promissory notes of \$100.0 million evidencing the new credit facility. No additional money remains available to us under the new credit facility.

The new credit facility is secured by substantially all of our personal property other than our intellectual property. We also pledged 65% of the issued and outstanding capital stock of our subsidiaries, Puma Biotechnology Ltd. and Puma Biotechnology B.V. The new credit facility limits our ability to grant any interest in our intellectual property to certain permitted licenses and permitted encumbrances set forth in the agreement.

The term loans under the new credit facility bear interest at an annual rate equal to the greater of (i) 9.0% and (ii) the sum of (a) the “prime rate,” as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. We are required to make monthly interest-only payments on each term loan under the new credit facility commencing on the first calendar day of the calendar month following the funding date of such term loan, and continuing on the first calendar day of each calendar month thereafter through August 1, 2021, or the Amortization Date. Commencing on the Amortization Date, and continuing on the first calendar day of each calendar month thereafter, we will make consecutive equal monthly payments of principal, together with applicable interest, in arrears to each lender under the new credit facility, calculated pursuant to the new credit facility. All unpaid principal and accrued and unpaid interest with respect to each term loan under the new credit facility is due and payable in full on June 1, 2024, or the Maturity Date. Upon repayment of such term loans, we are also required to make a final payment to the new lenders equal to 7.5% of the aggregate principal amount of such term loans outstanding as of the Effective Date.

At our option, we may prepay the outstanding principal balance of any term loan in whole but not in part, subject to a prepayment fee of 3.0% of any amount prepaid if the prepayment occurs through and including the first anniversary of the funding date of such term loan, 2.0% of the amount prepaid if the prepayment occurs after the first anniversary of the funding date of such term loan through and including the second anniversary of the funding date of such term loan, and 1.0% of the amount prepaid if the prepayment occurs after the second anniversary of the funding date of such term loan and prior to the Maturity Date.

The new credit facility includes affirmative and negative covenants applicable to us, our current subsidiary and any subsidiaries we create in the future. The affirmative covenants include, among others, covenants requiring us to maintain our legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. We must also achieve certain product revenue targets, measured as of the last day of each fiscal quarter on a trailing year to date basis, for the periods ending June 30, 2019, September 30, 2019 and December 31, 2019. New minimum revenue levels will be established for each subsequent fiscal year by mutual agreement of us, Oxford, as collateral agent, and the lenders under the new credit facility. The negative covenants include, among others, restrictions on our transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens, selling assets and suffering a change in control, in each case subject to certain exceptions.

The new credit facility also includes events of default, the occurrence and continuation of which could cause interest to be charged at the rate that is otherwise applicable plus 5.0% and would provide Oxford, as collateral agent, with the right to exercise remedies against us and the collateral securing the new credit facility, including foreclosure against the property securing the new credit facility, including our cash. These events of default include, among other things, our failure to pay principal or interest due under the new credit facility, a breach of certain covenants under the new credit facility, our insolvency, a material adverse change, the occurrence of any default under certain other indebtedness in an amount greater than \$500,000 and one or more judgments against us in an amount greater than \$500,000 individually or in the aggregate that remains unsatisfied, unvacated, or unstayed for a period of 10 days after its entry.

As of June 30, 2019, there was \$100.0 million in term loans outstanding under the new credit facility, representing all of our long-term debt outstanding as of that date, and we were in compliance with all applicable covenants under the new credit facility.

Current and Future Financing Needs:

We have incurred negative cash flows from operations since we started our business, and we did not receive or record any product revenues until the third quarter of 2017. We have spent, and expect to continue to spend, substantial amounts in connection with implementing our business strategy, including our planned product development efforts, our clinical trials, our R&D efforts and our commercialization efforts. Given the current and desired pace of clinical development of our product candidates, over the next 12 months we estimate that our R&D spending will be approximately \$110.0 million to \$120.0 million, excluding stock-based compensation.

Additionally, we expect SG&A expenses to increase as we continue commercialization efforts.

We may choose to begin new R&D efforts or we may choose to launch additional marketing efforts. These efforts may require funding in addition to the cash and cash equivalents totaling approximately \$27.2 million and \$90.5 million in marketable securities available at June 30, 2019. While our consolidated financial statements have been prepared on a going concern basis, we expect to continue incurring significant losses for the foreseeable future and will continue to remain dependent on our ability to obtain sufficient funding to sustain operations and successfully commercialize neratinib. While we have been successful in raising financing in the past, there can be no assurance that we will be able to do so in the future. Our ability to obtain funding may be adversely impacted by uncertain market conditions, unfavorable decisions of regulatory authorities or adverse clinical trial results. The outcome of these matters cannot be predicted at this time.

In addition, we have based our estimate of capital needs on assumptions that may prove to be wrong. Changes may occur that would consume our available capital faster than anticipated, including changes in and progress of our development activities, the impact of commercialization efforts, acquisitions of additional drug candidates and changes in regulation. Potential sources of financing include strategic relationships, public or private sales of equity or debt and other sources of funds. We may seek to access the public or private equity markets when conditions are favorable due to our long-term capital requirements. If we raise funds by selling additional shares of common stock or other securities convertible into common stock, the ownership interests of our existing stockholders will be diluted. If we are not able to obtain financing when needed, we may be unable to carry out our business plan. As a result, we may have to significantly limit our operations, and our business, financial condition and results of operations would be materially harmed. In such an event, we will be required to undertake a thorough review of our programs, and the opportunities presented by such programs, and allocate our resources in the manner most prudent.

Non-GAAP Financial Measures:

In addition to our operating results, as calculated in accordance with generally accepted accounting principles, or GAAP, we use certain non-GAAP financial measures when planning, monitoring, and evaluating our operational performance. The following table presents our net loss and net loss per share, as calculated in accordance with GAAP, as adjusted to remove the impact of stock-based compensation. For the three and six months ended June 30, 2019, stock-based compensation represented approximately 21.9% and 22.1% of our operating expenses, respectively, and 26.6% and 28.5% for the same period in 2018. Our management believes that these non-GAAP financial measures are useful to enhance understanding of our financial performance, are more indicative of our operational performance and facilitate a better comparison among fiscal periods. These non-GAAP financial measures are not, and should not be viewed as, substitutes for GAAP reporting measures.

**Reconciliation of GAAP Net Loss to Non-GAAP Adjusted Net Loss and
GAAP Net Loss Per Share to Non-GAAP Adjusted Net Loss Per Share
(in thousands except share and per share data)**

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2019	2018	2019	2018
GAAP net loss	\$ (37,424)	\$ (44,335)	\$ (47,511)	\$ (68,679)
Adjustments:				
Stock-based compensation -				
Selling, general and administrative	7,452	8,572 (1)	17,327	17,538 (1)
Research and development	7,988	13,612 (2)	16,251	29,998 (2)
Non-GAAP adjusted net loss	<u>\$ (21,984)</u>	<u>\$ (22,151)</u>	<u>\$ (13,933)</u>	<u>\$ (21,143)</u>
GAAP net loss per share—basic	\$ (0.97)	\$ (1.17)	\$ (1.23)	\$ (1.82)
Adjustment to net loss (as detailed above)	0.40	0.58	0.87	1.26
Non-GAAP adjusted basic net loss per share	<u>\$ (0.57)</u>	<u>\$ (0.59) (3)</u>	<u>\$ (0.36)</u>	<u>\$ (0.56) (4)</u>

(1) To reflect a non-cash charge to operating expense for selling, general, and administrative stock-based compensation.

(2) To reflect a non-cash charge to operating expense for research and development stock-based compensation.

(3) Non-GAAP adjusted basic net loss per share was calculated based on 38,647,775 and 37,819,767 weighted-average shares of common stock outstanding for the three months ended June 30, 2019 and 2018, respectively.

(4) Non-GAAP adjusted basic net loss per share was calculated based on 38,565,258 and 37,759,729 weighted-average shares of common stock outstanding for the six months ended June 30, 2019 and 2018, respectively.

Off-Balance Sheet Arrangements

We do not have any “off-balance sheet agreements,” as defined by SEC regulations.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Some of the securities that we invest in have market risk in that a change in prevailing interest rates may cause the principal amount of the cash equivalents to fluctuate. Financial instruments that potentially subject us to significant concentrations of credit risk consist primarily of cash and cash equivalents. We invested our excess cash primarily in cash equivalents such as money market investments as of June 30, 2019. The primary objectives of our investment activities are to ensure liquidity and to preserve principal while at the same time maximizing the income we receive from our cash and cash equivalents without significantly increasing risk. Additionally, we established guidelines regarding approved investments and maturities of investments, which are designed to maintain safety and liquidity.

Because of the short-term maturities of our cash equivalents, we do not believe that a 10% increase in interest rates would have a material effect on the realized value of our cash equivalents.

We also have interest rate exposure as a result of borrowings outstanding under our loan and security agreement. As of June 30, 2019, the outstanding principal amount of our borrowings was \$100.0 million. Our borrowings under the loan and security agreement, as amended, bear interest at an annual rate equal to the greater of (i) 9.0% and (ii) the sum of (a) the “prime rate,” as reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue, plus (b) 3.5%. Changes in the prime rate may therefore affect our interest expense associated with our borrowings under the loan and security agreement.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act, is recorded, processed, summarized and reported within the timelines specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures (as defined under Exchange Act Rule 13a-15(e)), as of June 30, 2019. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures were effective as of June 30, 2019.

Changes in Internal Control over Financial Reporting

Effective January 1, 2019, we adopted Accounting Standards Codification 842, Leases (Topic 842). As a result, we have made changes to certain internal controls over financial reporting to address risks associated with the required lease accounting and disclosure requirements. This includes the enhancement of our lease evaluation processes and the implementation of controls to address risks associated with the calculation of right-of-use assets and corresponding lease liabilities. There were no other changes in our internal control over financial reporting that occurred during the three months ended June 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

Hsu v. Puma Biotechnology, Inc.,

On June 3, 2015, Hsingching Hsu, individually and on behalf of all others similarly situated, filed a class action lawsuit against us and certain of our executive officers in the United States District Court for the Central District of California (Case No. 8:15-cv-00865-AG-JCG). On October 16, 2015, lead plaintiff Norfolk Pension Fund filed a consolidated complaint on behalf of all persons who purchased our securities between July 22, 2014 and May 29, 2015. A trial on the claims relating to four statements alleged to have been false or misleading was held from January 15 to January 29, 2019. At trial, the jury found that three of the four challenged statements were not false or misleading, and thus found in the defendants' favor on those claims. The jury found liability as to one statement and awarded a maximum of \$4.50 per share in damages, which represents approximately 5% of the total claimed damages of \$87.20 per share. The total amount of aggregate class-wide damages is uncertain and will be ascertained only after an extensive claims process and the exhaustion of any appeals. Trading models suggest that approximately ten million shares traded during the class period may be eligible to claim damages. Based on prior lawsuits, we believe that the number of stockholders who submit proof of claims sufficient to recover damages is typically in the range of 20% to 40% of the total eligible shares. Based on these assumptions, total damages after claims could range from \$9 million to \$18 million. It is also reasonably possible that the total damages will be higher than this estimate, however, at this time, the amount is not estimable.

On June 14, 2019, the plaintiffs filed motions for prejudgment interest and for approval of their proposed notice and claims process. A hearing on these motions is scheduled for September 9, 2019. A final judgment has not been entered.

Eshelman v. Puma Biotechnology, Inc., et al.

In February 2016, Fredric N. Eshelman filed a lawsuit against our Chief Executive Officer and President, Alan H. Auerbach, and us in the United States District Court for the Eastern District of North Carolina (Case No. 7:16-cv-00018-D). The complaint generally alleged that we and Mr. Auerbach made defamatory statements regarding Dr. Eshelman in connection with a proxy contest. In May 2016, Dr. Eshelman filed a notice of voluntary dismissal of the claims against Mr. Auerbach. A trial on the remaining defamation claims against us took place from March 11 to March 15, 2019. At trial, the jury found us liable and awarded Dr. Eshelman \$15.9 million in compensatory damages and \$6.5 million in punitive damages. Plaintiff has since filed motions seeking attorneys' fees and pre-judgment interest, which if granted could increase the judgment amount. We strongly disagree with the verdict and, on April 22, 2019, filed a motion for a new trial or, in the alternative, a reduced damages award. If the verdict is upheld, pending the outcome of that motion, we intend to appeal the verdict. We estimate the high end of potential damages in the matter could be approximately \$26.3 million; however, the actual amount of damages payable by us is still uncertain and will be ascertained only after completion of post-trial proceedings and the exhaustion of any appeals, and such amounts could be greater than the amount of expense already recognized or the high end of the estimate.

Derivative Actions

On April 12 and April 14, 2016, stockholders filed two derivative lawsuits purportedly on behalf of us against certain of our officers and directors in the Superior Court of the State of California, Los Angeles, captioned *Xie v. Auerbach*, No. BC616617, and *McKenney v. Auerbach*, No. BC617059. The complaints asserted claims for breach of fiduciary duty, unjust enrichment, abuse of control, mismanagement and waste of corporate assets. *McKenney* was consolidated with *Xie* on June 21, 2016. The complaints sought an unspecified sum of damages and equitable relief.

Separately, on February 9, 2018, another purported stockholder filed a derivative lawsuit purportedly on behalf of us against certain of our officers and directors in the United States District Court, Central District of California, captioned *Van Der Gracht De Rommerswael v. Auerbach*, No. 8:18-cv-00236. The complaint asserted claims for violation of securities laws, breach of fiduciary duty, waste of corporate assets, and unjust enrichment.

On May 30, 2018, another stockholder filed a derivative lawsuit purportedly on behalf of us against certain of its officers and directors in the United States District Court, Central District of California, captioned *Duran v. Auerbach*, No. 2:18-cv-04802. The complaint asserted claims for violations of securities laws, breach of fiduciary duties, unjust enrichment, abuse of control, gross mismanagement, and waste of corporate assets. The complaint seeks an unspecified sum of damages, declaratory judgment, corporate reforms, restitution, and costs and disbursements associated with the lawsuit.

On July 30, 2018, the parties reached a settlement in principle of the *Xie, Rommerswael* and *Duran* lawsuits. On January 7, 2019, the Court approved the settlement and entered final judgment in the *Rommerswael* case. On March 1, 2019, the Court approved the parties' stipulation and dismissed the *Duran* lawsuit with prejudice. On April 8, 2019, the Court approved the parties' stipulation and dismissed the *Xie* lawsuit with prejudice.

Item 1A. RISK FACTORS

Under Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the SEC on March 1, 2019, we identified important factors that could affect our financial performance and could cause our actual results for future periods to differ materially from our anticipated results or other expectations, including those expressed in any forward-looking statements made in this Form 10-Q. There has been no material change in our risk factors subsequent to the filing of our Annual Report. However, the risks described in our Annual Report are not the only risks we face. Additional risks and uncertainties that we currently deem to be immaterial or not currently known to us, as well as other risks reported from time to time in our reports to the SEC, also could cause our actual results to differ materially from our anticipated results or other expectations.

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

Recent Sales of Unregistered Securities

We did not sell any of our equity securities without registration under the Securities Act of 1933, as amended, during the three months ended June 30, 2019.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Neither we nor any "affiliated purchasers" within the definition of Rule 10b-18(a)(3) promulgated under the Exchange Act made any purchases of our equity securities during the quarter ended June 30, 2019.

Item 3. DEFAULTS UPON SENIOR SECURITIES

None.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5. OTHER INFORMATION

None.

Item 6. EXHIBITS

(a) Exhibits required by Item 601 of Regulation S-K.

Exhibit Number	Description
3.1	<u>Second Amended and Restated Certificate of Incorporation of the Company, as filed with the Secretary of State of the State of Delaware on June 14, 2016 (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on June 15, 2016 and incorporated herein by reference)</u>
3.2	<u>Third Amended and Restated Bylaws of the Company (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on May 28, 2019 and incorporated herein by reference)</u>
10.1+*	<u>Amended and Restated Loan and Security Agreement, dated June 28, 2019, by and between the Company and Oxford Finance LLC, as collateral agent and lender</u>
31.1+	<u>Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, with respect to the registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019</u>
31.2+	<u>Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, with respect to the registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019</u>
32.1++	<u>Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>
32.2++	<u>Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>
101.INS+	XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH+	XBRL Taxonomy Extension Schema Document
101.CAL+	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF+	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB+	XBRL Taxonomy Extension Label Linkbase Document
101.PRE+	XBRL Taxonomy Extension Linkbase Document
+	Filed herewith
++	Furnished herewith
*	Portions of this exhibit (indicated by asterisks) have been omitted pursuant to Regulation S-K, Item 601(b)(10). Such omitted information is not material and would likely cause competitive harm to the registrant if publicly disclosed. Additionally, certain schedules and attachments to this exhibit have been omitted pursuant to Regulation S-K, Item 601(a)(5).
#	Management contract or compensatory plan or arrangement.

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.

PUMA BIOTECHNOLOGY, INC.

Date: August 9, 2019

By: /s/ Alan H. Auerbach
Alan H. Auerbach
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 9, 2019

By: /s/ Maximo F. Nougues
Maximo Nougues
Chief Financial Officer
(Principal Financial and Accounting Officer)

[***] Certain information in this document has been excluded pursuant to Regulation S-K, Item 601(b)(10). Such excluded information is not material and would likely cause competitive harm to the registrant if publicly disclosed.

AMENDED AND RESTATED LOAN AND SECURITY AGREEMENT

THIS AMENDED AND RESTATED LOAN AND SECURITY AGREEMENT (as the same may from time to time be amended, modified, supplemented or restated, this “**Agreement**”) dated as of June 28, 2019 (the “**Effective Date**”) by and among OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 (“**Oxford**”), as collateral agent (in such capacity, “**Collateral Agent**”), the Lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time (including Oxford in its capacity as a Lender) (each a “**Lender**” and collectively, the “**Lenders**”), and PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (“**Borrower**”), amends and restates in its entirety that certain Loan and Security Agreement dated as of October 31, 2017 by and among Oxford, in its capacity as a Lender, SILICON VALLEY BANK (“**SVB**”), in its capacity as Collateral Agent, Administrative Agent, and Lender (each as defined in the Original Agreement), and Borrower (as amended from time to time including by, but not limited to, that certain First Amendment to Loan and Security Agreement dated as of May 8, 2018 and that certain Second Amendment to Loan and Security Agreement dated as of September 27, 2018, collectively, the “**Original Agreement**”) and provides the terms on which the Lenders shall lend to Borrower and Borrower shall repay the Lenders. The parties agree as follows:

1. ACCOUNTING AND OTHER TERMS

1.1 Accounting terms not defined in this Agreement shall be construed in accordance with GAAP. Calculations and determinations must be made in accordance with GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. All references to “**Dollars**” or “**\$**” are United States Dollars, unless otherwise noted.

2. LOANS AND TERMS OF PAYMENT

2.1 **Promise to Pay.** Borrower hereby unconditionally promises to pay each Lender, the outstanding principal amount of all Term Loans advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 **Term Loans.**

(a) Availability.

(i) Subject to the terms and conditions of the Original Agreement, prior to the Effective Date, the Lenders (as defined in the Original Loan Agreement), severally and not jointly, made term loans to Borrower in an aggregate amount of One Hundred Fifty-Five Million Dollars (\$155,000,000.00) according to each Lender’s Term Loan Commitment as set forth on Schedule 1.1 of the Original Agreement (such term loans are hereinafter referred to singly as an “**Original Term Loan**”, and collectively as the “**Original Term Loans**”).

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, on the Effective Date, to make term loans to Borrower as follows:

1) The secured promissory notes issued by Borrower evidencing the Original Term Loans made by Oxford (i) on May 8, 2018 in the amounts of (I) Sixteen Million Five Hundred Thousand Dollars (\$16,500,000.00), (II) Thirteen Million Five Hundred Thousand Dollars (\$13,500,000.00), (III) Sixteen Million Dollars (\$16,000,000.00), and (IV) Fourteen Million Four Hundred Eighty-Three Thousand Eight Hundred Seventy-One Dollars (\$14,483,871.00) and (ii) on December 7, 2018 in the amounts of (I) Nine Million Dollars (\$9,000,000.00) and (II) Five Million Five Hundred Sixteen Thousand One Hundred Twenty-Nine Dollars (\$5,516,129.00), shall be replaced with amended and restated secured promissory notes in the same amounts (collectively, the “**Oxford Original Term Loans**”).

2) the Lenders, severally and not jointly, shall make a term loan to Borrower in an amount equal to Twenty-Five Million Dollars (\$25,000,000.00) (the “**New Term Loan**” and together with the Oxford Original Term Loans, collectively the “**Term Loans**”). After repayment, no Term Loan may be reborrowed.

(b) Repayment. Borrower shall make monthly payments of interest only commencing on the first (1st) Payment Date following the Funding Date of each Term Loan (including the Oxford Original Term Loans), and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date. 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, and continuing on the Payment Date of each month thereafter, Borrower shall make consecutive equal monthly payments of principal, together with applicable interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender’s Term Loan, (2) the effective rate of interest, as determined in Section 2.3(a), and (3) a repayment schedule equal to thirty-five (35) months. All unpaid principal and accrued and unpaid interest with respect to each Term Loan is due and payable in full on the Maturity Date. Each Term Loan may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(c) Mandatory Prepayments. If the Term Loans are accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share, 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 Lenders’ 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 to Collateral Agent, for payment to each Lender in accordance with its respective Pro Rata Share, the Final Payment in respect of the Term Loan(s).

(d) Permitted Prepayment of Term Loans. Borrower shall have the option to prepay all, but not less than all, of the Term Loans advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans at least ten (10) Business Days prior to such prepayment, and (ii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its respective Pro Rata Share, 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, including Lenders’ Expenses and interest at the Default Rate with respect to any past due amounts. Oxford hereby agrees to waive (i) the Prepayment Fee (as defined in the Original Loan Agreement) with respect to the Oxford Original Term Loans owed under the Original Loan Agreement.

2.3 Payment of Interest on the Credit Extensions.

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Term Loans shall accrue interest at a floating per annum rate equal to the Basic Rate, determined by Collateral Agent on the Funding Date of the applicable Term Loan, which interest shall be payable monthly in arrears in accordance with Sections 2.2(b) and 2.3(e). Interest shall accrue on each Term Loan commencing on, and including, the Funding Date of such Term Loan, and shall accrue on the principal amount outstanding under such Term Loan through and including the day on which such Term Loan is paid in full.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall accrue interest at a floating per annum rate equal to the rate that is otherwise applicable thereto plus five percentage points (5.00%) (the “**Default Rate**”). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 360-Day Year. Interest shall be computed on the basis of a three hundred sixty (360) day year, and the actual number of days elapsed.

(d) Debit of Accounts. Collateral Agent and each Lender may debit (or ACH) the Designated Deposit Account, and second, any other deposit accounts maintained by Borrower, for principal and interest payments or any other amounts Borrower owes Collateral Agent or the Lenders under the Loan Documents when due. Any such debits (or ACH activity) shall not constitute a set-off.

(e) Payments. Except as otherwise expressly provided herein, all payments by Borrower under the Loan Documents shall be made to the respective Lender to which such payments are owed, at such Lender's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on the Payment Date of each month. Payments of principal and/or interest received after 2:00 p.m. Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

2.4 Secured Promissory Notes. The Term Loans shall be evidenced by a Secured Promissory Note or Notes in the form attached as Exhibit D hereto (other than the six (6) Oxford Original Loans made by Oxford which shall be evidenced by Four Amended and Restated Secured Promissory Notes and Two Second Amended and Restated Secured Promissory Notes in the form attached as Exhibit E hereto) (each a "**Secured Promissory Note**"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Term Loan or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note Record reflecting the making of such Term Loan or (as the case may be) the receipt of such payment. Absent manifest error, the outstanding amount of each Term Loan set forth on such Lender's Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's 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 or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender 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.

2.5 Fees. Borrower shall pay to Collateral Agent:

(a) [Reserved].

(b) Final Payment.

(i) The Final Payment, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares; and

(ii) A fully-earned, non-refundable final payment, due on the Effective Date in connection with the Oxford Original Term Loans, in the aggregate amount of Five Million Six Hundred Twenty-Five Thousand Dollars (\$5,625,000.00) (the "**Oxford Effective Date Final Payment**"), payable to Oxford in its capacity as Lender under the Original Agreement. For the sake of clarity, the Oxford Effective Date Final Payment shall not reduce the Final Payment otherwise due in connection with Section 2.5(b)(i) hereof.

(c) Prepayment Fee. The Prepayment Fee, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares. For the sake of clarity, the Funding Date of each Term Loan, which Term Loans are in the original aggregate principal amount of One Hundred Million Dollars (\$100,000,000.00), is the Effective Date; and

(d) Lenders' Expenses. All Lenders' Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

(e) Good Faith Deposit. Borrower has paid to Collateral Agent a deposit of One Hundred Thousand Dollars (\$100,000.00) (the "Good Faith Deposit"), to initiate the Collateral Agent's and Lenders' due diligence review and documentation process. The Good Faith Deposit shall be utilized to pay Lenders' Expenses.

2.6 Withholding. Payments received by the Lenders from Borrower hereunder will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any governmental authority (including any interest, additions to tax or penalties applicable thereto). Specifically, however, if at any time any Governmental Authority, applicable law, regulation or international agreement requires Borrower to make any withholding or deduction from any such payment or other sum payable hereunder to the Lenders, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, each Lender receives a net sum equal to the sum which it would have received had no withholding or deduction been required and Borrower shall pay the full amount withheld or deducted to the relevant Governmental Authority. Borrower will, upon request, furnish the Lenders with proof reasonably satisfactory to the Lenders indicating that Borrower has made such withholding payment; provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings and as to which payment in full is bonded or reserved against by Borrower. The agreements and obligations of Borrower contained in this Section 2.6 shall survive the termination of this Agreement.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. Each Lender's obligation to make a Term Loan is subject to the condition precedent that Collateral Agent and each Lender shall consent to or shall have received, in form and substance satisfactory to Collateral Agent and each Lender, such documents, and completion of such other matters, as Collateral Agent and each Lender may reasonably deem necessary or appropriate, including, without limitation:

- (a) original Loan Documents, each duly executed by Borrower;
- (b) duly executed original Control Agreements with respect to any Collateral Accounts maintained by Borrower or any of its domestic Subsidiaries;
- (c) duly executed original Secured Promissory Notes in favor of each Lender according to its Term Loan Commitment Percentage;
- (d) the certificate for the Shares, together with Assignment Separate from Certificate, duly executed in blank;
- (e) the Operating Documents of Borrower and its Subsidiaries and good standing certificates of Borrower certified by the Secretary of State (or equivalent agency) of Borrower's jurisdiction of organization or formation and each jurisdiction in which Borrower is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;
- (f) a completed Perfection Certificate for Borrower;
- (g) the Annual Projections, for the current calendar year;
- (h) duly executed original officer's certificate for Borrower that is a party to the Loan Documents, in a form acceptable to Collateral Agent and the Lenders;

- (i) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;
- (j) a landlord's consent executed in favor of Collateral Agent in respect of all of Borrower's and each Subsidiaries' leased locations;
- (k) a bailee waiver executed in favor of Collateral Agent in respect of each third party bailee where Borrower or any Subsidiary maintains Collateral having a book value in excess of Five Hundred Thousand Dollars (\$500,000.00);
- (l) a duly executed legal opinion of counsel to Borrower dated as of the Effective Date;
- (m) a payoff letter from SVB in respect of the SVB Existing Indebtedness;
- (n) evidence that (i) the Liens securing the SVB Existing Indebtedness will be terminated and (ii) the documents and/or filings evidencing the perfection of such Liens, including without limitation any financing statements and/or control agreements, have or will, concurrently with the initial Credit Extension, be terminated;
- (o) evidence satisfactory to Collateral Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Lenders; and
- (p) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.2 Conditions Precedent to all Credit Extensions. The obligation of each Lender to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

- (a) receipt by the Lenders of an executed Disbursement Letter in the form of Exhibit B attached hereto;
- (b) the representations and warranties in Section 5 hereof shall be true, accurate and complete in all material respects on the date of the Disbursement Letter and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in Section 5 hereof are true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;
- (c) in such Lender's sole but reasonable discretion, there has not been any Material Adverse Change;
- (d) to the extent not delivered at the Effective Date, duly executed original Secured Promissory Notes, in number, form and content acceptable to each Lender, and in favor of each Lender according to its Commitment Percentage, with respect to each Credit Extension made by such Lender after the Effective Date; and
- (e) payment of the fees and Lenders' Expenses then due as specified in Section 2.5 hereof.

3.3 Covenant to Deliver. Borrower agrees to deliver to Collateral Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Collateral Agent or any Lender of any such item shall not constitute a waiver by Collateral Agent or any Lender of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in each Lender's sole but reasonable discretion.

3.4 Procedures for Borrowing. Subject to the prior satisfaction of all other applicable conditions to the making of a Term Loan set forth in this Agreement, to obtain a Term Loan, Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 2:00 p.m. Eastern time five (5) Business Days prior to the date the Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to the Lenders by electronic mail or facsimile a completed Disbursement Letter executed by a Responsible Officer or his or her designee. The Lenders may rely on any telephone notice given by a person whom a Lender reasonably believes is a Responsible Officer or designee. On the Funding Date, each Lender shall credit and/or transfer (as applicable) to the Designated Deposit Account, an amount equal to its Term Loan Commitment.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Collateral Agent, for the ratable benefit of the Lenders, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Agent, for the ratable benefit of the Lenders, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral, subject only to Permitted Liens that are permitted by the terms of this Agreement to have priority to Collateral Agent's or each Lender's Lien. If Borrower shall acquire a commercial tort claim (as defined in the Code) greater than Two Hundred Fifty Thousand Dollars (\$250,000.00), Borrower, shall promptly notify Collateral Agent in a writing signed by Borrower, as the case may be, of the general details thereof (and further details as may be required by Collateral Agent) and grant to Collateral Agent, for the ratable benefit of the Lenders, in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

If this Agreement is terminated, Collateral Agent's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as the Lenders' obligation to make Credit Extensions has terminated, Collateral Agent shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Collateral Agent to file financing statements or take any other action required to perfect Collateral Agent's security interests in the Collateral, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Collateral Agent's interest or rights under the Loan Documents.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Collateral Agent, for the ratable benefit of the Lenders, a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Effective Date, or, to the extent not certificated as of the Effective Date, within ten (10) days of the certification of any Shares, the certificate or certificates for the Shares will be delivered to Collateral Agent, accompanied by an instrument of assignment duly executed in blank by Borrower. To the extent required by the terms and conditions governing the Shares, Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence and during the continuance of an Event of Default hereunder, Collateral Agent and Lenders may affect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Collateral Agent and Lenders and cause new (as applicable) certificates representing such securities to be issued in the name of Collateral Agent and Lenders or their transferees. Borrower will execute and deliver such documents,

and take or cause to be taken such actions, as Collateral Agent or any Lender may reasonably request to perfect or continue the perfection of Collateral Agent's security interest in the Shares. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants to Collateral Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing as a Registered Organization in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with this Agreement, Borrower and each of its Subsidiaries has delivered to Collateral Agent a completed perfection certificate signed by an officer of Borrower or such Subsidiary (each a "**Perfection Certificate**" and collectively, the "**Perfection Certificates**"). Borrower represents and warrants that (a) Borrower and each of its Subsidiaries' exact legal name is that which is indicated on its respective Perfection Certificate and on the signature page of each Loan Document to which it is a party; (b) Borrower and each of its Subsidiaries is an organization of the type and is organized in the jurisdiction set forth on its respective Perfection Certificate; (c) each Perfection Certificate accurately sets forth each of Borrower's and its Subsidiaries' organizational identification number or accurately states that Borrower or such Subsidiary has none; (d) each Perfection Certificate accurately sets forth Borrower's and each of its Subsidiaries' place of business, or, if more than one, its chief executive office as well as Borrower's and each of its Subsidiaries' mailing address (if different than its chief executive office); (e) Borrower and each of its Subsidiaries (and each of its respective predecessors) have not, in the past five (5) years, changed its jurisdiction of organization, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificates pertaining to Borrower and each of its Subsidiaries, is accurate and complete in all material respects (it being understood and agreed that Borrower and each of its Subsidiaries may from time to time update certain information in the Perfection Certificates (including the information set forth in clause (d) above) after the Effective Date to the extent permitted by one or more specific provisions in this Agreement); such updated Perfection Certificates subject to the review and approval of Collateral Agent. If Borrower or any of its Subsidiaries is not now a Registered Organization but later becomes one, Borrower shall notify Collateral Agent of such occurrence and provide Collateral Agent with such Person's organizational identification number within five (5) Business Days of receiving such organizational identification number.

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any material applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected, (iv) require any material action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect) or are being obtained pursuant to Section 6.1(b), or (v) constitute an event of default under any material agreement by which Borrower or any of such Subsidiaries, or their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each of its Subsidiaries have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any of its Subsidiaries have any Deposit

Accounts, Securities Accounts, Commodity Accounts or other investment accounts other than the Collateral Accounts or the other investment accounts, if any, described in the Perfection Certificates delivered to Collateral Agent in connection herewith with respect of which Borrower or such Subsidiary has given Collateral Agent notice and taken such actions as are necessary to give Collateral Agent a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

(b) On the Effective Date, and except as disclosed on the Perfection Certificate (i) the Collateral is not in the possession of any third party bailee (such as a warehouse), and (ii) no such third party bailee possesses components of the Collateral with replacement value in excess of Five Hundred Thousand Dollars (\$500,000.00). None of the components of the Collateral shall be maintained at locations other than as disclosed in the Perfection Certificates on the Effective Date or as permitted pursuant to Section 6.11.

(c) All Inventory is in all material respects of good and marketable quality, free from material defects.

(d) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own, free and clear of all Liens other than Permitted Liens. Except as noted on the Perfection Certificates or as otherwise disclosed pursuant to the terms of this Agreement, neither Borrower nor any of its Subsidiaries is a party to, nor is bound by, any material license or other material agreement with respect to which Borrower or such Subsidiary is the licensee that (i) prohibits or otherwise restricts Borrower or its Subsidiaries from granting a security interest in Borrower's or such Subsidiaries' interest in such material license or material agreement or any other property, or (ii) for which a default under or termination of could interfere with Collateral Agent's or any Lender's right to sell any Collateral.

5.3 Litigation. Except as disclosed (i) on the Perfection Certificates, or (ii) in accordance with Section 6.9 hereof, there are no actions, suits, investigations, or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than Five Hundred Thousand Dollars (\$500,000.00).

5.4 No Material Deterioration in Financial Condition; Financial Statements. All consolidated financial statements for Borrower and its Subsidiaries, delivered to Collateral Agent fairly present, in conformity with GAAP, in all material respects the consolidated financial condition of Borrower and its Subsidiaries, and the consolidated results of operations of Borrower and its Subsidiaries. There has not been any material deterioration in the consolidated financial condition of Borrower and its Subsidiaries since the date of the most recent financial statements submitted to any Lender.

5.5 Solvency. Borrower and each of its Subsidiaries is Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' properties or assets has been used by Borrower or such Subsidiary or, to Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

None of Borrower, any of its Subsidiaries, or 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.

5.7 Investments. Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries has timely filed all required tax returns and reports, and Borrower and each of its Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower and such Subsidiaries, in all jurisdictions in which Borrower or any such Subsidiary is subject to taxes, including the United States, unless such taxes are being contested in accordance with the following sentence. Borrower and each of its Subsidiaries, may defer payment of any contested taxes, provided that Borrower or such Subsidiary, (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Collateral Agent in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the Governmental Authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "**Permitted Lien.**" Neither Borrower nor any of its Subsidiaries is aware of any claims or adjustments proposed for any of Borrower's or such Subsidiaries', prior tax years which could result in additional taxes in excess of One Hundred Thousand Dollars (\$100,000.00) becoming due and payable by Borrower or its Subsidiaries. Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries have, withdrawn from participation in, and have not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority. For purposes of this Section 5.8, "foreign, federal, state, and local tax, assessments, deposits and contributions" shall mean foreign, federal, state, and local taxes, assessments, deposits and contributions exceeding in the aggregate One Hundred Thousand Dollars (\$100,000.00) in any fiscal year.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions 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.

5.10 Shares. Borrower has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. To Borrower's knowledge, there are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.11 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement given to Collateral Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Collateral Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not materially misleading (it being recognized that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.12 Definition of “Knowledge.” For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower’s knowledge or awareness, to the “best of” Borrower’s knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries’ legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent, for the ratable benefit of the Lenders, in all of the Collateral. Borrower shall promptly provide copies to Collateral Agent of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries.

6.2 Financial Statements, Reports, Certificates.

(a) Deliver to each Lender:

(i) as soon as available, but no later than forty-five (45) days after the last day of each quarter, a company prepared consolidated and consolidating (if prepared) balance sheet, income statement and cash flow statement covering the consolidated operations of Borrower and its Subsidiaries for such month certified by a Responsible Officer and in a form reasonably acceptable to Collateral Agent;

(ii) as soon as available, but no later than ninety (90) days after the last day of Borrower’s fiscal year or within five (5) days of filing with the SEC, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion (other than with respect to going concern so long as no Event of Default has occurred and is continuing) on the financial statements from an independent certified public accounting firm acceptable to Collateral Agent in its reasonable discretion;

(iii) as soon as available after approval thereof by Borrower’s Board of Directors, but no later than thirty (30) days after the last day of each of Borrower’s fiscal years, Borrower’s annual financial projections for the entire current fiscal year as approved by Borrower’s Board of Directors, which such annual financial projections shall be set forth in a month-by-month format (such annual financial projections as originally delivered to Collateral Agent and the Lenders are referred to herein as the “**Annual Projections**”; provided that, any revisions of the Annual Projections approved by Borrower’s Board of Directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval);

(iv) within five (5) days of delivery, copies of all non-ministerial statements, reports and notices made available to Borrower’s security holders or holders of Subordinated Debt;

(v) in the event that Borrower becomes subject to the reporting requirements under the Securities Exchange Act of 1934, as amended, within five (5) days of filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission; provided, however, that notwithstanding anything herein to the contrary, the posting of a link on Borrower's website on the internet to any annual, regular, periodic and special reports, registration statements and notices shall satisfy the delivery requirements hereunder so long as Borrower has provided Lenders with prior written notice of such link on the Borrower's website;

(vi) prompt notice of any material amendments of or other changes to the Operating Documents of Borrower or any of its Subsidiaries, together with any copies reflecting such amendments or changes with respect thereto;

(vii) prompt notice of any event that could reasonably be expected to materially and adversely affect the value of the Intellectual Property;

(viii) as soon as available, but no later than forty-five (45) days after the last day of each quarter, copies of the quarter-end account statements for each Collateral Account maintained by Borrower or its Subsidiaries, which statements may be provided to Collateral Agent by Borrower or directly from the applicable institution(s), and

(ix) other information as reasonably requested by Collateral Agent or any Lender.

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 SEC) 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.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a)(i) above but no later than forty-five (45) days after the last day of each quarter, deliver to each Lender, a duly completed Compliance Certificate signed by a Responsible Officer.

(c) Keep proper books of record and account in accordance with GAAP in all material respects, in which full, true and correct entries shall be made of all dealings and transactions in relation to its business and activities. Borrower shall, and shall cause each of its Subsidiaries to, allow, at the sole cost of Borrower, Collateral Agent or any Lender, during regular business hours upon reasonable prior notice (provided that no notice shall be required when an Event of Default has occurred and is continuing), to visit and inspect any of its properties, to examine and make abstracts or copies from any of its books and records, and to conduct a collateral audit and analysis of its operations and the Collateral. Such audits shall be conducted no more often than once every year unless (and more frequently if) an Event of Default has occurred and is continuing.

(d) Deliver to Collateral Agent and Alexandria Real Estate, as soon as available, but no later than (i) thirty (30) days after the end of each fiscal quarter and (ii) thirty (30) days after the last day of each month in which Borrower has delivered in excess of One Hundred Thousand Dollars (\$100,000) worth of new Collateral to the property located at 701 Gateway Boulevard, South San Francisco, California, an updated, fully comprehensive, Exhibit A to the landlord lien waiver among Alexandria Real Estate, Borrower and Collateral Agent.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects except for Inventory for which adequate reserves have been made. Returns and allowances between Borrower, or any of its Subsidiaries, and their respective Account Debtors shall follow Borrower's, or such Subsidiary's, customary practices as they exist at the Effective Date. Borrower must promptly notify Collateral Agent and the Lenders of all returns, recoveries, disputes and claims that involve more than Five Hundred Thousand Dollars (\$500,000.00) individually or in the aggregate in any calendar year.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely file, all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.8 hereof, and shall deliver to Collateral Agent and Lenders, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans. Notwithstanding anything to the contrary contained in this Section 6.4, Borrower shall not be in breach of this Section 6.4 unless the aggregate amount of taxes covered by tax returns and reports that have not been filed, together with the aggregate amount of taxes that have not been timely paid, exceeds Fifty Thousand Dollars (\$50,000.00).

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location and as Collateral Agent may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Collateral Agent and Lenders. All property policies shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee and waive subrogation against Collateral Agent, and all liability policies shall show, or have endorsements showing, Collateral Agent, as additional insured. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent, that it will give the Collateral Agent thirty (30) days prior written notice before any such policy or policies shall be materially altered or canceled. At Collateral Agent's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any policy shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any property policy up to One Million Dollars (\$1,000,000.00) with respect to any loss, but not exceeding One Million Dollars (\$1,000,000.00), in the aggregate for all losses under all property policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Collateral Agent has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such property policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons, Collateral Agent and/or any Lender may make, at Borrower's expense, all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Maintain all of Borrower's and its domestic U.S. Subsidiaries' Collateral Accounts in accounts which are subject to a Control Agreement in favor of Collateral Agent and the Lenders; provided, however, that Borrower may maintain cash and Cash Equivalents (i) held in existing accounts held at Wells Fargo (which are subject to a Control Agreement in favor of Collateral Agent and the Lenders), and (ii) held in accounts xxxxxx2454 and xxxxxx5768 at Wells Fargo (which are not required to be subject to a Control Agreement).

(b) Borrower shall provide Collateral Agent five (5) days' prior written notice before Borrower or any of its domestic Subsidiaries establishes any Collateral Account at or with any Person. In addition, for each Collateral Account that Borrower or any of its domestic Subsidiaries, at any time maintains, Borrower or such Subsidiary shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's Lien in such Collateral Account in accordance with the terms hereunder prior to the establishment of such Collateral Account, which Control Agreement may not be terminated without prior written consent of Collateral Agent. The provisions of the previous sentence shall not apply to (a) any accounts established (or otherwise maintained) solely with respect to 401(k) accounts, flexible spending reimbursement accounts and insurance accounts for the payment of employee health claims, (b) any trust accounts established (or otherwise maintained) solely with respect to withholding taxes and all payroll accounts (which are solely for such purposes), (c) any fiduciary or escrow accounts and (d) any disbursement accounts established solely for the payment of medical, dental, disability or other similar expenses in connection with insurance or benefit programs for the benefit of Borrower's, or any of its Subsidiaries', employees and identified to Collateral Agent by Borrower as such in the Perfection Certificates.

(c) Neither Borrower nor any of its domestic Subsidiaries shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with Sections 6.6(a) and (b).

6.7 Protection of Intellectual Property Rights. 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 Collateral Agent in writing of material infringement by a third party of its Intellectual Property; and (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent.

6.8 Litigation Cooperation. Commencing on the Effective Date and continuing through the termination of this Agreement, make available to Collateral Agent and the Lenders, without expense to Collateral Agent or the Lenders, Borrower and each of Borrower's officers, employees and agents and Borrower's Books, to the extent that Collateral Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Collateral Agent or any Lender with respect to any Collateral or relating to Borrower.

6.9 Notices of Litigation and Default. Borrower will give prompt written notice to Collateral Agent and the Lenders of any litigation or governmental proceedings pending or threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of Five Hundred Thousand Dollars (\$500,000.00) or more or which could reasonably be expected to have a Material Adverse Change. Without limiting or contradicting any other more specific provision of this Agreement, promptly (and in any event within three (3) Business Days) upon Borrower becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, Borrower shall give written notice to Collateral Agent and the Lenders of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default.

6.10 Minimum Revenue. Borrower shall achieve net commercial revenues (inclusive of commercial product sales and royalties from commercial product sales, but, for the sake of clarity, exclusive of upfront or milestone payments from licensing agreements), measured in accordance with GAAP as of the last day of each fiscal quarter on a trailing year to date basis greater than or equal to the amounts set forth below.

Fiscal Quarter Ending	Minimum Revenue
June 30, 2019	[***]
September 30, 2019	[***]
December 31, 2019	[***]

New minimum revenue levels for each fiscal quarter following the fiscal year ending December 31, 2019 be set by the mutual agreement of Borrower, Collateral Agent and the Lenders based on the projections delivered by Borrower to Collateral Agent and the Lenders pursuant to Section 6.2(a)(iii) hereof and pursuant to an amendment to this Agreement which Borrower hereby agrees to execute no later than February 28th of each year; provided that, in any case, (i) the minimum revenue (as measured pursuant to the above) for the total fiscal year 2020 shall be greater than or equal to [***] and (ii) the minimum revenue (as measured pursuant to the above) for the total fiscal year 2021 shall be greater than or equal to [***]. Such revenue projections shall be acceptable to Collateral Agent and the Lenders in their sole but reasonable discretion and in any case shall show year over year revenue growth (at a rate to be reasonably agreed) and it shall be an immediate Event of Default if Borrower, Collateral Agent and the Lenders (in each case acting reasonably) fail to enter into the aforementioned amendment on or prior to February 28th of each year.

6.11 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its domestic U.S. Subsidiaries, after the Effective 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 will first notify, no later than twenty (20) days prior to moving into such new location, the Collateral Agent and, in the event that the Collateral at any new location is valued in excess of Five Hundred Thousand (\$500,000.00) in the aggregate, such bailee or landlord, as applicable, must execute and deliver a bailee waiver or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent 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.

6.12 Creation/Acquisition of Subsidiaries. In the event Borrower, or any of its Subsidiaries creates or acquires any Subsidiary after the Effective Date, Borrower shall provide prior written notice to Collateral Agent and each Lender of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Collateral Agent or any Lender 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 Collateral Agent, for the ratable benefit of the Lenders, a perfected security interest in the Shares; 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 Collateral Agent, for the ratable benefit of Lenders, a perfected security interest in more than sixty-five percent (65%) of the stock, units or other evidence of ownership of such Foreign Subsidiary, if Borrower demonstrates to the reasonable satisfaction of Collateral Agent that such Foreign Subsidiary providing such guarantee or pledge and security interest or Borrower providing a perfected security interest in more than sixty-five percent (65%) of the stock, units or other evidence of ownership would create a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code.

6.13 Further Assurances.

(a) Execute any further instruments and take further action as Collateral Agent or any Lender reasonably requests to perfect or continue Collateral Agent's Lien in the Collateral or to effect the purposes of this Agreement.

(b) Deliver to Collateral Agent and Lenders, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Borrower's business or otherwise could reasonably be expected to have a Material Adverse Change.

6.14 Netherlands Share Pledge Documents. No later than thirty (30) days after the Effective Date, Borrower shall have delivered to Collateral Agent and the Lenders the duly executed Netherlands Share Pledge Documents.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries to, do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn out or obsolete Equipment; (c) in connection with Permitted Liens, Permitted Investments and Permitted Licenses; (d) of cash and Cash Equivalents in connection with transactions not prohibited hereunder, in the ordinary course of business, and approved by the Borrower's Board of Directors; and (e) the Transfer of other assets for fair market value not to exceed Five Hundred Thousand Dollars (\$500,000.00) in the aggregate.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses engaged in by Borrower as of the Effective Date or reasonably related thereto; (b) liquidate or dissolve; or (c) (i) any Key Person shall cease to be actively engaged in the management of Borrower unless written notice thereof is provided to Collateral Agent within ten (10) days of such change, or (ii) have a Change in Control. Borrower shall not, without at least twenty (20) days' prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations (ii) contain less than Two Hundred Fifty Thousand Dollars (\$250,000.00) in assets or property of Borrower or any of its Subsidiaries and (ii) are not Borrower's or its Subsidiaries' chief executive office); (B) change its jurisdiction of organization, (C) change its organizational structure or type, (D) change its legal name, or (E) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock, shares or property of another Person, except (i) for Permitted Acquisitions, and (ii) that a Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a "co-Borrower" hereunder or has provided 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.

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

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or 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 permit any Collateral not to be subject to the first priority security interest granted herein (except for Permitted Liens that are permitted by the terms of this Agreement to have priority over Collateral Agent's or any Lender's Lien or Liens arising by an agreement to the extent permitted hereunder and in respect of clauses (c) through (f), (h), (j), and (k) in the definition of Permitted Liens that may have priority over Collateral Agent's Lien), or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Agent, for the ratable benefit of the Lenders, or any Lender) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower, or any of its Subsidiaries, from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or such Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of "**Permitted Liens**" herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6 hereof.

7.7 Distributions; Investments. (a) Pay any dividends (other than dividends payable solely in capital stock or dividends by a Subsidiary of Borrower to Borrower) or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock in cash, except that Borrower may (i) repurchase the stock of former employees, consultants and directors pursuant to stock repurchase agreements entered into by Borrower in the ordinary course of business, as long as an Event of Default does not exist and is not continuing prior to such repurchase or would not exist after giving effect to such repurchase, and (ii) repurchase the stock of former employees, consultants and directors pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees to Borrower regardless of whether an Event of Default exists; not to exceed Five Hundred Thousand Dollars (\$500,000.00) in the aggregate per fiscal year for (i) and (ii), above; or (b) directly or indirectly make any Investment other than Permitted Investments or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) Subordinated Debt or equity investments by Borrower's investors in Borrower or its Subsidiaries and (c) compensation and benefit arrangements (including the granting of options or other equity compensation arrangements) and any indemnification arrangements with employees, officers, directors or consultants approved by, or pursuant to, any plan approved by the Board of Directors of Borrower in the ordinary course of business and consistent with past practices.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to the Lenders.

7.10 Compliance. Become an “investment company” or a company controlled by an “investment company”, under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that 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 other law or regulation, if the violation could reasonably be expected to have a Material Adverse Change, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.11 Compliance with Anti-Terrorism Laws. Collateral Agent hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Collateral Agent’s policies and practices, Collateral Agent 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 Collateral Agent 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 Collateral Agent 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.

7.12 Foreign Subsidiary Assets. Permit the aggregate value of cash, Cash Equivalents and other assets held by (i) Puma UK to exceed Two Million Dollars (\$2,000,000.00) (or equivalent) at any time and (ii) Puma Netherlands to exceed Two Million Dollars (\$2,000,000.00) (or equivalent) at any time.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an “**Event of Default**”) 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) Borrower or any of its Subsidiaries fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.7 (Protection of Intellectual Property Rights), 6.9 (Notice of Litigation and Default), 6.10 (Minimum Revenue), 6.11 (Landlord Waivers; Bailee Waivers), 6.12 (Creation/Acquisition of Subsidiaries) or Section 6.12 (Netherlands Share Pledge Documents) or Borrower violates any covenant in Section 7; or

(b) Borrower, or any of its Subsidiaries, fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within twenty (20) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the twenty (20) day period or cannot after diligent attempts by Borrower be cured within such twenty (20) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this Section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

8.3 Material Adverse Change. A Material Adverse Change occurs;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries or of any entity under control of Borrower or its Subsidiaries on deposit with any Lender or any Lender's Affiliate or any bank or other institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment is filed against Borrower or any of its Subsidiaries or their respective assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting any part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is or becomes Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while Borrower or any Subsidiary is Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Thousand Dollars (\$500,000.00) or that could reasonably be expected to have a Material Adverse Change;

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars (\$500,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order or decree);

8.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Collateral Agent and/or Lenders or to induce Collateral Agent and/or the Lenders to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

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 Collateral Agent or the Lenders, or any creditor that has signed such an agreement with Collateral Agent or the Lenders breaches any terms of such agreement;

8.10 Guaranty. (a) Any Guaranty terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty; (c) any circumstance described in Sections 8.3, 8.4, 8.5, 8.7, or 8.8 occurs with respect to any Guarantor, or (d) the liquidation, winding up, or termination of existence of any Guarantor;

8.11 Governmental Approvals. Any Governmental Approval 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 Change; or

8.12 Lien Priority. Any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected Lien on any of the Collateral purported to be secured thereby, subject to no prior or equal Lien, other than Permitted Liens which are permitted to have priority in accordance with the terms of this Agreement; provided that such circumstance is not due to Collateral Agent's failure to file an appropriate continuation financing statement, amendment financing statement or initial financing statement.

8.13 Delisting. The shares of common stock of Borrower are delisted from NASDAQ Capital Market because of failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on any other nationally recognized stock exchange in the United States having listing standards at least as restrictive as the NASDAQ Capital Market.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Collateral Agent may, and at the written direction of Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Collateral Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders shall be immediately terminated without any action by Collateral Agent or the Lenders).

(b) Without limiting the rights of Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

- (i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) apply to the Obligations any (a) balances and deposits of Borrower that Collateral Agent or any Lender holds or controls, or (b) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of Borrower; and/or

(iii) commence and prosecute an Insolvency Proceeding or consent to Borrower commencing any Insolvency Proceeding.

(c) Without limiting the rights of Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing Borrower money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Collateral Agent requests and make it available in a location as Collateral Agent reasonably designates. Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, the Collateral. Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any account maintained with Collateral Agent or the Lenders and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries; and

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

Notwithstanding any provision of this Section 9.1 to the contrary, upon the occurrence of any Event of Default, Collateral Agent shall have the right to exercise any and all remedies referenced in this Section 9.1 without the written consent of Required Lenders following the occurrence of an Exigent Circumstance. As used in the immediately preceding sentence, “**Exigent Circumstance**” means any event or circumstance that, in the reasonable judgment of Collateral Agent, imminently threatens the ability of Collateral Agent to realize upon all or any material portion of the Collateral, such as, without limitation, fraudulent removal, concealment, or abscondment thereof, destruction or material waste thereof, or failure of Borrower or any of its Subsidiaries after reasonable demand to maintain or reinstate adequate casualty insurance coverage, or which, in the judgment of Collateral Agent, could reasonably be expected to result in a material diminution in value of the Collateral

9.2 Power of Attorney. Borrower hereby irrevocably appoints Collateral Agent as its lawful attorney -in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower’s or any of its Subsidiaries’ name on any checks or other forms of payment or security; (b) sign Borrower’s or any of its Subsidiaries’ name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower’s insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Borrower hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower’s or any of its Subsidiaries’ name on any documents necessary to perfect or continue the perfection of Collateral Agent’s security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Collateral Agent and the Lenders are under no further obligation to make Credit Extensions hereunder. Collateral Agent’s foregoing appointment as Borrower’s or any of its Subsidiaries’ attorney in fact, and all of Collateral Agent’s rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Collateral Agent’s and the Lenders’ obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders’ Expenses and immediately due and payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent’s waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between Borrower on the one hand and the Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lenders’ Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of Borrower owing to the Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or

sharing by the Lenders of any right, interest or obligation “ratably,” “proportionally” or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender’s portion of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by Borrower. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to the Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender’s ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders’ claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Collateral Agent and other Lenders for purposes of perfecting Collateral Agent’s security interest therein.

9.5 Liability for Collateral. So long as the Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by the Collateral Agent or any Lender, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of the Collateral Agent or any Lender thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by the Collateral Agent and the Required Lenders and then is only effective for the specific instance and purpose for which it is given. The rights and remedies of the Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. The Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by the Collateral Agent or any Lender of one right or remedy is not an election, and the Collateral Agent’s or any Lender’s waiver of any Event of Default is not a continuing waiver. The Collateral Agent’s or any Lender’s delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives, to the fullest extent permitted by law, demand, 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 held by the Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

Other than as provided in Section 6.2(a), all notices, consents, requests, approvals, demands, or other communication (collectively, “**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 facsimile transmission or email; (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. Any of the Collateral Agent, Lender or Borrower may change its mailing or email address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower: PUMA BIOTECHNOLOGY, INC.
10880 Wilshire Blvd., Ste. 2150
Los Angeles, CA 90024
Attn: Vice President, Finance and Accounting
Fax: (424) 248-6501
Email: ccollett@pumabiotechnology.com

with a copy (which shall not constitute notice) to: LATHAM & WATKINS LLP
355 South Grand Avenue, Suite 100
Los Angeles, CA 90071-1560
Attn: Jason R. Bosworth
Email: jason.bosworth@lw.com

If to Collateral Agent: OXFORD FINANCE LLC
133 North Fairfax Street
Alexandria, Virginia 22314
Attention: Legal Department
Fax: (703) 519-5225
Email: LegalDepartment@oxfordfinance.com

with a copy (which shall not constitute notice) to: DLA Piper LLP (US)
500 Eighth Street, NW
Washington, DC, 20004
Attn: Eric Eisenberg
Fax: (202) 799-4211
Email: eric.eisenberg@dlapiper.com

11. **CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER, AND JUDICIAL REFERENCE**

California law governs the Loan Documents without regard to principles of conflicts of law. Borrower, Collateral Agent and each Lender each submit to the exclusive jurisdiction of the State and Federal courts in Santa Clara County, California; provided, however, that nothing in this Agreement shall be deemed to operate to preclude the Collateral Agent or any Lender from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of the Collateral Agent or any Lender. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 10 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER, COLLATERAL AGENT AND EACH LENDER EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR EACH PARTY TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHT TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Santa Clara County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure § 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not transfer, pledge or assign this Agreement or any rights or obligations under it without the Collateral Agent's and each Lender's prior written consent (which may be granted or withheld in the Collateral Agent's and each Lender's discretion, subject to Section 12.6). The Lenders have the right, without the consent of or notice to Borrower, to sell, transfer, assign, pledge, negotiate, or grant participation in (**any** such sale, transfer, assignment, negotiation, or grant of a participation, a "**Lender Transfer**") all or any part of, or any interest in, the Lenders' obligations, rights, and benefits under this Agreement and the other Loan Documents; *provided, however*, that any such Lender Transfer (other than a transfer, pledge, sale or assignment to an Eligible Assignee) of its obligations, rights, and benefits under this Agreement and the other Loan Documents shall require the prior written consent of the Required Lenders (such approved assignee, an "**Approved Lender**"). Borrower and Collateral Agent shall be entitled to continue to deal solely and directly with such Lender in connection with the interests so assigned until Collateral Agent shall have received and accepted an effective assignment agreement in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee or Approved Lender as Collateral Agent reasonably shall require. Notwithstanding anything to the contrary contained herein, so long as no Event of Default has occurred and is continuing, no Lender Transfer (other than a Lender Transfer in connection with (x) assignments by a Lender due to a forced divestiture at the request of any regulatory agency; or (y) upon the occurrence of a default, event of default or similar occurrence with respect to a Lender's own financing or securitization transactions) shall be permitted, without Borrower's consent, to any Person which is an Affiliate or Subsidiary of Borrower, a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent.

12.2 Indemnification. Borrower agrees to indemnify, defend and hold the Collateral Agent and the Lenders and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing the Collateral Agent or the Lenders (each, an “**Indemnified Person**”) harmless against: (a) all obligations, demands, claims, and liabilities (collectively, “**Claims**”) asserted by any other party in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses or Lenders’ Expenses incurred, or paid by Indemnified Person in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents between Collateral Agent, and/or the Lenders and Borrower (including reasonable attorneys’ fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person’s gross negligence, bad faith or willful misconduct. Borrower hereby further indemnifies, defends and holds each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including reasonable and documented the fees and disbursements of counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such proceeding initiated by or on behalf of Borrower, and the reasonable expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or compensation claimed by any broker (other than any broker retained by Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the loan proceeds except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person’s gross negligence, bad faith or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.5 Correction of Loan Documents. The, Collateral Agent and the Lenders may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

12.6 Amendments in Writing; Integration. (a) No amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, The Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender’s Term Loan Commitment or Commitment Percentage shall be effective as to such Lender without such Lender’s written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent’s written consent or signature;

(iii) no such amendment, waiver or modification that would affect the rights and duties of the Collateral Agent shall be effective without Collateral Agent’s written consent or signature;

(iv) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or of interest on any Term Loan (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term “**Required Lenders**” or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize Borrower to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the

Obligations or its guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.6 or the definitions of the terms used in this Section 12.6 insofar as the definitions affect the substance of this Section 12.6; (F) consent to the assignment, delegation or other transfer by Borrower of any of its rights and obligations under any Loan Document or release Borrower of its payment obligations under any Loan Document, except, in each case with respect to this clause (F), pursuant to a merger or consolidation permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment, Commitment Percentage or that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral hereunder; (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations; or (I) amend any of the provisions of Section 12.10. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the preceding sentence;

(v) the provisions of the foregoing clauses (i), (ii) and (iii) are subject to the provisions of any interlender or agency agreement among the Lenders, and Collateral Agent pursuant to which any Lender may agree to give its consent in connection with any amendment, waiver or modification of the Loan Documents only in the event of the unanimous agreement of all Lenders.

(b) Other than as expressly provided for in Section 12.6(a)(i)-(iii), Collateral Agent may, if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.7 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, is an original, and all taken together, constitute one Agreement.

12.8 Survival. All covenants, representations and warranties made in this Agreement continue in full force and effect until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. The obligation of Borrower in Section 12.2 to indemnify each Lender, and Collateral Agent, as well as the confidentiality provisions in Section 12.9 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.9 Confidentiality. In handling any confidential information of Borrower, the Lenders, and Collateral Agent shall exercise the same degree of care that it exercises for their own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, to the Lenders', and Collateral Agent's Subsidiaries or Affiliates, or in connection with a Lender's own financing or securitization transactions and upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; (b) to prospective transferees (other than those identified in (a) above) or purchasers of any interest in the Credit Extensions (provided, however, the Lenders, and Collateral Agent shall, except upon the occurrence and during the continuance of an Event of Default, obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to similar confidentiality terms); (c) as required by law, regulation, subpoena, or other order; (d) to Lenders' or Collateral Agent's regulators or as otherwise required in connection with an examination or audit; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents; and (f) to third party service providers of the Lenders and/or Collateral Agent so long as such service providers have executed a confidentiality agreement with the Lenders, and Collateral Agent with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders' and/or Collateral Agent's possession when disclosed to the Lenders and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders and/or Collateral Agent; or (ii) is disclosed to the Lenders and/or Collateral Agent by a third party, if the Lenders and/or

Collateral Agent does not know that the third party is prohibited from disclosing the information. The Collateral Agent and the Lenders may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis so long as Collateral Agent and Lenders do not disclose Borrower's identity or the identity of any person associated with Borrower unless (x) in connection with disclosure under (a) through (f), above or (y) otherwise expressly permitted by this Agreement or consented to by Borrower. The provisions of the immediately preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.9 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.9.

12.10 Right of Set Off. Borrower hereby grants to Collateral Agent, a lien, security interest and right of set off as security for all Obligations to Collateral Agent and each Lender hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Collateral Agent or the Lenders or any entity under the control of Collateral Agent or the Lenders (including a Collateral Agent affiliate) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Collateral Agent or the Lenders may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even though unmaturing and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

12.11 Cooperation of Borrower. If necessary, Borrower agrees to (i) execute any documents (including new Secured Promissory Notes) reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment or Loan to an assignee in accordance with Section 12.1, (ii) make Borrower's management available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments or Credit Extensions (which meetings shall be conducted no more often than once every twelve months unless an Event of Default has occurred and is continuing), and (iii) assist Collateral Agent or the Lenders in the preparation of information relating to the financial affairs of Borrower as any prospective participant or assignee of a Term Loan Commitment or Term Loan reasonably may request. Subject to the provisions of Section 12.9, Borrower authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment, any and all information in such Lender's possession concerning Borrower and its financial affairs which has been delivered to such Lender by or on behalf of Borrower pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of Borrower in connection with such Lender's credit evaluation of Borrower prior to entering into this Agreement.

12.12 Effect of Amendment and Restatement. Except as otherwise set forth herein, this Agreement is intended to and does completely amend and restate, without novation, the Original Agreement. All security interests granted to Oxford under the Original Agreement are hereby confirmed and ratified and shall continue to secure all Obligations under this Agreement.

13. DEFINITIONS

13.1 Definitions. As used in this Agreement, the following terms have the following meanings:

“**Account**” is any “account” as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

“**Account Debtor**” is any “account debtor” as defined in the Code with such additions to such term as may hereafter be made.

“**Affiliate**” of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

“**Agreement**” is defined in the preamble hereof.

“**Alexandria Real Estate**” means ARE-MA REGION NO. 38, LLC, a Delaware limited liability company.

“**Amortization Date**” is August 1, 2021.

“**Annual Projections**” is defined in Section 6.2(a).

“**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.

“**Approved Fund**” is any (i) investment company, fund, trust, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business or (ii) any Person (other than a natural person) which temporarily warehouses loans for any Lender or any entity described in the preceding clause (i) and that, with respect to each of the preceding clauses (i) and (ii), is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender.

“**Approved Lender**” is defined in Section 12.1.

“**Basic Rate**” is, with respect to each Term Loan, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the greater of (i) nine percent (9.00%) and (ii) the sum of (a) the Prime Rate, as reported in The Wall Street Journal on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) three and one-half percent (3.50%). Notwithstanding the foregoing, the Basic Rate for the Term Loans for the period from the Effective Date through and including June 30, 2019 shall be nine percent (9.00%).

“**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 any Lender 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.

“**Borrower**” is defined in the preamble hereof.

“**Borrower’s Books**” are Borrower’s or any of its Subsidiaries’ books and records including ledgers, federal, and state tax returns, records regarding Borrower’s or its Subsidiaries’ assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

“**Business Day**” is any day that is not a Saturday, Sunday or a day on which Collateral Agent is closed.

“**Cash Equivalents**” are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than two (2) years from the date of acquisition; (b) commercial paper maturing no more than two (2) years after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc., and (c) certificates of deposit maturing no more than two (2) years after issue provided that the account in which any such certificate of deposit is maintained is subject to a Control Agreement in favor of Collateral Agent. For the avoidance of doubt, the direct purchase by Borrower or any of its Subsidiaries of any Auction Rate Securities, or purchasing participations in, or entering into any type of swap or other derivative transaction, or otherwise holding or engaging in any ownership interest in any type of Auction Rate Security by Borrower or any of its Subsidiaries shall be

conclusively determined by the Lenders as an ineligible Cash Equivalent, and any such transaction shall expressly violate each other provision of this Agreement governing Permitted Investments. Notwithstanding the foregoing, Cash Equivalents does not include and Borrower, and each of its Subsidiaries, are prohibited from purchasing, purchasing participations in, entering into any type of swap or other equivalent derivative transaction, or otherwise holding or engaging in any ownership interest in any type of debt instrument, including, without limitation, any corporate or municipal bonds with a long-term nominal maturity for which the interest rate is reset through a dutch auction and more commonly referred to as an auction rate security (each, an “**Auction Rate Security**”).

“**Cash-Secured Obligations**” are Obligations owing to SVB on account of Automated Clearing House transactions, corporate credit card services, foreign exchange contracts, or other treasury management services provided by Bank, not to exceed, and secured by a segregated cash collateral account with Bank in the amount of, One Million Five Hundred Thousand Dollars (\$1,500,000.00) at any time.

“**Change in Control**” means any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty nine percent (49%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower’s equity securities in a public offering, a private placement of public equity or to venture capital investors so long as Borrower identifies to Collateral Agent the venture capital investors prior to the closing of the transaction).

“**Claims**” are defined in Section 12.2.

“**Code**” is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of California; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent’s Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of California, the term “Code” shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

“**Collateral**” is any and all properties, rights and assets of Borrower described on Exhibit A.

“**Collateral Account**” is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Subsidiary at any time.

“**Collateral Agent**” is, Oxford Finance LLC, not in its individual capacity, but solely in its capacity as agent on behalf of and for the benefit of the Lenders.

“**Commitment Percentage**” is set forth in Schedule 1.1, as amended from time to time.

“**Commodity Account**” is any “commodity account” as defined in the Code with such additions to such term as may hereafter be made.

“**Communication**” is defined in Section 10.

“**Compliance Certificate**” is that certain certificate in the form attached hereto as Exhibit C.

“**Contingent Obligation**” is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest

rates, currency exchange rates or commodity prices; but “Contingent Obligation” does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

“**Control Agreement**” is any control agreement entered into among the depository institution at which Borrower or any of its Subsidiaries maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any of its Subsidiaries maintains a Securities Account or a Commodity Account, Borrower and such Subsidiary, and Collateral Agent pursuant to which Collateral Agent obtains control (within the meaning of the Code) for the benefit of the Lenders over such Deposit Account, Securities Account, or Commodity Account.

“**Copyrights**” are any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

“**Credit Extension**” is any Term Loan or any other extension of credit by Collateral Agent or Lenders for Borrower’s benefit.

“**Default Rate**” is defined in Section 2.3(b).

“**Deposit Account**” is any “deposit account” as defined in the Code with such additions to such term as may hereafter be made.

“**Designated Deposit Account**” is Borrower’s deposit account, account number 2783846799, maintained with Wells Fargo Bank, N.A..

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

“**Dollars,**” “**dollars**” and “**\$**” each mean lawful money of the United States.

“**Effective Date**” is defined in the preamble of this Agreement.

“**Eligible Assignee**” is (i) a Lender, (ii) an Affiliate of a Lender, (iii) an Approved Fund and (iv) any commercial bank, savings and loan association or savings bank or any other entity which is an “accredited investor” (as defined in Regulation D under the Securities Act of 1933, as amended) and which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which either (A) has a rating of BBB or higher from Standard & Poor’s Rating Group and a rating of Baa2 or higher from Moody’s Investors Service, Inc. at the date that it becomes a Lender or (B) has total assets in excess of Five Billion Dollars (\$5,000,000,000.00), and in each case of clauses (i) through (iv), which, through its applicable lending office, is capable of lending to Borrower without the imposition of any withholding or similar taxes; provided that notwithstanding the foregoing, “Eligible Assignee” shall not include, unless an Event of Default has occurred and is continuing, (i) Borrower or any of Borrower’s Affiliates or Subsidiaries or (ii) a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent. Notwithstanding the foregoing, (x) in connection with assignments by a Lender due to a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party and (y) in connection with a Lender’s own financing or securitization transactions, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Collateral Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee as Collateral Agent reasonably shall require.

“**Equipment**” is all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“**ERISA**” is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

“**Event of Default**” is defined in Section 8.

“**Final Payment**” is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest) due on the earliest to occur of (a) the Maturity Date, or (b) the acceleration of any Term Loan, or (c) the prepayment of a Term Loan pursuant to Section 2.2(c) or (d), equal to the original principal amount of such Term Loan multiplied by the Final Payment Percentage. For the avoidance of doubt, the calculation of any Final Payment shall not include the principal amount prepaid in accordance with Section 2.2(d) if a Final Payment based on such principal amount was made at the time of such prepayment.

“**Final Payment Percentage**” is seven and one half of one percent (7.50%).

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

“**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**” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

“**General Intangibles**” are all “general intangibles” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

“**Governmental Approval**” is 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.

“**Governmental Authority**” is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

“**Guarantor**” is any Person providing a Guaranty in favor of Collateral Agent. For the avoidance of doubt, as of the Effective Date, no Foreign Subsidiary shall be a Guarantor.

“**Guaranty**” is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

“**Indebtedness**” is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

“**Indemnified Person**” is defined in Section 12.2.

“**Insolvency Proceeding**” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

“**Insolvent**” means not Solvent.

“**Intellectual Property**” means all of Borrower’s or any Subsidiary’s right, title and interest in and to the following:

- (a) its Copyrights, Trademarks and Patents;
- (b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;
- (c) any and all source code;
- (d) any and all design rights which may be available to Borrower;
- (e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and
- (f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

“**Inventory**” is all “inventory” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person’s custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

“**Investment**” is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance, payment or capital contribution to any Person.

“**Key Person**” is each of Borrower’s (i) Chief Executive Officer, who is Alan Auerbach as of the Effective Date, (ii) Chief Financial Officer, who is Maximo Nougues as of the Effective Date, (iii) Chief Medical and Scientific Officer, who is Richard Bryce as of the Effective Date and (iv) Chief Commercial Officer, who is Steven Lo as of the Effective Date.

“**Lender**” is any one of the Lenders.

“**Lenders**” are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

“**Lenders’ Expenses**” are all reasonable audit fees and expenses, costs, and expenses (including reasonable attorneys’ fees and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred by Collateral Agent and/or the Lenders in connection with the Loan Documents.

“**Lien**” is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

“**Loan Documents**” are, collectively, this Agreement, the Perfection Certificates, each Compliance Certificate, each Disbursement Letter, the Post Closing Letter, the Netherlands Share Pledge Documents, any subordination agreements, any note, or notes or guaranties executed by Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders and Collateral Agent in connection with this Agreement; all as amended, restated, or otherwise modified.

“**Material Adverse Change**” is (a) a material impairment in the perfection or priority of Collateral Agent’s Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations or condition (financial or otherwise) of Borrower, or any Subsidiary; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

“**Maturity Date**” is June 1, 2024.

“**Netherlands Share Pledge Documents**” are that certain Deed of First Right of Pledge along with the related Powers of Attorney and all instruments or other agreements executed and/or delivered in connection therewith, and such other and further documents as Collateral Agent shall reasonably request to evidence the pledge of the Shares of Puma Netherlands; all in form and content reasonably acceptable to Collateral Agent.

“**Obligations**” are all of Borrower’s obligations to pay when due any debts, principal, interest, Lenders’ Expenses, the Prepayment Fee, the Final Payment, and other amounts Borrower owes the Lenders now or later, in connection with, related to, following, or arising from, out of or under, this Agreement or, the other Loan Documents, or otherwise (other than any warrants or any other equity instruments issued in favor of the Lenders), including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin (whether or not allowed) and debts, liabilities, or obligations of Borrower assigned to the Lenders and/or Collateral Agent, and the performance of Borrower’s duties under the Loan Documents (other than any warrants or any other equity instruments issued in favor of the Lenders).

“**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 Documents**” are, for any Person, such Person’s formation documents, as certified by the Secretary of State (or equivalent agency) of such Person’s jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

“**Original Term Loan(s)**” is defined in Section 2.2(a)(i) hereof.

“**Oxford Effective Date Final Payment**” is defined in Section 2.5(b)(ii).

“**Oxford Original Term Loan(s)**” is defined in Section 2.2(a)(ii) hereof.

“**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**” is the first (1st) calendar day of each calendar month, commencing on August 1, 2019.

“**Perfection Certificate**” and “**Perfection Certificates**” is defined in Section 5.1.

“**Permitted Acquisition**” is any transaction or series of related transactions resulting in the acquisition by Borrower or any Subsidiary, whether by purchase, merger or otherwise, of all or substantially all of the assets of, all of the Equity Interests of, or a business line or unit or a division of, any Person, provided that:

- (a) immediately prior to, and after giving effect thereto, no Event of Default shall have occurred and be continuing or would result therefrom;
- (b) all transactions in connection therewith shall be consummated, in all material respects, in accordance with applicable law;
- (c) cash consideration for the Permitted Acquisitions shall not exceed One Million Dollars (\$1,000,000.00) in the aggregate, and non-cash acquisition consideration for the Permitted Acquisitions shall consist solely of Equity Interests of Borrower and be subject to the limitation on changes of ownership of Borrower set forth in Section 7.2;
- (d) in the case of the purchase or other acquisition of Equity Interests, all of the Equity Interests (except for any such Equity Interest in the nature of directors’ qualifying shares required pursuant to applicable law) acquired or otherwise issued by such Person or any newly formed Subsidiary in connection with such acquisition shall be wholly owned by Borrower or a Subsidiary;
- (e) Borrower shall have delivered to the Collateral Agent and Lenders at least fifteen (15) Business Days (or such shorter period as may be acceptable to Collateral Agent and Lenders) prior to such proposed acquisition (i) a copy of the purchase agreement related to the proposed acquisition (and any related documents reasonably requested by the Collateral Agent and Lenders), (ii) a general description of the acquired assets or acquired business line or unit or division and the competitive position of such business line or unit or division within the industry, (iii) the sources and uses of funds to finance the proposed acquisition and (iv) to the extent available, quarterly and annual audited financial statements of the Person whose Equity Interests or assets are being acquired for the twelve (12) month period immediately prior to such proposed acquisition;
- (f) such Permitted Acquisition shall only comprise a business, or those assets of a business, in substantially the same business or lines of business in which Borrower and its Subsidiaries are engaged; and
- (g) such Permitted Acquisition shall be non-hostile and shall have been approved by the target’s board of directors.

Notwithstanding anything to the contrary contained herein, in order for any acquisition of Equity Interests or assets of another Person to constitute a “Permitted Acquisition”, Borrower must comply with all of the following:

- (A) concurrent with the closing of such Permitted Acquisition, the applicable Borrower (or Subsidiary) making such Permitted Acquisition and the target shall have executed such documents and taken such actions as may be required under Section 6.12;
- (B) the applicable Borrower shall have delivered to Collateral Agent and Lenders, in form and substance satisfactory to the Collateral Agent and Lenders and sufficiently in advance (and in any case no later than ten (10) Business Days prior to such Permitted Acquisition), such other financial information, financial analysis, documentation or other information relating to such Permitted Acquisition and the pro forma certifications required by clause (C) below, in each case, as Collateral Agent and Lenders shall reasonably request; and
- (C) on or prior to the date of such Permitted Acquisition, the Collateral Agent and Lenders shall have received, in form and substance reasonably satisfactory to the Collateral Agent and Lenders, a certificate of the chief financial officer or treasurer of Borrower certifying compliance with the requirements contained in this definition of “Permitted Acquisitions” and with the other terms of the Loan Documents (before and after giving effect to such Permitted Acquisition).

“Permitted Indebtedness” is:

- (a) Borrower’s Indebtedness to the Lenders and Collateral Agent under this Agreement and the other Loan Documents;
- (b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate(s);
- (c) Subordinated Debt;
- (d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;
- (e) Indebtedness consisting of (i) capitalized lease obligations and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person and (ii) real property leases, provided that (x) the aggregate outstanding principal amount of all such Indebtedness does not exceed One Million Dollars (\$1,000,000.00) at any time and (y) in the case of clause (i) above, the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);
- (f) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of Borrower’s business;
- (g) intercompany Indebtedness constituting Permitted Investments;
- (h) Indebtedness consisting of Cash-Secured Obligations;
- (i) other unsecured Indebtedness not otherwise permitted by Section 7.4 not exceeding One Million Dollars (\$1,000,000.00) in the aggregate outstanding at any time;
- (j) Indebtedness under corporate credit cards used in the ordinary course of business not to exceed One Hundred Fifty Thousand Dollars (\$150,000.00) at any time;
- (k) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (e), (i), and (j) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower, or its Subsidiary, as the case may be; and;
- (l) a surety bond issued in connection with the Fredric N. Eshelman vs. Puma Biotechnology, Inc. litigation in the amount of Twenty-Nine Million Five Hundred Thousand Dollars (\$29,500,000).

“Permitted Investments” are:

- (m) Investments disclosed on the Perfection Certificate(s) and existing on the Effective Date;
- (n) (i) Investments consisting of cash and Cash Equivalents, and (ii) any other Investments permitted by Borrower’s investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved by Borrower’s Board of Directors and provided to Collateral Agent;
- (o) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;
- (p) Investments consisting of deposit accounts in which Collateral Agent has a perfected security interest (unless such perfected security interest is not required by Section 6.6);

(q) Investments in connection with Transfers permitted by Section 7.1;

(r) Investments by Borrower in (i) Puma UK not to exceed Two Million Dollars (\$2,000,000.00) in the aggregate in any fiscal year (ii) Puma Netherlands not to exceed Two Million Dollars (\$2,000,000.00) in the aggregate in any fiscal year;

(s) 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 stock purchase plans or agreements approved by Borrower's Board of Directors; not to exceed One Million Dollars (\$1,000,000.00) in the aggregate for (i) and (ii) in any fiscal year;

(t) 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;

(u) 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 (i) shall not apply to Investments of Borrower in any Subsidiary;

(v) Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments in all such joint ventures and strategic alliances by Borrower do not exceed One Million Dollars (\$1,000,000.00) in the aggregate in any fiscal year;

(w) Investments in unfinanced capital expenditures in connection with transactions not prohibit hereunder, in the ordinary course of business, and approved by Borrower's Board of Directors;

(x) Investments consisting of deposit account and securities accounts of Borrower or any Subsidiary, subject to the compliance by Borrower or such Subsidiary with the covenant set forth in Section 6.6; and

(y) (i) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in its Foreign Subsidiaries not to exceed in the aggregate in any fiscal year Five Hundred Thousand Dollars (\$500,000.00) and (ii) 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.

"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 Subsidiaries entered into in the ordinary course of business or approved by Borrower's Board of Directors, 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 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 ten (10) days' prior written notice and a brief summary of the terms of the proposed license to Collateral Agent and the Lenders and delivers to Collateral Agent and the Lenders copies of the final executed licensing documents in connection with the exclusive license promptly upon consummation thereof, and (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; 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 a Deposit Account that is governed by a Control Agreement.

“Permitted Liens” are:

- (z) Liens existing on the Effective Date and disclosed on the Perfection Certificates or arising under this Agreement and the other Loan Documents;
- (aa) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;
- (bb) Liens or deposits securing Indebtedness permitted under clause (e) of the definition of “**Permitted Indebtedness**,” provided that, with respect only to capitalized lease obligations for purchase money indebtedness (i) such Liens exist prior to the acquisition of, or attach substantially simultaneous with, or within thirty (30) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such Liens do not extend to any property of Borrower other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;
- (cc) 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 Five Hundred Thousand Dollars (\$500,000.00), 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;
- (dd) 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);
- (ee) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;
- (ff) 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 Collateral Agent or any Lender a security interest therein;
- (gg) 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 Section 6.6(b) hereof;
- (hh) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7;
- (ii) Liens consisting of Permitted Licenses;
- (jj) Liens in favor of Wells Fargo arising from that certain restricted cash account no. xxxxxx2454 which secures the standby letters of credit for Borrower’s office lease;
- (kk) Liens and pledges securing Indebtedness permitted under clause (h) of the definition of “Permitted Indebtedness”; and

(ll) Liens in favor of SVB arising from that certain restricted cash account no. xxxxxx6771 which secures Letter of Credit SVBSF013889, which shall be in an amount not to exceed Eight Million Eight Hundred Fifty Thousand Dollars (\$8,850,000.00) dated 04/26/2019 (or any replacement thereof) issued by SVB.

“**Person**” is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

“**Post Closing Letter**” is that certain Post Closing Letter dated as of the Effective Date by and between Collateral Agent and Borrower.

“**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 the Lenders in amount equal to:

(i) for a prepayment made on or after the Funding Date of such Term Loan through and including the first anniversary of the Funding Date of such Term Loan, three percent (3.00%) of the principal amount of such Term Loan prepaid; and

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

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

“**Prime Rate**” is the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the “prime rate” then in effect.

“**Pro Rata Share**” is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of Term Loans held by such Lender by the aggregate outstanding principal amount of all Term Loans.

“**Puma UK**” is Puma Biotechnology Ltd., a wholly-owned Subsidiary of Borrower organized under the laws of the United Kingdom.

“**Puma Netherlands**” is Puma Biotechnology BV, a wholly-owned Subsidiary of Borrower organized under the laws of the Netherlands.

“**Registered Organization**” is any “registered organization” as defined in the Code with such additions to such term as may hereafter be made.

“**Required Lenders**” means (i) for so long as all of the Persons that are Lenders on the Effective Date (each an “**Original Lender**”) have not assigned or transferred any of their interests in their Term Loan, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan, Lenders holding at least sixty six percent (66%) of the aggregate outstanding principal balance of the Term Loan and, in respect of this clause (ii), (A) each Original Lender that has not assigned or transferred any portion of its Term Loan, (B) each assignee or transferee of an Original Lender’s interest in the Term Loan, but only to the extent that such assignee or transferee is an Affiliate or Approved Fund of such Original Lender, and (C) any Person providing financing to any Person described in clauses (A) and (B) above; provided, however, that this clause (C) shall only apply upon the occurrence of a default, event of default or similar occurrence with respect to such financing.

“**Requirement of Law**” is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

“**Responsible Officer**” is any of the President, Chief Executive Officer, Chief Financial Officer or Treasurer of Borrower acting alone.

“**Secured Promissory Note**” is defined in Section 2.4.

“**Secured Promissory Note Record**” is a record maintained by each Lender with respect to the outstanding Obligations owed by Borrower to Lender and credits made thereto.

“**Securities Account**” is any “securities account” as defined in the Code with such additions to such term as may hereafter be made.

“**Shares**” is one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower’s Subsidiary, in any Subsidiary; provided that, in the event Borrower, demonstrates to Collateral Agent’s reasonable satisfaction, that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary which is a Foreign Subsidiary, creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code, “Shares” shall mean sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or its Subsidiary in any first-tier Foreign Subsidiary and zero (0%) in any second or other-tier.

“**Solvent**” is, with respect to any Person: the fair salable value of such Person’s consolidated assets (including goodwill minus disposition costs) exceeds the fair value of such Person’s liabilities; such Person is not left with unreasonably small capital after the transactions in this Agreement; and such Person is able to pay its debts (including trade debts) as they mature.

“**Subordinated Debt**” is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all Indebtedness of Borrower and/or its Subsidiaries to the Lenders hereunder (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Collateral Agent and the Lenders entered into between Collateral Agent, Borrower, and/or any of its Subsidiaries, and the other creditor), on terms acceptable to Collateral Agent and the Lenders.

“**Subsidiary**” is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries.

“**SVB Existing Indebtedness**” is the indebtedness of Borrower to SVB in the aggregate principal outstanding amount as of the Effective Date of approximately Eighty-Eight Million Two Hundred Ninety-Four Thousand Eight Hundred Thirty-Eight and 71/100 Dollars (\$88,294,838.71) pursuant to the Original Agreement.

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

“**Term Loan Commitment**” is, for any Lender, the obligation of such Lender to make a Term Loan, up to the principal amount shown on Schedule 1.1. “**Term Loan Commitments**” means the aggregate amount of such commitments of all Lenders.

“**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.

“**Transfer**” is defined in Section 7.1.

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

BORROWER:

PUMA BIOTECHNOLOGY, INC.

By: /s/ Maximo F. Nougues
Name: Maximo F. Nougues
Title: Chief Financial Officer

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By: /s/ Colette H. Featherly
Name: Colette H. Featherly
Title: Senior Vice President

[Signature Page to Amended and Restated Loan and Security Agreement]

SCHEDULE 1.1

Lenders and Commitments

Term Loans

Lender	Term Loan Commitment	Commitment Percentage
OXFORD FINANCE LLC	\$100,000,000.00	100.00%
TOTAL	\$100,000,000.00	100.00%

EXHIBIT A

Description of Collateral

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any first-tier Foreign Subsidiary, if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code; and (iii) cash and cash equivalents contained in that certain deposit account number xxxxxx6771 held, maintained or managed through Silicon Valley Bank for so long as such deposit account is used for cash collateral to secured Letter of Credit SVBSF013889 dated April 26, 2019 (or any replacement thereof) issued by Silicon Valley Bank (collectively, the "Excluded Assets").

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Borrower has agreed not to encumber any of its Intellectual Property.

EXHIBIT B

Disbursement Letter

Omitted pursuant to Regulation S-K, Item 601(a)(5)

EXHIBIT C

Compliance Certificate

TO: OXFORD FINANCE LLC, as Collateral Agent and Lender
FROM: PUMA BIOTECHNOLOGY, INC.

The undersigned authorized officer (“**Officer**”) of PUMA BIOTECHNOLOGY, INC. (“**Borrower**”), hereby certifies that in accordance with the terms and conditions of the Amended and Restated Loan and Security Agreement by and among Borrower, Collateral Agent, and the Lenders from time to time party thereto (the “**Loan Agreement**,” capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below;

(b) There are no Events of Default, except as noted below;

(c) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date and for the period described in (a), above; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

(d) Borrower, and each of Borrower’s Subsidiaries, has timely filed all required tax returns and reports, Borrower, and each of Borrower’s Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(e) No Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Collateral Agent and the Lenders.

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements 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 and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under “Complies” column.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Quarterly within 45 days		Yes	No	N/A
2)	Annual (CPA Audited) statements	Within 90 days after FYE or within 5 days of filing		Yes	No	N/A
3)	Annual Financial Projections/Budget (prepared on a monthly basis)	Annually (within 30 days of FYE), and when revised		Yes	No	N/A
5)	8-K, 10-K and 10-Q Filings	If applicable, within 5 days of filing		Yes	No	N/A
6)	Compliance Certificate	Quarterly within 45 days		Yes	No	N/A
8)	Total amount of Borrower's cash and cash equivalents at the last day of the measurement period		\$ _____	Yes	No	N/A
9)	Total amount of Borrower's Subsidiaries' cash and cash equivalents at the last day of the measurement period		\$ _____	Yes	No	N/A
10)	Updated Exhibit A to Landlord Waiver	Quarterly within 30 days and in any month where new Collateral in excess of \$100,000 was delivered to 701 Gateway Boulevard, South San Francisco, California		Yes	No	N/A

Deposit and Securities Accounts

(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	Account Number	New Account?		Account Control Agreement in place?	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

Financial Covenants

	Covenant	Requirement	Actual	Compliance	
1)	Minimum Revenues (trailing year to date)	See Section 6.10	\$ _____	Yes	No

Other Matters

- | | | | |
|----|--|-----|----|
| 1) | Have there been any changes in management since the last Compliance Certificate? | Yes | No |
| 2) | Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement? | Yes | No |
| 3) | Have there been any new or pending claims or causes of action against Borrower that involve more than Five Hundred Thousand Dollars (\$500,000.00)? | Yes | No |
| 4) | Have there been any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate. | Yes | No |
-

Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions." Attach separate sheet if additional space needed.)

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____
Date:

LENDER USE ONLY

Received by: _____ Date: _____

Verified by: _____ Date: _____

Compliance Status: Yes No

EXHIBIT D

Form of Secured Promissory Note

[see attached]

SECURED PROMISSORY NOTE
(Term Loan)

[\$25,000,000.00]

Dated: June 28, 2019

FOR VALUE RECEIVED, the undersigned, PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (“**Borrower**”) HEREBY PROMISES TO PAY to the order of OXFORD FINANCE LLC (“**Lender**”) the principal amount of [TWENTY-FIVE] MILLION DOLLARS [(\$25,000,000.00)] or such lesser amount as shall equal the outstanding principal balance of the Term Loan made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such Term Loan, at the rates and in accordance with the terms of the Amended and Restated Loan and Security Agreement dated June 28, 2019 by and among Borrower, Lender, Oxford Finance LLC, and the other Lenders from time to time party thereto (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 Lender 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 Lender 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 Lender 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 Lender 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 Lender 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 Lender 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:

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By
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EXHIBIT E

Form of Amended and Restated Secured Promissory Note

[see attached]

[SECOND] AMENDED AND RESTATED SECURED PROMISSORY NOTE – TERM LOAN
(Oxford Original Term Loan – original face amount of \$[_____])

\$[_____] Dated: June 28, 2019

FOR VALUE RECEIVED, the undersigned, PUMA BIOTECHNOLOGY, INC., a Delaware corporation with offices located at 10880 Wilshire Blvd., Ste. 2150, Los Angeles, CA 90024 (“**Borrower**”) HEREBY PROMISES TO PAY to the order of OXFORD FINANCE LLC (“**Lender**”) the principal amount of [_____] MILLION [_____] DOLLARS (\$[_____]) or such lesser amount as shall equal the outstanding principal balance of the Oxford Original Term Loan made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such Oxford Original Term Loan, at the rates and in accordance with the terms of the Amended and Restated Loan and Security Agreement dated as of June 28, 2019 by and among Borrower, Lender, Oxford Finance LLC, and the other Lenders from time to time party thereto (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 Oxford Original Term Loan, are payable in lawful money of the United States of America to Lender 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 Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

This Note amends and restates, in its entirety, that certain Secured Promissory Note, dated [May 8, 2018][December 7, 2018], in the original principal amount of [_____] MILLION [_____] DOLLARS (\$[_____]), executed by Borrower in favor of Lender and issued pursuant to the Loan Agreement.

The Loan Agreement, among other things, (a) provides for the making of a secured Oxford Original Term Loan by Lender 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 Oxford Original Term Loan, interest on the Oxford Original Term Loan and all other amounts due Lender 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 Lender 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 Lender 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.

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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:

PUMA BIOTECHNOLOGY, INC.

By _____
Name: _____
Title: _____

Oxford Finance LLC
[Second] Amended and Restated Secured Promissory Note No. [1]
Term Loan

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By
<hr/>				

CORPORATE BORROWING CERTIFICATE

BORROWER: PUMA BIOTECHNOLOGY, INC.
LENDERS: OXFORD FINANCE LLC, as Collateral Agent and Lender

DATE: June 28, 2019

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.
2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware.
3. Attached hereto as Exhibit A and Exhibit B, respectively, are true, correct and complete copies of (i) Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth in paragraph 2 above; and (ii) Borrower's Bylaws. Neither such Certificate of Incorporation nor such Bylaws have been amended, annulled, rescinded, revoked or supplemented, and such Certificate of Incorporation and such Bylaws remain in full force and effect as of the date hereof.
4. The following resolutions were duly and validly adopted by Borrower's Board of Directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and the Lenders may rely on them until each Lender receives written notice of revocation from Borrower.

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RESOLVED, that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

<u>Name</u>	<u>Title</u>	<u>Signature</u>	Authorized to Add or Remove <u>Signatories</u>
_____	_____	_____	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>

RESOLVED FURTHER, that **any one** of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED FURTHER, that such individuals may, on behalf of Borrower:

Borrow Money. Borrow money from the Lenders.

Execute Loan Documents. Execute any loan documents any Lender requires.

Grant Security. Grant Collateral Agent a security interest in any of Borrower's assets.

Negotiate Items. Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds.

Further Acts. Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effectuate such resolutions.

RESOLVED FURTHER, that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

[Balance of Page Intentionally Left Blank]

5. The persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: _____
Name: _____
Title: _____

**** If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the _____ of Borrower, hereby certify as to paragraphs 1 through 5 above, as [print title] of the date set forth above.

By: _____
Name: _____
Title: _____

[Signature Page to Corporate Borrowing Certificate]

EXHIBIT A

Certificate of Incorporation (including amendments)

[see attached]

EXHIBIT B

Bylaws

[see attached]

DEBTOR: PUMA BIOTECHNOLOGY, INC.
SECURED PARTY: OXFORD FINANCE, LLC, as Collateral Agent

EXHIBIT A TO UCC FINANCING STATEMENT

Description of Collateral

The Collateral consists of all of Debtor's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Debtor that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "Shares") of any first-tier Foreign Subsidiary, if Debtor demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than sixty five percent (65%) of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Debtor under the U.S. Internal Revenue Code; and (iii) that certain deposit account number xxxxxx6771 held, maintained or managed through Silicon Valley Bank (collectively, the "Excluded Assets").

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Debtor has agreed not to encumber any of its Intellectual Property.

Capitalized terms used but not defined herein have the meanings ascribed in the Uniform Commercial Code in effect in the State of California as in effect from time to time (the "Code") or, if not defined in the Code, then in the Amended and Restated Loan and Security Agreement by and between Debtor, Secured Party and the other Lenders party thereto (as modified, amended and/or restated from time to time).

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Alan H. Auerbach, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2019

/s/ Alan H. Auerbach
Alan H. Auerbach
Principal Executive Officer

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Maximo F. Nougues, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2019

/s/ Maximo F. Nougues
Maximo F. Nougues
Chief Financial Officer

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

The following certification is being furnished solely to accompany the Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019, pursuant to 18 U.S.C. § 1350 and in accordance with SEC Release No. 33-8238. This certification shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference in any filing of Puma Biotechnology, Inc. under the Securities Act of 1933, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Certification of Principal Executive Officer

I, Alan H. Auerbach, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Puma Biotechnology, Inc.

Date: August 9, 2019

/s/ Alan H. Auerbach

Alan H. Auerbach

Principal Executive Officer

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

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

The following certification is being furnished solely to accompany the Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019, pursuant to 18 U.S.C. § 1350 and in accordance with SEC Release No. 33-8238. This certification shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference in any filing of Puma Biotechnology, Inc. under the Securities Act of 1933, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Certification of Principal Financial Officer

I, Maximo F. Nougues, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Puma Biotechnology, Inc. for the quarter ended June 30, 2019, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Puma Biotechnology, Inc.

Date: August 9, 2019

/s/ Maximo F. Nougues

Maximo F. Nougues

Principal Financial and Accounting Officer

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