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 March 31, 2018

OR

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

For the transition period from __________ to __________

Commission file number 001-36150

SORRENTO THERAPEUTICS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**33-0344842**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**

4955 Directors Place

San Diego, California 92121
(Address of Principal Executive Offices)

(858) 203-4100
(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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐
Emerging growth company	☐		

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

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

The number of shares of the issuer's common stock, par value $0.0001 per share, outstanding as of April 28, 2018 was 92,824,725.

Sorrento Therapeutics, Inc.

Form 10-Q for the Quarter Ended March 31, 2018

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PART I. FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements.

SORRENTO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)
(In thousands, except for share amounts)

	March 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 24,252	$ 20,429
Marketable securities	444	441
Grants and accounts receivables, net	3,912	2,211
Income tax receivable	1,771	1,715
Prepaid expenses and other, net	6,190	4,904
Total current assets	36,569	29,700
Property and equipment, net	19,494	19,345
Intangibles, net	70,352	71,013
Goodwill	38,298	38,298
Cost method investments	237,008	237,008
Equity method investments	32,077	32,999
Other, net	3,081	3,250
Total assets	$ 436,879	$ 431,613
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 9,014	$ 9,911
Accrued payroll and related benefits	4,504	4,485
Accrued expenses	8,832	7,274
Current portion of deferred revenue	2,496	3,864
Current portion of deferred rent	251	212
Acquisition consideration payable	24,833	53,209
Current portion of debt	1,594	—
Total current liabilities	51,524	78,955
Long-term debt	5,501	5,211
Deferred tax liabilities	14,640	15,535
Deferred revenue	118,367	119,287
Deferred rent and other	5,974	6,015
Total liabilities	196,006	225,003
Commitments and contingencies		
Equity:		
Sorrento Therapeutics, Inc. equity		
Preferred stock, $0.0001 par value; 100,000,000 shares authorized and no shares issued or outstanding	—	—
Common stock, $0.0001 par value; 750,000,000 shares authorized and 91,028,089 and 82,903,567 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	10	9
Additional paid-in capital	480,691	413,901
Accumulated other comprehensive income (loss)	352	242
Accumulated deficit	(196,784)	(165,120)
Treasury stock, 7,568,182 shares at cost at March 31, 2018, and December 31, 2017, respectively	(49,464)	(49,464)
Total Sorrento Therapeutics, Inc. stockholders' equity	234,805	199,568
Noncontrolling interests	6,068	7,042
Total equity	240,873	206,610
Total liabilities and stockholders' equity	$ 436,879	$ 431,613

See accompanying unaudited notes

SORRENTO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(In thousands, except per share amounts)

	Three Months Ended March 31,	
	2018	**2017**
Revenues:		
Grant	$ —	$ 101
Royalty and license	120	2,417
Sales and services	6,126	2,356
Total revenues	6,246	4,874
Operating costs and expenses:		
Costs of revenues	1,311	1,064
Research and development	14,632	14,883
Acquired in-process research and development	—	200
General and administrative	9,961	11,887
Intangible amortization	662	627
Loss (gain) on contingent liabilities and acquisition consideration payable	12,226	(461)
Total operating costs and expenses	38,792	28,200
Loss from operations	(32,546)	(23,326)
Gain on trading securities	3	159
Gain on foreign currency exchange	17	—
Interest expense	(1,052)	(1,609)
Interest income	4	225
Loss before income tax	(33,574)	(24,551)
Income tax benefit	(948)	(1,696)
Loss on equity method investments	(922)	(948)
Net loss	(33,548)	(23,803)
Net loss attributable to noncontrolling interests	(974)	(739)
Net loss attributable to Sorrento	$ (32,574)	$ (23,064)
Net loss per share - basic and diluted per share attributable to Sorrento	$ (0.38)	$ (0.45)
Weighted-average shares used during period - basic and diluted per share attributable to Sorrento	84,941	50,886

See accompanying unaudited notes

SORRENTO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)
(In thousands)

	Three Months Ended March 31,	
	2018	**2017**
Net loss	$ (33,548)	$ (23,803)
Other comprehensive income:		
Foreign currency translation adjustments	110	62
Total other comprehensive income (loss)	110	62
Comprehensive income (loss)	(33,438)	(23,741)
Comprehensive income (loss) attributable to noncontrolling interests	(974)	(739)
Comprehensive income (loss) attributable to Sorrento	$ (32,464)	$ (23,002)

See accompanying unaudited notes

SORRENTO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)
(In thousands, except for share amounts)

	Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount					
Balance, December 31, 2017	82,903,567	$ 9	7,568,182	(49,464)	$ 413,901	$ 242	$ (165,120)	$ 7,042	$ 206,610
Adoption impact of ASC 606	—	—	—	—	—	—	910	—	910
Issuance of stock option with exercise	24,090	—	—	—	155	—	—	—	155
Issuance of common stock for BDL settlement	309,916	—	—	—	2,340	—	—	—	2,340
Issuance of common stock for Scilex settlement	1,381,346	—	—	—	13,744	—	—	—	13,744
Issuance of common stock for public placement and investments, net	6,409,170	1	—	—	48,957	—	—	—	48,958
Stock-based compensation	—	—	—	—	1,594	—	—	—	1,594
Foreign currency translation adjustment	—	—	—	—	—	110	—	—	110
Net loss	—	—	—	—	—	—	(32,574)	(974)	(33,548)
Balance, March 31, 2018	91,028,089	$ 10	7,568,182	(49,464)	$ 480,691	$ 352	$ (196,784)	$ 6,068	$ 240,873

	Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount					
Balance, December 31, 2016	50,882,856	$ 6	7,568,182	(49,464)	$ 303,865	$ (118)	$ (174,252)	$ 6,465	$ 86,502
Scilex acquisition adjustments	—	—	—	—	(627)	—	—	(1,400)	(2,027)
Issuance of common stock with exercise of options	—	—	—	—	—	—	—	—	—
Issuance of common stock for private placement and investments, net	4,246	—	—	—	30	—	—	—	30
Stock-based compensation	—	—	—	—	1,342	—	—	—	1,342
Foreign currency translation adjustment	—	—	—	—	—	62	—	—	62
Hercules warrant	—	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(23,064)	(739)	(23,803)
Balance, March 31, 2017	50,887,102	$ 6	7,568,182	(49,464)	$ 304,610	$ (56)	$ (197,316)	$ 4,326	$ 62,106

See accompanying unaudited notes

SORRENTO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited) (In thousands)

	Three Months Ended March 31,	
	2018	2017
Operating activities		
Net income (loss)	$ (33,548)	$ (23,803)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,005	1,454
Non-cash interest expense	288	310
Gain on trading securities	(3)	(159)
Amortization of debt issuance costs	1	166
Stock-based compensation	1,594	1,342
Loss on equity method investments	922	948
Loss (gain) on contingent liabilities and acquisition consideration payable	12,226	(461)
Deferred tax provision	(895)	(1,686)
Changes in operating assets and liabilities, excluding effect of acquisitions:		
Grants and other receivables	(1,701)	(642)
Accrued payroll	19	1,436
Prepaid expenses and other	(1,286)	(107)
Deposits and other assets	113	148
Accounts payable	(1,825)	2,392
Deferred revenue	(1,378)	(2,416)
Deferred rent and other	(33)	(44)
Acquisition consideration payable for Scilex	(2,020)	—
Accrued expenses and other liabilities	1,558	(792)
Net cash used for operating activities	(23,963)	(21,914)
Investing activities		
Purchases of property and equipment	(448)	(4,161)
Net cash used in investing activities	(448)	(4,161)
Financing activities		
Proceeds from bridge loan for Scilex regulatory milestone	20,000	—
Repayment of bridge loan for Scilex regulatory milestone	(20,000)	—
Repayment under the amended loan and security agreement	—	(21,500)
Proceeds from loan agreement	1,586	—
Payments under deferred compensation arrangements	—	(1,012)
Scilex consideration for regulatory milestone	(22,466)	—
Proceeds from issuance of common stock, net of issuance costs	48,958	30
Proceeds from exercise of stock options	155	—
Net cash provided by (used in) financing activities	28,233	(22,482)
Net change in cash and cash equivalents	3,822	(48,557)
Net effect of exchange rate changes on cash	1	78
Cash and cash equivalents at beginning of period	20,429	82,398
Cash and cash equivalents at end of period	$ 24,252	$ 33,919
Supplemental disclosures:		
Cash paid during the period for:		
Interest paid	$ 128	$ 1,300
Supplemental disclosures of non-cash investing and financing activities:		
BDL non-cash consideration	$ 2,340	$ —
Property and equipment costs incurred but not paid	$ 965	$ 933
Scilex non-cash consideration for regulatory milestone	$ 13,744	$ —

See accompanying unaudited notes

SORRENTO THERAPEUTICS, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2018

1. Nature of Operations and Business Activities

Nature of Operations and Basis of Presentation

Sorrento Therapeutics, Inc. (Nasdaq: SRNE), together with its subsidiaries (collectively, the "Company"), is a clinical stage biotechnology company focused on delivering clinically meaningful therapies to patients and their families, globally. The Company's primary focus is to transform cancer into a treatable or chronically manageable disease. The Company also has programs assessing the use of its technologies and products in auto-immune, inflammatory, neurodegenerative, infectious diseases and pain indications with high unmet medical needs.

At its core, the Company is an antibody-centric company and leverages its proprietary G-MAB™ library to identify, screen and validate fully human antibodies against high impact oncogenic targets and mutations, immune modulators and intracellular targets. To date, the Company has screened over 100 validated targets and generated a number of fully human antibodies against these targets which are at various stages of preclinical development. These include PD-1, PD-L1, CD38, CD123, CD47, c-MET, VEGFR2, CCR2, OX40, TIGIT and CD137 among others.

The Company's vision is to leverage these antibodies in conjunction with proprietary targeted delivery modalities to generate the next generation of cancer therapeutics. These modalities include proprietary antibody drug conjugates ("ADCs"), bispecific approaches, as well as T-Cell Receptor ("TCR")-like antibodies. With LA Cell, Inc. ("LA Cell"), the Company's joint venture with City of Hope, the Company's objective is to become the global leader in the development of antibodies against intracellular targets such as STAT3, mutant KRAS, MYC, p53 and TAU. Additionally, the Company has acquired and is assessing the regulatory and strategic path forward for its portfolio of late stage biosimilar/biobetter antibodies based on Erbitux®, Remicade®, Xolair®, and Simulect® as these may represent nearer term commercial opportunities.

With each of its programs, the Company aims to tailor its therapies to treat specific stages in the evolution of cancer, from elimination, to equilibrium and escape. In addition, the Company's objective is to focus on tumors that are resistant to current treatments and where the Company can design focused trials based on a genetic signature or biomarker to ensure patients have the best chance of a durable and significant response. The Company has several immuno-oncology programs that are in or near to entering the clinic. These include cellular therapies, an oncolytic virus and a palliative care program targeted to treat intractable cancer pain. Finally, as part of its global aim to provide a wide range of therapeutic products to meet underserved therapeutic markets, the Company has made investments and developed a separate pain focused franchise which the Company believes will serve to provide short term upside to its core thesis.

Through March 31, 2018, the Company had devoted substantially all of its efforts to product development, raising capital and building infrastructure.

The accompanying condensed consolidated financial statements include the accounts of the Company's subsidiaries. For consolidated entities where the Company owns or is exposed to less than 100% of the economics, the Company records net income (loss) attributable to noncontrolling interests in its condensed consolidated statements of operations equal to the percentage of the economic or ownership interest retained in such entities by the respective noncontrolling parties. All intercompany balances and transactions have been eliminated in consolidation.

In the opinion of management, the unaudited financial information for the interim periods presented reflects all adjustments, which are only normal, recurring and necessary for a fair statement of financial position, results of operations and cash flows. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017. Operating results for interim periods are not expected to be indicative of operating results for the Company's 2018 fiscal year, or any subsequent period.

2. Liquidity and Going Concern

The accompanying condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company has working capital deficiencies as of March 31, 2018 and has incurred substantial net losses for the years ended December 31, 2017 and 2016, and anticipates that it will continue to do so for the foreseeable future as it continues to identify and invest in advancing product candidates, as well as expanding corporate infrastructure. These conditions, among others, raise substantial doubt about the Company's ability to continue as a going concern.

As of March 31, 2018, the Company had $50.0 million of long term debt issued in a private placement pursuant to the Securities Purchase Agreement, dated December 21, 2017 (the "Securities Purchase Agreement" or "Note SPA"), among the Company and certain accredited investors (collectively, the "Purchasers"). Pursuant to the Securities Purchase Agreement, the Company issued and sold to the Purchasers, in a private placement transaction (the "Private Placement"), (1) convertible promissory notes in an aggregate principal amount of $50,000,000 (the "Notes"), which accrue simple interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of (a) December 21, 2022, and (b) the date of the closing of a change in control of the Company (the "Maturity Date"), and (2) warrants (the "Warrants") to purchase an aggregate of 12,121,210 shares of the common stock of the Company, par value $0.0001 per share.

Each of the Notes provide that, upon the occurrence of an event of default, the Purchasers thereof may, by written notice to the Company, declare all of the outstanding principal and interest under such Notes immediately due and payable. For purposes of the Notes, an event of default includes, among other things, one or more events that have, or could reasonably be expected to have, a material adverse effect on (i) the Company's ability to comply with its obligations under the Securities Purchase Agreement, the Notes or the Warrants or the registration rights agreement entered into with the Purchasers in connection with the Private Placement, or (ii) the rights of the Purchasers under the Notes. The Company believes that it is not probable that the material adverse event clause under the Notes will be exercised.

The Company has plans in place to obtain sufficient additional fundraising to fulfill its operating and capital requirements for the next 12 months. The Company's plans include continuing to fund its operating losses and capital funding needs through public or private equity or debt financings, strategic collaborations, licensing arrangements, asset sales, government grants or other arrangements. Although management believes such plans, if executed as planned, should provide the Company sufficient financing to meet its needs, successful completion of such plans is dependent on factors outside of the Company's control. As such, management cannot conclude that such plans will be effectively implemented within one year after the date that the condensed consolidated financial statements are issued.

If the Company is unable to raise additional capital in sufficient amounts or on terms acceptable, the Company may have to significantly delay, scale back or discontinue the development or commercialization of one or more of its product candidates. The Company may also seek collaborators for one or more of its current or future product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available.

The condensed consolidated financial statements do not reflect any adjustments that might be necessary if the Company is unable to continue as a going concern.

Universal Shelf Registration

In November 2014, the Company filed a universal shelf registration statement on Form S-3 (the "2014 Shelf Registration Statement") with the SEC, which was declared effective by the SEC in December 2014. This 2014 Shelf Registration Statement provided the Company with the ability to offer up to $250 million of securities, including equity and other securities as described in the registration statement. Included in the 2014 shelf registration is a sales agreement prospectus covering the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $50.0 million of the Company's common stock that may be issued and sold under a sales agreement with MLV & Co. LLC (the "2014 ATM Facility"). During the twelve months ended December 31, 2017, the Company sold approximately $13.9 million in shares of common stock under the 2014 ATM Facility.

In April 2017, the Company completed a public offering of $47.5 million of shares of common stock pursuant to the 2014 Shelf Registration Statement for net proceeds of approximately $43.1 million.

In November 2017, the Company filed a universal shelf registration statement on Form S-3 (the "2017 Shelf Registration Statement") with the SEC, which was declared effective by the SEC in December 2017. The 2014 Shelf Registration Statement expired on December 6, 2017 when the 2017 Shelf Registration was declared effective. This 2017 Shelf Registration Statement provides the Company with the ability to offer up to $350 million of securities, including equity and other securities as described in the registration statement. Included in the 2017 Shelf Registration Statement is a sales agreement prospectus covering the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $100.0 million of the Company's common stock that may be issued and sold under a sales agreement with B. Riley FBR, Inc. (the "ATM Facility"). During the twelve months ended December 31, 2017 and the three months ended March 31, 2018, the Company sold approximately $0.9 million and approximately $50.6 million in shares of common stock, respectively, under the ATM Facility. The Company can offer up to approximately $48.5 million of additional shares of common stock under the ATM Facility, subject to certain limitations.

Pursuant to the 2017 Shelf Registration Statement, the Company may offer such securities from time to time and through one or more methods of distribution, subject to market conditions and the Company's capital needs. Specific terms and prices will be determined at the time of each offering under a separate prospectus supplement, which will be filed with the SEC at the time of any offering. However, the Company cannot be sure that such additional funds will be available on reasonable terms, or at all.

2016 Private Investment in Public Entity Financing

On April 3, 2016, the Company entered into a Securities Purchase Agreement (the "ABG Purchase Agreement") with ABG SRNE Limited and Ally Bridge LB Healthcare Master Fund Limited (collectively, "Ally Bridge"), pursuant to which, among other things, the Company agreed to issue and sell to Ally Bridge and other purchasers designated by Ally Bridge (collectively, the "ABG Purchasers"), in a private placement transaction (the "ABG Private Placement"), up to $50.0 million in shares of the Company's common stock and warrants to purchase shares of common stock. Upon the closing of the ABG Private Placement, the Company issued to the ABG Purchasers (1) an aggregate of 9,009,005 shares (the "ABG Shares") of common stock, and (2) warrants to purchase an aggregate of 2,702,700 shares of common stock (each, an "ABG Warrant"). Each ABG Warrant has an exercise price of $8.50 per share, was immediately exercisable upon issuance, has a term of three years and is exercisable on a cash or cashless exercise basis.

Under the terms of the ABG Purchase Agreement, the Company was obligated to prepare and file with the SEC, within 30 days of the closing date of the ABG Private Placement, a registration statement to register for resale the ABG Shares and the shares of common stock issuable upon exercise of each ABG Warrant (the "ABG Warrant Shares"), and may be required to effect certain registrations to register for resale the ABG Shares and the ABG Warrant Shares in connection with certain "piggy-back" registration rights granted to the ABG Purchasers.

On April 3, 2016, the Company also entered into a Securities Purchase Agreement (collectively, the "Additional Purchase Agreements") with each of Beijing Shijilongxin Investment Co., Ltd. ("Beijing Shijilongxin"), FREJOY Investment Management Co., Ltd. ("Frejoy") and Yuhan Corporation ("Yuhan"), pursuant to which, among other things, the Company agreed to issue and sell, in separate private placement transactions: (1) to Beijing Shijilongxin, 8,108,108 shares of common stock, and a warrant to purchase 1,176,471 shares of common stock, for an aggregate purchase price of $45.0 million; (2) to Frejoy, 8,108,108 shares of common stock, and a warrant to purchase 1,176,471 shares of common stock, for an aggregate purchase price of $45.0 million; and (3) to Yuhan, 1,801,802 shares of common stock, and a warrant to purchase 235,294 shares of common stock, for an aggregate purchase price of $10.0 million. The warrants issued pursuant to each of the Additional Purchase Agreements (collectively, the "Additional Warrants" and, together with each ABG Warrant, the "ABG Warrants") have an exercise price of $8.50 per share, were immediately exercisable upon issuance, have a term of three years and are exercisable on a cash or cashless exercise basis.

Under the terms of the Additional Purchase Agreements, each of Beijing Shijilongxin, Frejoy and Yuhan had the right to demand, at any time beginning six months after the closing of the transactions contemplated by the applicable Additional Purchase Agreement, that the Company prepare and file with the SEC a registration statement to register for resale such investor's shares of common stock purchased pursuant to the applicable Additional Purchase Agreement and the shares of common stock issuable upon exercise of such investor's Additional Warrant. In addition, the Company may be required to effect certain registrations to register for resale such shares in connection with certain "piggy-back" registration rights granted to Beijing Shijilongxin, Frejoy and Yuhan.

On May 2, 2016, the Company closed its private placement of common stock and warrants with Yuhan for gross proceeds of $10.0 million. Yuhan purchased 1,801,802 shares of common stock at $5.55 per share and a warrant to purchase 235,294 shares of common stock. The warrant is exercisable for three years at an exercise price of $8.50 per share.

Between May 31, 2016 and June 7, 2016, the Company closed on the remainder of the $150.0 million financing with the ABG Purchasers, Beijing Shijilongxin, and Frejoy. The ABG Purchasers led the financing and, together with Beijing Shijilongxin and Frejoy, collectively purchased 25,225,221 shares of common stock at $5.55 per share and warrants to purchase 5,055,642 shares of common stock for total cash consideration of $86.5 million and secured promissory notes (the "ABG Notes") in an aggregate principal amount of $53.5 million.

On December 31, 2016, the Company entered into Warrant and Note Cancellation and Share Forfeiture Agreements (the "Cancellation and Forfeiture Agreements") with certain investors (the "Investors") that held an aggregate of 7,838,259 shares of common stock and certain of the Warrants granting the right to purchase an aggregate of 1,137,316 shares of common stock. Pursuant to the Cancellation and Forfeiture Agreements, effective December 31, 2016, the ABG Warrants held by the Investors and the ABG Notes, of which $43.5 million was then outstanding, were cancelled and the shares of common stock held by the Investors were forfeited and returned to the Company.

2017 Private Investment in Public Entity Financing

On December 11, 2017, the Company entered into the Securities Purchase Agreement with the Purchasers. Pursuant to the Securities Purchase Agreement, on December 21, 2017, the Company issued and sold to the Purchasers, in the Private Placement, (1) the Notes, which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the Maturity Date, and (2) the Warrants to purchase an aggregate of 12,121,210 shares of common stock.

At any time and from time to time before the Maturity Date, each Purchaser shall have the option to convert any portion of the outstanding principal amount of such Purchaser's Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such Purchaser's Note into shares of common stock at a price per share of $2.26875, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with the year ending December 31, 2018. If a Purchaser elects to convert any of the principal amount of their Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type.

Each Warrant has an exercise price of $2.61 per share, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions, will become exercisable on June 20, 2018, has a term of five and a half years and is exercisable on a cash basis, unless there is not an effective registration statement covering the resale of the shares issuable upon exercise of the Warrants, in which case the Warrants shall also be exercisable on a cashless exercise basis.

2018 Private Investment in Public Entity Financing

On March 26, 2018, the Company entered into a Securities Purchase Agreement (the "March 2018 Securities Purchase Agreement") with certain accredited investors (collectively, the "March 2018 Purchasers"), pursuant to which, among other things, the Company agreed to issue and sell to the Purchasers, in a private placement transaction (the "March 2018 Private Placement"), (1) convertible promissory notes in an aggregate principal amount of $120,500,000 (the "March 2018 Notes"), which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of (a) the date that is five years from the date of issuance, and (b) the date of the closing of a change in control of the Company (the "March 2018 Maturity Date"), and (2) warrants to purchase shares of Common Stock. Upon the closing of the March 2018 Private Placement (the "March 2018 Closing"), the Company will issue to each March 2018 Purchaser (1) a March 2018 Note with a face value equal to the amount of the March 2018 Purchaser's investment, and (2) a warrant to purchase such number of shares of Common Stock as is equal to 50% of the number of shares of common stock into which such March 2018 Purchaser's March 2018 Note is initially convertible (each, a "March 2018 Warrant"). The aggregate number of shares of common stock issuable upon exercise of the March 2018 Warrants will be 8,591,794 shares.

At any time and from time to time before the March 2018 Maturity Date, each March 2018 Purchaser shall have the option to convert any portion of the outstanding principal amount of such March 2018 Purchaser's March 2018 Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such Purchaser's Note into shares of common stock at a price per share of $7.0125, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the March 2018 Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with December 31, 2018. If a March 2018 Purchaser elects to convert any of the principal amount of their March 2018 Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The March 2018 Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type.

Each March 2018 Warrant will have an exercise price of $8.77 per share, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions, will become exercisable on the date that is 181 days following the date of the March 2018 Closing, will have a term of five and a half years from the date of issuance and will be exercisable on a cash basis, unless there is not an effective registration statement covering the resale of the shares issuable upon exercise of the Warrants (the "March 2018 Warrant Shares"), in which case the March 2018 Warrants shall also be exercisable on a cashless exercise basis.

If the Company raises additional funds by issuing equity securities, substantial dilution to existing stockholders would result. If the Company raises additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict the Company's ability to operate its business.

As of the date of this filing, the March 2018 Securities Purchase Agreement had not closed.

3. Significant Accounting Policies

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of expenses during the reporting period. Management believes that these estimates are reasonable; however, actual results may differ from these estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less to be cash equivalents. The Company minimizes its credit risk associated with cash and cash equivalents by periodically evaluating the credit quality of its primary financial institution. The balance at times may exceed federally insured limits. The Company has not experienced any losses on such accounts.

Fair Value of Financial Instruments

The Company follows accounting guidance on fair value measurements for financial instruments measured on a recurring basis, as well as for certain assets and liabilities that are initially recorded at their estimated fair values. Fair value is defined as the exit price, or the amount that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company uses the following three-level hierarchy that maximizes the use of observable inputs and minimizes the use of unobservable inputs to value its financial instruments:

- Level 1: Observable inputs such as unadjusted quoted prices in active markets for identical instruments.

- Level 2: Quoted prices for similar instruments that are directly or indirectly observable in the marketplace.

- Level 3: Significant unobservable inputs which are supported by little or no market activity and that are financial instruments whose values are determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

Financial instruments measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires it to make judgments and consider factors specific to the asset or liability. The use of different assumptions and/or estimation methodologies may have a material effect on estimated fair values. Accordingly, the fair value estimates disclosed or initial amounts recorded may not be indicative of the amount that the Company or holders of the instruments could realize in a current market exchange.

The carrying amounts of cash equivalents and marketable securities approximate their fair value based upon quoted market prices. Certain of the Company's financial instruments are not measured at fair value on a recurring basis, but are recorded at amounts that approximate their fair value due to their liquid or short-term nature, such as cash, accounts receivable and payable, and other financial instruments in current assets or current liabilities.

Marketable Securities

Marketable securities are designated either as trading or available-for-sale securities and are accounted for at fair value. Marketable securities are classified as short-term or long-term based on the nature of the securities and their availability to meet current operating requirements. Marketable securities that are readily available for use in current operations and are classified as short-term available-for-sale securities are reported as a component of current assets in the accompanying condensed consolidated balance sheets. Marketable securities that are not trading securities and are not considered available for use in current operations are classified as long-term available-for-sale securities and are reported as a component of long-term assets in the accompanying condensed consolidated balance sheets.

Securities that are classified as trading are carried at fair value, with changes to fair value reported as a component of income. Securities that are classified as available-for-sale are carried at fair value, with temporary unrealized gains and losses reported as a component of stockholders' equity until their disposition. The cost of securities sold is based on the specific identification method.

All of the Company's marketable securities are subject to a periodic impairment review. The Company recognizes an impairment charge when a decline in the fair value of its investments below the cost basis is judged to be other-than-temporary. For the three months ended March 31, 2018 and 2017, no other-than-temporary impairment charges were recorded.

Grants and Accounts Receivable

Grants receivable at March 31, 2018 and December 31, 2017 represent amounts due under several federal contracts with the National Institute of Allergy and Infectious Diseases ("NIAID"), a division of the National Institutes of Health ("NIH"). The Company considers the grants receivable to be fully collectible; accordingly, no allowance for doubtful amounts has been established. If amounts become uncollectible, they are charged to operations.

Accounts receivable at March 31, 2018 and December 31, 2017 consist of trade receivables from sales and services provided to certain customers, which are generally unsecured and due within 30 days. Estimated credit losses related to trade accounts receivable are recorded as general and administrative expenses and as an allowance for doubtful accounts within grants and accounts receivable, net. The Company reviews reserves and makes adjustments based on historical experience and known collectability issues and disputes. When internal collection efforts on accounts have been exhausted, the accounts are written off by reducing the allowance for doubtful accounts. As of each of March 31, 2018 and December 31, 2017, the allowance for doubtful accounts was $20 thousand.

Property and Equipment

Property and equipment are carried at cost less accumulated depreciation. Depreciation of property and equipment is computed using the straight-line method over the estimated useful lives of the assets, which are generally three to five years. Leasehold improvements are amortized over the lesser of the life of the lease or the life of the asset. Repairs and maintenance are charged to expense as incurred.

Acquisitions and Intangibles

The Company has engaged in business combination activity. The accounting for business combinations requires management to make judgments and estimates of the fair value of assets acquired, including the identification and valuation of intangible assets, as well as liabilities assumed. Such judgments and estimates directly impact the amount of goodwill recognized in connection with each acquisition, as goodwill presents the excess of the purchase price of an acquired business over the fair value of its net tangible and identifiable intangible assets.

Goodwill and Other Long-Lived Assets

Goodwill, which has an indefinite useful life, represents the excess of cost over fair value of net assets acquired. Goodwill is reviewed for impairment at least annually during the fourth quarter, or more frequently if events occur indicating the potential for impairment. During its goodwill impairment review, the Company may assess qualitative factors to determine whether it is more likely than not that the fair value of its reporting unit is less than its carrying amount, including goodwill. The qualitative factors include, but are not limited to, macroeconomic conditions, industry and market considerations, and the overall financial performance of the Company. If, after assessing the totality of these qualitative factors, the Company determines that it is not more likely than not that the fair value of its reporting unit is less than its carrying amount, then no additional assessment is deemed necessary. Otherwise, the Company proceeds to perform the two-step test for goodwill impairment. The first step involves comparing the estimated fair value of the reporting unit with its carrying value, including goodwill. If the carrying amount of the reporting unit exceeds its fair value, the Company performs the second step of the goodwill impairment test to determine the amount of loss, which involves comparing the implied fair value of the goodwill to the carrying value of the goodwill. The Company may also elect to bypass the qualitative assessment in a period and elect to proceed to perform the first step of the goodwill impairment test. The Company performed its annual assessment for goodwill impairment in the fourth quarter of 2017, noting no impairment. There have not been any triggering events indicating the potential for impairment through March 31, 2018.

The Company evaluates its long-lived and intangible assets with definite lives, such as property and equipment, acquired technology, customer relationships, patent and license rights, for impairment by considering competition by products prescribed for the same indication, the likelihood and estimated future entry of non-generic and generic competition with the same or similar indication and other related factors. The factors that drive the estimate of useful life are often uncertain and are reviewed on a periodic basis or when events occur that warrant review. Recoverability is measured by comparison of the assets' book value to future net undiscounted cash flows that the assets are expected to generate. There have not been any impairment losses of long-lived assets through March 31, 2018.

Acquisition Consideration Payable - Gain or Loss on Contingent Liabilities

Acquisition consideration payable relates to the Company's acquisition of businesses and various other assets and is recorded on the Company's condensed consolidated balance sheets at fair value and is re-measured at each balance sheet date until such contingent liabilities have been settled, with changes in fair value recorded as gain or loss on contingent liabilities.

The Company estimates the fair value of contingent consideration based on level 3 inputs primarily driven by the probability of achieving certain financing or operating related milestones.

Debt With Detachable Warrants

Debt with detachable warrants are evaluated for the classification of warrants as either equity instruments, derivative liabilities, or liabilities depending on the specific terms of the warrant agreement. In circumstances in which debt is issued with equity-classified warrants, the proceeds from the issuance of convertible debt are first allocated to the debt and the warrants at their relative estimated fair values. The portion of the proceeds so allocated to the warrants are accounted for as paid-in capital and a debt discount. The remaining proceeds, as further reduced by discounts created by the bifurcation of embedded derivatives and beneficial conversion features, are allocated to the debt. The Company accounts for debt as liabilities measured at amortized cost and amortizes the resulting debt discount from the allocation of proceeds, to interest expense using the effective interest method over the expected term of the debt instrument. The Company considers whether there are any embedded features in debt instruments that require bifurcation and separate accounting as derivative financial instruments pursuant to ASC 815.

If the amount allocated to the convertible debt results in an effective per share conversion price less than the fair value of the Company's common stock on the commitment date, the intrinsic value of this beneficial conversion feature is recorded as a discount to the convertible debt with a corresponding increase to additional paid in capital. The beneficial conversion feature discount is equal to the difference between the effective conversion price and the fair value of the Company's common stock at the commitment date, unless limited by the remaining proceeds allocated to the debt.

Derivative Liability

Derivative liabilities are recorded on the Company's condensed consolidated balance sheets at their fair value on the date of issuance and are revalued on each balance sheet date until such instruments are exercised or expire, with changes in the fair value between reporting periods recorded as other income or expense. The Company estimates the fair value of derivative liabilities using the Black-Scholes option pricing model.

Investments in Other Entities

The Company holds a portfolio of investments in equity securities that are accounted for under either the equity method or cost method. Investments in entities over which the Company has significant influence but not a controlling interest are accounted for using the equity method, with the Company's share of earnings or losses reported in loss on equity method investments.

The Company's cost method investments are included in cost method investments on the condensed consolidated balance sheets. The Company's equity method investments are included in equity method investments on the condensed consolidated balance sheets.

All investments are reviewed on a regular basis for possible impairment. If an investment's fair value is determined to be less than its net carrying value and the decline is determined to be other-than-temporary, the investment is written down to its fair value. Such an evaluation is judgmental and dependent on specific facts and circumstances. Factors considered in determining whether an other-than-temporary decline in value has occurred include: the magnitude of the impairment and length of time that the market value was below the cost basis; financial condition and business prospects of the investee; the Company's intent and ability to retain the investment for a sufficient period of time to allow for recovery in market value of the investment; issues that raise concerns about the investee's ability to continue as a going concern; any other information that the Company may be aware of related to the investment. The Company does not report the fair value of its equity investments in non-publicly traded companies because it is not practical to do so.

Research and Development Costs and Collaborations

All research and development costs are charged to expense as incurred. Such costs primarily consist of lab supplies, contract services, stock-based compensation expense, salaries and related benefits.

Acquired In-Process Research and Development Expense

The Company has acquired and may continue to acquire the rights to develop and commercialize new drug candidates. The up-front payments to acquire a new drug compound, as well as future milestone payments, are immediately expensed as acquired in-process research and development provided that the drug has not achieved regulatory approval for marketing and, absent obtaining such approval, have no alternative future use. Prior to November 8, 2016, all acquired in-process research and development was expensed immediately. The acquired in-process research and development related to the business combinations of Virttu Biologics Limited ("Virttu") and Scilex Pharmaceuticals Inc. ("Scilex"), for which certain products are under development and expected to be commercialized in the future, was capitalized and recorded within "Intangibles, net" on the accompanying condensed consolidated balance sheet. Capitalized in-process research and development will be reviewed annually for impairment or more frequently as changes in circumstance or the occurrence of events suggest that the remaining value may not be recoverable.

Income Taxes

The provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 740 *"Income Taxes,"* addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under ASC Topic 740-10, 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 taxing authorities, based on the technical merits of the position. The Company has determined that it has uncertain tax positions.

The Company accounts for income taxes using the asset and liability method to compute the differences between the tax basis of assets and liabilities and the related financial amounts, using currently enacted tax rates.

The Company has deferred tax assets, which are subject to periodic recoverability assessments. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount that more likely than not will be realized. As of each of December 31, 2017 and March 31, 2018, the Company maintained a full valuation allowance against its deferred tax assets, with the exception of an amount equal to its deferred tax liabilities, an amount equal to its alternative minimum tax credits and state research and development tax credits for which there is no expiration and the deferred tax assets related to its investment in Scilex.

Revenue Recognition

The Company's revenues are generated from various NIH grant awards, license fees, the sale of customized reagents and other materials, and the provision of contract manufacturing and other services. The Company does not have significant costs associated with costs to obtain contracts with its customers. Substantially all of the Company's grants and accounts receivable result from contracts with customers.

Grant Revenues

The revenue from the NIH grant awards is based upon subcontractor and internal costs incurred that are specifically covered by the grant, and where applicable, a facilities and administrative rate that provides funding for overhead expenses. These revenues are recognized when expenses have been incurred by subcontractors or when the Company incurs internal expenses that are related to the grant.

Royalty and License Revenues

License fees for the licensing of product rights are recorded as deferred revenue upon receipt of cash and recognized as revenue on a straight-line basis over the license period, with the exception of license agreements with no remaining performance obligations or undelivered obligations. The Company applies judgment in determining the timing of revenue recognition related to contracts that include multiple performance obligations. The total transaction price of the contract is allocated to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. For goods or services for which observable standalone selling prices are not available, the Company develops an estimated standalone selling price of each performance obligation.

As of December 31, 2017 and March 31, 2018, the future performance obligations for royalty and license revenues relate to the ImmuneOncia Therapeutics, LLC ("ImmuneOncia") and NantCell, Inc. ("NantCell") license agreements.

The total consideration for the ImmuneOncia license agreement, effective September 1, 2016, represented \$9.6 million. The estimated revenue expected to be recognized for the future performance obligation, as of December 31, 2017 and March 31, 2018, was approximately \$9.0 million and \$8.8 million. The Company expects to recognize revenue on approximately \$0.5 million of the remaining performance obligation annually through the remaining term. The Company applied judgment in estimating the 20-year contract term, analogous to the expected life of the patent, over which revenue is recognized over time given the ongoing performance obligation under the agreement.

As of December 31, 2017 and March 31, 2018, the NantCell license agreement, effective April 21, 2015, represented $110 million of contract liabilities reflected in long-term deferred revenue. See Note 11 for additional information regarding the remaining performance obligation for the significant agreement.

Sales and Services Revenues

Sales and services revenues are comprised of contract manufacturing associated with sales of customized reagents at Conccortis Biosystems Corporation, materials and supply agreements, contract manufacturing services at BioServ Corporation, and the Company's joint development agreement with Celularity, Inc.

The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which it recognizes revenue at the amount to which it has the right to invoice for services performed. The Company applied the practical expedient in ASC Topic 606-10-50-13 to the revenue contracts for our Concortis Biosystems Corporation sales and services and materials and supply agreements due to the short-term length of such contracts.

Concortis Biosystems Corporation ("Concortis")

Contract manufacturing associated with sales of customized reagents for Concortis operations relate to providing synthetic expertise to customers' synthesis by delivering proprietary cytotoxins, linkers and linker-toxins and ADC service using industry standard toxin and antibodies provided by customers which are recognized upon the transfer of control, which is generally upon shipment given the short contract terms which are generally three months or less.

Materials And Supply Agreements

Revenues from the sale of materials associated with our research and development arrangements are recognized upon the transfer of control, which is generally, upon shipment.

Bioserv Corporation ("Bioserv")

Contract manufacturing services associated with the Company's Bioserv operations related to finish and fill activities for drug products and reagents are recognized ratably over the contract term based on a time-based measure which reflects the transfer of services to the customer because the manufactured products are highly customized and do not have an alternative use to the Company. As of December 31, 2017 and March 31, 2018, the Company had approximately $0.5 million and $0.8 million of unbilled accounts receivable for which revenue has been recognized but not billed at the reporting date, respectively. As of December 31, 2017 and March 31, 2018, the Company had approximately $0.4 million and $0.2 million of upfront payments related to its contract manufacturing services included in deferred revenue, respectively.

As of December 31, 2017 and March 31, 2018, the estimated revenue expected to be recognized for future performance obligations associated with contract manufacturing services was approximately $3.0 million and $2.2 million, respectively. The Company expects to recognize revenue on approximately $1.6 million of these remaining performance obligations over the next twelve months.

The following table includes Bioserv sales and services revenue expected to be recognized in the future related to performance obligations that are undelivered or partially delivered at the end of the reporting period and do not include contracts with original durations of one year or less (in thousands):

	Remainder of 2018	2019	2020 and thereafter
Contract manufacturing services	$1,500	$400	$400

Joint Development Agreement

On September 26, 2017, the Company entered into a joint development agreement with Celularity Inc. whereby the Company agreed to provide research services to Celularity Inc. through June 30, 2018 in exchange for an upfront payment of $5.0 million. The revenue related to the joint development agreement of $5.0 million will be recognized over the length of the service agreement as services are performed. The Company recorded $1.7 million of sales and services revenues under the joint development agreement for each of the quarter ended March 31, 2018 and the year ended December 31, 2017.

The following table shows sales and service revenues disaggregated by product and services type for the three months ended March 31, 2018 and 2017 (in thousands):

	Three Months Ended March 31,	
	2018	2017
Concortis sales and services	1,463	1,188
Materials and supply agreements	861	318
Bioserv sales and services	2,135	850
Joint development agreement	1,667	—
	$ 6,126	$ 2,356

The Company is obligated to accept from customers the return of products sold that are damaged or do not meet certain specifications. The Company may authorize the return of products sold in accordance with the terms of its sales contracts, and estimates allowances for such amounts at the time of sale. The Company has not experienced any sales returns.

Stock-Based Compensation

The Company accounts for stock-based compensation in accordance with FASB ASC Topic 718 "*Compensation – Stock Compensation,*" which establishes accounting for equity instruments exchanged for employee services. Under such provisions, stock-based compensation cost is generally measured at the grant date, based on the calculated fair value of the award and an estimate of forfeitures, and is recognized as an expense, under the straight-line method, over the employee's requisite service period (generally the vesting period of the equity grant).

The Company accounts for equity instruments, including restricted stock or stock options, issued to non-employees in accordance with authoritative guidance for equity based payments to non-employees. Stock options issued to non-employees are accounted for at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of options and restricted stock granted to non-employees is re-measured over the vesting period, and the resulting changes in fair value are recognized as expense in the period of the change in proportion to the services rendered to date.

Comprehensive Income (Loss)

Comprehensive income (loss) is primarily comprised of net income (loss) and adjustments for the change in unrealized gains and losses on the Company's investments in available-for-sale marketable securities, net of taxes. The Company displays comprehensive income (loss) and its components in its condensed consolidated statements of comprehensive income (loss).

Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing net income (loss) for the period by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share reflects the additional dilution from potential issuances of common stock, such as stock issuable pursuant to the exercise of stock options or the exercise of outstanding warrants. The treasury stock method and if-converted method are used to calculate the potential dilutive effect of these common stock equivalents. Potentially dilutive shares are excluded from the computation of diluted net loss per share when their effect is anti-dilutive. In periods where a net loss is presented, all potentially dilutive securities are anti-dilutive and are excluded from the computation of diluted net loss per share.

These outstanding securities consist of the following:

	Quarters Ended March 31,	
	2018	2017
Outstanding options	3,314,450	4,320,576
Outstanding warrants	4,708,860	5,932,998

Segment Information

The Company is engaged primarily in the discovery and development of innovative therapies focused on oncology and the treatment of chronic cancer pain as well as immunology and infectious diseases based on its platform technologies. Accordingly, the Company has determined that it operates in one operating segment.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. ASU No. 2014-09 was originally effective for annual reporting periods beginning after December 15, 2016, and interim periods thereafter. In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard for annual reporting periods beginning after December 15, 2017, and interim periods thereafter. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date. The standard allows for either a full retrospective or modified retrospective method of adoption. The Company adopted this standard on its effective date, January 1, 2018 under the modified retrospective method of adoption. Under this method, entities recognize the cumulative impact of applying the new standard at the date of adoption without restatement of prior periods presented. The cumulative effect of applying the new standard to contracts that were not completed as of January 1, 2018 did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU amends the guidance in GAAP on the classification and measurement of financial instruments. Changes to the current guidance primarily affect the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. ASU No. 2016-01 is effective for fiscal years and interim periods beginning after December 15, 2017, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective. Early adoption is not permitted except for the provision to record fair value changes for financial liabilities under the fair value option resulting from instrument-specific credit risk in other comprehensive income. The adoption of this standard did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. ASU No. 2016-02 is aimed at making leasing activities more transparent and comparable, and requires substantially all leases be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. ASU No. 2016-20 is effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of ASU No. 2016-02 will have on its consolidated financial position, results of operations and cash flows.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,* to improve financial reporting by requiring timelier recording of credit losses on loans and other financial instruments held by financial institutions and other organizations. The ASU requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. The ASU also requires enhanced disclosures to help investors and other financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. The ASU is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early application will be permitted for all organizations for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently evaluating the impact that the adoption of ASU No. 2016-13 will have on its consolidated financial position, results of operations and cash flows.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, to improve financial reporting in regards to how certain transactions are classified in the statement of cash flows. The ASU requires that (1) debt extinguishment costs be classified as cash outflows for financing activities and provides additional classification guidance for the statement of cash flows, (2) the classification of cash receipts and payments that have aspects of more than one class of cash flows to be determined by applying specific guidance under generally accepted accounting principles, and (3) each separately identifiable source or use within the cash receipts and payments be classified on the basis of their nature in financing, investing or operating activities. The ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The adoption of this standard did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*, to clarify the definition of a business to add guidance for evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Specifically, this ASU provides a screen to assist entities in determining when a set should not be considered a business, which screen provides that if substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or group of similar assets, the set is not a business. The ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The adoption of this standard did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In January 2017, the FASB issued ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment (Topic 350)*. This standard eliminates Step 2 from the goodwill impairment test, instead requiring an entity to recognize a goodwill impairment charge for the amount by which the goodwill carrying amount exceeds the reporting unit's fair value. This guidance is effective for interim and annual goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption permitted. This guidance must be applied on a prospective basis. The Company is currently evaluating the impact that the adoption of ASU No. 2017-04 will have on the Company's consolidated financial position, results of operations or cash flows.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting*, to provide clarity and reduce both the diversity in practice and cost of complexity when applying the guidance. Specifically, the ASU provides additional modification conditions in determining whether or not modification accounting should be applied. The ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The adoption of this standard did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, to allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act and improves the usefulness of information reported to financial statement users. The ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial position, results of operations or cash flows.

4. Acquisitions

Acquisition of Virttu Biologics Limited

On April 27, 2017, the Company entered into a Share Purchase Agreement (the "Virttu Purchase Agreement") with TNK Therapeutics, Inc., a majority-owned subsidiary of the Company ("TNK"), Virttu, the shareholders of Virttu (the "Virttu Shareholders") and Dayspring Ventures Limited, as the representative of the Virttu Shareholders, pursuant to which, among other things, TNK acquired from the Virttu Shareholders 100% of the outstanding ordinary shares of Virttu (the "Virttu Acquisition").

Virttu focuses on the development of oncolytic viruses that infect and selectively multiply in and destroy tumor cells without damaging healthy tissue. Its lead oncolytic virus candidate, Seprehvir, infects and replicates in cancer cells selectively, leaving normal cells unharmed.

Under the Virttu Purchase Agreement, the total amount of the consideration payable to the Virttu Shareholders in the Virttu Acquisition is equal to $25 million, less Virttu's net debt (the "Virttu Base Consideration"). An additional $10 million contingent consideration is payable upon the achievement of certain regulatory milestones (as described below) (the "Regulatory Approval Consideration").

At the closing of the Virttu Acquisition (the "Closing"), the Company issued to the Virttu Shareholders consideration valued at approximately $2.2 million, which consisted primarily of an aggregate of 797,081 shares (the "Virttu Closing Shares") and approximately $557,000 in cash (the "Cash Consideration"). The issuance of the Virttu Closing Shares and the payment of the Cash Consideration satisfied TNK's obligation to pay 20% of the Virttu Base Consideration at the Closing. Under the terms of the Virttu Purchase Agreement, the Company agreed to provide additional consideration to the Virttu Shareholders, as follows:

(1) Upon a financing resulting in gross proceeds (individually or in the aggregate) to TNK of at least $50.0 million (a "Qualified Financing"), TNK will issue to the Virttu Shareholders an aggregate number of shares of its capital stock ("TNK Capital Stock") as is equal to the quotient obtained by dividing 80% of the Virttu Base Consideration by the lowest per share price paid by investors in the Qualified Financing (the "TNK Financing Consideration"); provided, however, that 20% of the TNK Financing Consideration shall be held in escrow until April 27, 2018 (the "Financing Due Date"), to be used to, among other things, satisfy the indemnification obligations of the Virttu Shareholders. In the event that a Qualified Financing does not occur, then on the Financing Due Date, the Company will issue to the Virttu Shareholders an aggregate number of shares of the

Company's common stock as is equal to the quotient obtained by dividing 80% of the Virttu Base Consideration, by $5.55 (as adjusted, as appropriate, to reflect any stock splits or similar events affecting the Company's common stock after the Closing).

(2) Within 45 business days after Virttu becomes aware that certain governmental bodies in the United States, the European Union, the United Kingdom or Japan have approved for commercialization, on or before October 26, 2024, Seprehvir (or any enhancement, combination or derivative thereof) as a monotherapy or in combination with one or more other active components (each of the first two such approvals by a governmental body being a "Regulatory Approval"), TNK shall pay half of the Regulatory Approval Consideration to the Virttu Shareholders, in a combination of (a) up to $5.0 million in cash (the "Regulatory Approval Cash") and/or (b) (i) such number of shares of the Company's common stock as is equal to the quotient obtained by dividing $5.0 million less the Regulatory Approval Cash (the "Regulatory Approval Share Value") by the 30 Day VWAP (as defined below) of one share of the Company's common stock; (ii) if TNK has completed its first public offering of TNK Capital Stock, the number of shares of TNK Capital Stock as is equal to the quotient obtained by dividing the Regulatory Approval Share Value by the 30 Day VWAP of one share of TNK Capital Stock; or (iii) such number of shares of common stock of a publicly traded company as is equal to the quotient obtained by dividing the Regulatory Approval Share Value by the volume weighted average price of the relevant security, as reported on the Nasdaq Capital Market (or other principal stock exchange or securities market on which the shares are then listed or quoted) for the thirty trading days immediately following the receipt of Regulatory Approval (the "30 Day VWAP"), with the composition of the Regulatory Approval Consideration to be at TNK's option. In order for a second regulatory approval to qualify as a Regulatory Approval under the Purchase Agreement, the second approval must be granted by a different governmental body in a different jurisdiction than that which granted the first Regulatory Approval.

At April 27, 2017, the 80% of the Virttu Base Consideration was valued at $12.8 million. The fair value of the 80% of the Virttu Base Consideration is recorded as a current liability and will be adjusted quarterly for changes in fair value or as events and circumstances arise. At April 27, 2017, the contingent Regulatory Approval Consideration was valued at $1.0 million. The fair value of the contingent Regulatory Approval Consideration is recorded as a non-current liability within "Deferred rent and other" on the accompanying condensed consolidated balance sheet and will be adjusted quarterly for changes in fair value or as events and circumstances arise.

The consolidated financial statements include the preliminary results of operations from this transaction, which have been accounted for as a business combination, and require, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. The final valuation of the acquired assets and liabilities resulted in the recognition of identifiable assets of approximately $16.0 million comprised mainly of in-process research and development of approximately $15.4 million, deferred tax liabilities of $0.8 million and goodwill of approximately $1.4 million subject to final adjustments including tax related items. Various factors contributed to the establishment of goodwill, including an assembled workforce.

In connection with the Virttu transaction, the Company recorded acquisition costs of approximately $0.9 million in general and administrative expenses for the twelve months ended December 31, 2017, for legal and related costs. No acquisition costs in connection with the Virttu transaction were recorded for the three months ended March 31, 2018. Acquisition costs are expensed as incurred.

The acquisition of Virttu was not material to the Company's consolidated financial statements.

Acquisition of Scilex Pharmaceuticals Inc.

On November 8, 2016, the Company entered into a Stock Purchase Agreement (the "Scilex Purchase Agreement") with Scilex and a majority of the stockholders of Scilex (the "Scilex Stockholders") pursuant to which, on November 8, 2016, the Company acquired from the Scilex Stockholders, and the Scilex Stockholders sold to the Company, approximately 72% of the outstanding capital stock of Scilex (the "Scilex Acquisition"). The remainder of the outstanding capital stock of Scilex represents a noncontrolling interest of which approximately 23% continues to be held by ITOCHU CHEMICAL FRONTIER CORPORATION following the Scilex Acquisition.

Scilex focuses on the development and commercialization of specialty pharmaceutical products for the treatment of pain; its lead product, ZTlido™ (lidocaine topical system 1.8%, is a branded lidocaine topical system formulation being developed for the treatment of chronic pain. ZTlido™ (lidocaine topical system 1.8%) will be manufactured by a contract manufacturer.

Under the terms of the Scilex Purchase Agreement, upon receipt of notice from the U.S. Food and Drug Administration (the "FDA") that the FDA has approved Scilex's new drug application for ZTlido™ (lidocaine topical system 1.8%) for the treatment of postherpetic neuralgia (the "NDA") for commercialization, the Company was obligated to deliver to the Scilex Stockholders cash and shares of its common stock in such proportion to be determined in the Company's sole discretion as a milestone payment. On February 28, 2018, the Company received notice from the FDA that the FDA had approved the NDA. As a result, the Company issued to the Scilex Stockholders consideration valued at approximately $38.2 million, which included an aggregate of 1,381,346 shares of common stock of approximately $13.7 million, cash payment of approximately $24.5 million, including a bridge loan of approximately $20.0 million with B. Riley FBR and resulted in a change in fair value of $6.0 million since December 31, 2017, for the contingent consideration upon settlement.

Acquired In-process Research and Development of BDL

In August 2015, the Company and TNK entered into a Stock Purchase Agreement (the "Stock Purchase Agreement") with BDL Products, Inc. ("BDL") and the stockholders of BDL ("Stockholders") pursuant to which the Stockholders sold all of their shares of capital stock in BDL to TNK for: (1) a cash payment of $100.00, and (2) $6.0 million in shares of TNK Class A Stock, subject to adjustment in certain circumstances, to be issued to the Stockholders upon a financing resulting in gross proceeds (individually or in the aggregate) to TNK of at least $50.0 million (a "Qualified Financing"). In accordance with subsequent amendments to the Stock Purchase Agreement, in the event a Qualified Financing does not occur by October 15, 2017 (which is subject to further extension as implied and based on previously amended dates) or TNK does not complete an initial public offering of shares of its capital stock by September 15, 2017, in lieu of receiving shares of TNK pursuant to the acquisition, the Stockholders shall receive an aggregate of 309,916 shares of the Company's common stock, subject to adjustment in certain circumstances. TNK did not complete a Qualified Financing by the financing deadline and the Company issued 309,916 shares of its common stock to the Stockholders on March 19, 2018.

5. Fair Value Measurements

Fair value measurement is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A fair value hierarchy is established, which prioritizes the inputs used in measuring fair value into three broad levels as follows:

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

Level 2—Inputs, other than quoted prices in active markets, that are observable either directly or indirectly.

Level 3—Unobservable inputs based on the Company's own assumptions.

The following table presents the Company’s financial assets and liabilities that are measured at fair value on a recurring basis. (in thousands):

	Fair Value Measurements at March 31, 2018			
	Balance	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash and cash equivalents	$ 24,252	$ 24,252	$ —	$ —
Marketable securities	$ 444	$ 356	$ —	$ 88
Total assets	$ 24,696	$ 24,608	$ —	$ 88
Liabilities:				
Acquisition consideration payable	$ 25,926	$ —	$ —	$ 25,926
Total liabilities	$ 25,926	$ —	$ —	$ 25,926

	Fair Value Measurements at December 31, 2017			
	Balance	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash and cash equivalents	$ 20,429	$ 20,429	$ —	$ —
Marketable securities	$ 441	$ 356	$ —	$ 85
Total assets	$ 20,870	$ 20,785	$ —	$ 85
Liabilities:				
Acquisition consideration payable	$ 54,272	$ —	$ —	$ 54,272
Total liabilities	$ 54,272	$ —	$ —	$ 54,272

The Company's financial assets and liabilities carried at fair value are comprised of cash and cash equivalents, acquisition consideration payable and derivative instruments. Cash and cash equivalents consist of money market accounts and bank deposits which are highly liquid and readily tradable. These investments are valued using inputs observable in active markets for identical securities. Marketable securities are valued using inputs observable in active markets for identical securities. The Company recorded contingent consideration as part of its investment in Shanghai Three Alliance Biotech Co. LTD (“Shanghai Three”), agreement with Roger Williams Medical Center (“RWMC”), and acquisitions of Concortis, Inc., (“Concortis”), BDL, Scilex and Virttu. The fair value of the contingent consideration measured at fair value on a recurring basis using significant unobservable inputs (Level 3). Contingent consideration is measured using the income approach and discounting to present value the contingent payments expected to be made based on assessment of the probability that the company would be required to make such future payment.

The following table includes a summary of the Company’s contingent consideration liabilities and acquisition consideration payables associated with acquisitions. The contingent consideration is measured at fair value using significant unobservable inputs (Level 3) during the three months ended March 31, 2018:

(in thousands)	Fair Value
Beginning Balance at December 31, 2017	54,272
Re-measurement of Fair Value	12,226
Payment of current year contingent consideration	(40,572)
Ending Balance at March 31, 2018	$ 25,926

The following table includes a summary of the Company’s contingent and financing liabilities, related inputs used to determine fair value, and the valuation methodologies used for the fair value measurements using significant unobservable inputs (Level 3) at March 31, 2018:

(in thousands)	Fair Value Measurements at March 31, 2018		Valuation Methodology	Significant Unobservable Input	Weighted Average (range, if applicable)
Virttu Contingent Consideration (Non-current)	$	1,093	Multiple outcome discounted cash flow	Discount Rate Probability of Regulatory Milestone	12.21% 16%
Virttu Contingent Consideration	$	18,694	Multiple outcome discounted cash flow	Discount Rate Percent probabilities assigned to scenarios	5.50% 10% and 90%
Concortis Contingent Consideration	$	511	Multiple outcome discounted cash flow	Discount Rate Percent probabilities assigned to scenarios	19.20% 20%
Shanghai Three Contingent Consideration	$	2,251	Multiple outcome discounted cash flow	Discount Rate Percent probabilities assigned to scenarios	12.21% 65%
RWMC Contingent Consideration	$	3,377	Multiple outcome discounted cash flow	Discount Rate, Percent probabilities assigned to scenarios	12.21% 65%

The principal significant unobservable inputs used in the valuations of the contingent considerations are the discount rates and probabilities assigned to scenario outcomes. An increase in the discount rate or decrease in the probability of regulatory milestone achievement will cause a decrease in the fair value of the contingent consideration. Conversely, a decrease in the discount rate will cause an increase in the fair value of the contingent consideration. An increase in the probabilities assigned to certain scenarios will cause the fair value of contingent consideration to increase. Conversely, a decrease in the probabilities assigned to certain scenarios will cause the fair value of contingent considerations to decrease.

6. Marketable Securities

Marketable securities consisted of the following as of March 31, 2018 and December 31, 2017 (in thousands):

	March 31, 2018							
		Cost		Gross Unrealized Gains (Losses)		Gross Realized Gains (Losses)		Fair Value
Trading securities:								
MedoveX common shares and warrants	$	750	$	(306)	$	—	$	444

	December 31, 2017							
		Cost		Gross Unrealized Gains (Losses)		Gross Realized Gains (Losses)		Fair Value
Trading securities:								
MedoveX common shares and warrants	$	750	$	(309)	$	—	$	441

Trading Securities

On August 5, 2016, the Company entered into a Unit Purchase Agreement (the “Unit Purchase Agreement”) with MedoveX Corporation (“MedoveX”). Pursuant to the terms of the Unit Purchase Agreement, the Company purchased three Units for $750,000. Each Unit had a purchase price of $250,000 and consisted of (i) 208,333 shares of MedoveX common stock (the “MedoveX Common Stock”), and (ii) a warrant to purchase 104,167 shares of MedoveX Common Stock (the “MedoveX Warrant”). The MedoveX Warrant has an initial exercise price of $1.52 per share, subject to adjustment, and is initially exercisable six months following the date of issuance for a period of five years from the date of issuance. In addition, the Company entered into a Registration Rights Agreement with MedoveX pursuant to which MedoveX was required to file a registration statement registering for resale all shares of MedoveX Common Stock and shares of MedoveX Common Stock issuable pursuant to the MedoveX Warrant issued as part of the Units.

For the three months ended March 31, 2018 and 2017, the Company recorded a gain of $0.3 million and a gain of $0.2 million on trading securities, respectively. The Company’s investment in MedoveX will be revalued on each balance sheet date. The fair value of the Company’s holding in MedoveX Common Stock at March 31, 2018 is a Level 1 measurement. The fair value of the Company’s holdings in the MedoveX Warrant was estimated using the Black-Scholes option-pricing method.

The risk-free rate was derived from the U.S. Treasury yield curve, matching the MedoveX Warrant's term, in effect at the measurement date. The volatility factor was determined based on MedoveX's historical stock prices. The warrant valuation is a Level 3 measurement.

The following table includes a summary of the warrant measured at fair value using significant unobservable inputs (Level 3) during the three months ended March 31, 2018 (in thousands):

	Total
Beginning balance at December 31, 2017	$ 84
Change in fair value of warrant	3
Ending balance at March 31, 2018	$ 87

7. Property and Equipment

Property and equipment consisted of the following as of March 31, 2018 and December 31, 2017 (in thousands):

	March 31, 2018	December 31, 2017
Furniture and fixtures	1,093	1,035
Office equipment	498	493
Machinery and lab equipment	21,216	19,868
Leasehold improvements	7,409	7,327
	30,216	28,723
Less accumulated depreciation	(10,722)	(9,378)
	$ 19,494	$ 19,345

Depreciation expense for the quarters ended March 31, 2018 and 2017 was $1.3 million and $0.8 million, respectively.

8. Cost Method Investments

As of March 31, 2018, the aggregate carrying amount of the Company's cost-method investments in non-publicly traded companies was $237.0 million and included an ownership interest in NantCell, Inc. ("NantCell"), NantBioScience, Inc. ("NantBioScience"), Globavir Biosciences, Inc., Brink Biologics, Inc., Coneksis, Inc., and Celularity Inc. (See Note 9).

As of December 31, 2017, the aggregate carrying amount of the Company's cost-method investments in non-publicly traded companies was $237.0 million and included an ownership interest in NantCell, NantBioScience, Globavir Biosciences, Inc., Brink Biologics, Inc., Coneksis, Inc. and Celularity Inc.

The Company's cost-method investments are assessed for impairment quarterly. The Company has determined that it is not practicable to estimate the fair value of its cost-method investments on a regular basis and does not reassess the fair value of cost-method investments if there are no identified events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. No impairment losses were recorded during the three months ended March 31, 2018.

9. Equity Method Investments

NANTibody

In 2013, the Company acquired IgDraSol Inc. ("IgDraSol"), a private company focused on the development of oncologic agents for the treatment of cancer, from a third party unrelated to the NantWorks, LLC ("NantWorks") affiliated entities for 3.0 million shares of the Company's common stock and $380,000 of cash for a total purchase price of $29.1 million. This transaction included the acquisition of IgDraSol's lead compound, CynviloqTM, a micellar diblock copolymeric paclitaxel formulation drug product.

In May 2015, the Company entered into an agreement with NantPharma, LLC ("NantPharma"), a NantWorks company, pursuant to which the Company sold to NantPharma all of its equity interests in IgDraSol, which continued to hold the rights to CynviloqTM. Pursuant to the agreement, NantPharma paid the Company an upfront fee of $90.1 million, of which $60.0 million was required to be used by the Company to fund two joint ventures, as described below.

In April 2015, the Company and NantCell, a subsidiary of NantWorks, a private company owned by Dr. Patrick Soon-Shiong, established a new entity called Immunotherapy NANTibody, LLC (“NANTibody”) as a stand-alone biotechnology company with $100.0 million initial joint funding. NantCell owns 60% of the equity interest of NANTibody and agreed to contribute $60.0 million to NANTibody. The Company owns 40% of NANTibody and in July 2015, the Company had NantPharma, contribute its portion of the initial joint funding of $40.0 million to NANTibody from the proceeds of the sale of IgDraSol. Additionally, the Company and NantCell were allowed to appoint three and two representatives, respectively, to NANTibody’s five-member Board of Directors. NANTibody will focus on accelerating the development of multiple immuno-oncology mAbs for the treatment of cancer, including but not limited to anti-PD-1, anti-PD-L1, anti-CTLA4mAbs, and other immune-check point antibodies as well as ADCs and bispecific antibodies.

NANTibody had been formed to advance pre-clinical and clinical immunology assets contributed by the Company and NantCell. The Company continues to hold 40% of the outstanding equity of NANTibody and NantCell holds the remaining

60%. Until July 2, 2017, NANTibody held approximately $100.0 million of cash and cash equivalents, and the Company recorded its investment in NANTibody at approximately $40.0 million. As an equity method investment, the Company's ratable portion of 40% of money expended for the development of intellectual property assets held by NANTibody would be reflected within income (loss) on equity method investments in its statement of operations. As a result of limited spending at NANTibody, the cash on hand at NANTibody remained at approximately at $100.0 million since the inception of the NANTibody joint venture until July 2, 2017. Further, the Company's equity method investment in NANTibody remained at approximately $40.0 million until July 2, 2017.

The financial statements of NANTibody are not received sufficiently timely for the Company to record its portion of earnings or loss in the current financial statements and therefore the Company reports its portion of earnings or loss on a quarter lag.

In February 2018, NANTibody notified the Company that on July 2, 2017, NANTibody acquired all of the outstanding equity of IgDraSol in exchange for $90.1 million in cash. NANTibody purchased IgDraSol from NantPharma, which is controlled by NantWorks, an entity with a controlling interest in NantCell and NantPharma.

Although the Company has had a designee serving on the Board of Directors of NANTibody since the formation of NANTibody in April 2015, and although the Company has held 40% of the outstanding equity of NANTibody since NANTibody’s formation, neither the Company nor its director designee was given any advance notice of NANTibody’s purchase of IgDraSol or of any board meeting or action to approve such purchase. As such, the Company's designee on NANTibody’s Board of Directors was not given an opportunity to consider or vote on the transaction as a director and the Company was not given an opportunity to consider or vote on the transaction in its position as a significant (40%) equity holder of NANTibody.

As a result of the July 2, 2017 purchase of IgDraSol, NANTibody’s cash and cash equivalents were reduced from $99.6 million as of June 30, 2017 to $9.5 million as of September 30, 2017, and NANTibody’s contributed capital was reduced from $100.0 million as of June 30, 2017 to $10.0 million as of September 30, 2017, to effect the transfer of IgDraSol from NantPharma to NANTibody. No additional information was provided to the Company to explain why NANTibody’s total assets as of September 30, 2017 were reduced by approximately $90.1 million. The Company requested, but did not receive, additional information from NANTibody for purposes of supporting the value of IgDraSol, including any information regarding clinical advancements in the entity since the sale of IgDraSol by the Company in May 2015.

Prior to the communication of the transfer of IgDraSol from NantPharma to NANTibody, the Company relied on the cash and cash equivalents of NANTibody for purposes of determining the value of its investment in NANTibody, which capital was expended by NANTibody to acquire IgDraSol on July 2, 2017. As a result of the transfer of IgDraSol, the Company reassessed the recoverability of its equity method investment in NANTibody as of July 2, 2017. In doing so, the Company considered the expected outcomes for the intellectual property assets held by NANTibody as of July 2, 2017. As a result of the lack of evidence of any development activity associated with any of the assets held in NANTibody, given the passage of time since the formation of the joint venture, many competitive products from other drug developers worldwide have advanced and/or commercialized for the targeted disease indications of the assets held in NANTibody, and given the Company's minority interest in NANTibody (the investee), the Company concluded that it does not have the ability to recover the carrying amount of the investment and an other-than-temporary decline in the value of the investment had occurred. Accordingly, an impairment was recorded to the Company's equity method investment in NANTibody for the three and nine months ended September 30, 2017. The fair value of the Company’s investment in NANTibody was measured at fair value on July 2, 2017 using significant unobservable inputs (Level 3) due to the determination of fair value requiring significant judgment, including the potential outcomes of the intellectual property assets held by NANTibody. For these reasons, fair value was determined by applying the Company's 40% equity interest in NANTibody to the remaining cash and cash equivalents, which resulted in an impairment of $36.0 million. The impairment resulted in a revised carrying value of the Company's investment in NANTibody of $3.7 million which approximates its ratable 40% ownership of the cash maintained by NANTibody expected to be used for future research and development. As of March 31, 2018, the carrying value of the Company's investment in NANTibody was approximately $3.5 million.

NANTibody recorded net loss of $484 thousand and $1.5 million for the three months ended December 31, 2017 and 2016, respectively. The Company recorded its portion of loss from NANTibody in loss on equity method investments on its condensed consolidated statement of operations for the three months ended March 31, 2018 and 2017. As of December 31, 2017, NANTibody had $9.8 million in current assets and $1.7 million in current liabilities and no noncurrent assets or noncurrent liabilities.

NantStem

In July 2015, the Company and NantBioScience, a wholly-owned subsidiary of NantWorks, established a new entity called NantCancerStemCell, LLC ("NantStem") as a stand-alone biotechnology company with $100.0 million initial joint funding. As initially organized, NantBioScience was obligated to make a $60.0 million cash contribution to NantStem for a 60% equity interest in NantStem, and the Company was obligated to make a $40.0 million cash contribution to NantStem for a 40% equity interest in NantStem. Fifty percent of these contributions were funded in July 2015 and the remaining amounts were to be made by no later than September 30, 2015. The Company had NantPharma contribute its portion of the initial joint funding of $20.0 million to NantStem from the proceeds of the sale of IgDraSol. Pursuant to a Side Letter dated October 13, 2015, the NantStem joint venture agreement was amended to relieve the Company of the obligation to contribute the second $20.0 million payment, and its ownership interest in NantStem was reduced to 20%. NantBioScience's funding obligations were unchanged. The Side Letter was negotiated at the same time the Company issued a call option on shares of NantKwest that it owned to Cambridge Equities, L.P. ("Cambridge"), a related party to NantBioScience.

In the fourth quarter of 2015, the Company determined it had an other-than-temporary decline in the value of NantStem and recognized a loss of $4.0 million in loss on equity method investments on its condensed consolidated statement of operations for the year ended December 31, 2015. There was no loss related to other-than-temporary impairment recognized for the equity investment for the year ended December 31, 2017 and the three months ended March 31, 2018.

The Company is accounting for its interest in NantStem as an equity method investment, due to the significant influence the Company has over the operations of NantStem through its board representation and 20% voting interest. The Company's investment in NantStem is reported in equity method investments on its condensed consolidated balance sheets and its share of NantStem's loss is recorded in loss on equity method investments on its condensed consolidated statement of operations. As of March 31, 2018, the carrying value of the Company's investment in NantStem was approximately $18.7 million. The difference between the Company's investment in NantStem and the Company's 20% interest in the net assets of Nantstem was approximately $2.1 million at March 31, 2018.

The financial statements of NantStem are not received sufficiently timely for the Company to record its portion of earnings or loss in the current financial statements and therefore the Company reports its portion of earnings or loss on a quarter lag.

NantStem recorded net income of $190 thousand and net loss of $455 thousand for the three months ended December 31, 2017 and 2016, respectively. The Company recorded its portion of loss from NantStem in loss on equity method investments on its condensed consolidated statement of operations for the three months ended March 31, 2018 and 2017. As of December 31, 2017, NantStem had $82.7 million in current assets and $90 thousand in current liabilities and no noncurrent assets or noncurrent liabilities.

Yuhan Agreement

In March 2016, the Company and Yuhan , a South Korea company, entered into an agreement to form a joint venture company called ImmuneOncia Therapeutics, LLC ("ImmuneOncia") to develop and commercialize a number of immune checkpoint antibodies against undisclosed targets for both hematological malignancies and solid tumors. Under the terms of the joint venture agreement, Yuhan contributed an initial investment of $10.0 million to ImmuneOncia, and the Company granted ImmuneOncia an exclusive license to one of its immune checkpoint antibodies for specified countries while retaining the rights for the U.S., European and Japanese markets, as well as global rights for ImmuneOncia to two additional antibodies that will be selected by ImmuneOncia from a group of pre-specified antibodies from the Company's immuno-oncology antibody portfolio. During October 2016, funding and operations of ImmuneOncia commenced. Yuhan owns 51% of ImmuneOncia, while the Company owns 49%.

The Company is accounting for its interest in ImmuneOncia as an equity method investment, due to the significant influence the Company has over the operations of ImmuneOncia through its board representation and 49% voting interest while not sharing joint control with Yuhan. The Company's investment in ImmuneOncia is reported in equity method investments on its condensed consolidated balance sheets and its share of ImmuneOncia's loss is recorded in loss on equity method investments on its condensed consolidated statement of operations. As of March 31, 2018, the carrying value of the Company's investment in ImmuneOncia was approximately $6.1 million. The difference between the Company's investment in ImmuneOncia and the Company's 49% interest in the net assets of ImmuneOncia was approximately $1.0 million at March 31, 2018.

ImmuneOncia recorded net loss of $1.6 million and $0.6 million for the three months ended March 31, 2018 and 2017, respectively. The Company recorded its portion (49% equity interest) of loss from ImmuneOncia in loss on equity method investments on its condensed consolidated statement of operations for the three months ended March 31, 2018 and 2017. As of March 31, 2018, ImmuneOncia had $6.3 million in current assets, $270 thousand in current liabilities, $8.5 million in noncurrent assets, and $33 thousand noncurrent liabilities.

In April 2016, Yuhan purchased $10.0 million of shares of common stock, and warrants as part of the Company's private placement offering.

Shanghai Three

On March 7, 2016, TNK agreed to issue to SiniWest Holdings, Inc. ("SiniWest Holdings") $4.0 million in shares of TNK Class A Stock, subject to certain circumstances, to be issued upon a financing resulting in gross proceeds (individually or in the aggregate) to TNK of at least $10.0 million and a $1.0 million upfront cash payment in exchange for SiniWest Holdings transferring certain assets to TNK, including SiniWest Holdings' 25% interest in Shanghai Three, a China based company. The Company is accounting for its interest in Shanghai Three as an equity method investment, due to the significant influence the Company has over the operations of Shanghai Three through its 25% voting interest. The Company's investment in Shanghai Three is reported in equity method investments on the condensed consolidated balance sheets and its share of Shanghai Three's income or loss is recorded in income (loss) on equity method investments on the condensed consolidated statement of operations. As of each of March 31, 2018, the carrying value of the Company's investment in Shanghai Three was approximately $3.8 million.

The financial statements of Shanghai Three are not received sufficiently timely for the Company to record its portion of earnings or loss in the current financial statements and therefore the Company reports its portion of earnings or loss on a quarter lag.

Shanghai Three incurred no operating expenses or net loss for the three months ended March 31, 2018 and 2017. As of March 31, 2018, Shanghai Three had $0.4 million in current assets, $2.9 million in current liabilities, $5.5 million in noncurrent assets, and $5.1 million in noncurrent liabilities.

3SBio Term Sheet

In June 2016, the Company and TNK entered into a joint venture agreement with Shenyang Sunshine Pharmaceutical Company Ltd ("3SBio"), a China based company, to develop and commercialize proprietary immunotherapies, including those developed from, including or using TNK's "CAR-T" technology targeting carcinoembryonic antigen ("CEA") positive cancers. Due diligence and negotiations between 3SBio and the Company for the definitive agreement(s) are currently ongoing.

Under the terms of the agreement 3SBio will contribute an initial investment of $10.0 million to the joint venture and TNK will grant the joint venture an exclusive license to the CEA CAR-T technology and two additional CARs for cellular therapy for the Greater China market, including Mainland China, Hong Kong and Macau. 3SBio will own 51% of the joint venture while TNK will own 49%. As of March 31, 2018, funding and operations of the joint venture had not yet begun, as a result no investment has been recorded as of March 31, 2018.

In June 2016, 3SBio purchased $10.0 million of shares of common stock and warrants as part of the Company's private placement offering.

Fair Value of Equity Method Investment

The Company periodically evaluates the carrying value of its equity method investments, when events and circumstances indicate that the carrying amount of an asset may not be recovered. The Company determines the fair value of its equity method investments to evaluate whether impairment losses shall be recorded using Level 3 inputs. These investments include the Company's holdings in privately held biotechnology companies that are not exchange traded and therefore not supported with observable market prices. However, these investments are valued by reference to their net asset values that can be market supported and unobservable inputs including future cash flows.

10. Goodwill and Intangible Assets

At March 31, 2018 and December 31, 2017, the Company had recorded goodwill of $38.3 million. The Company performed a qualitative test for goodwill impairment as of December 31, 2017. Based upon the results of the qualitative testing the Company concluded that it is more-likely-than-not that the fair values of the Company's goodwill was in excess of its carrying value and therefore performing the first step of the two-step impairment test was unnecessary. No goodwill impairment was recognized for the three months ended March 31, 2018 and 2017. A summary of the Company's goodwill as of March 31, 2018 is as follows (in thousands):

		Total
Balance at December 31, 2017	$	38,298
Goodwill Acquired from Acquisitions		—
Balance at March 31, 2018	$	38,298

The Company's intangible assets, excluding goodwill, include acquired license and patent rights, core technologies, customer relationships and acquired in-process research and development. Amortization for the intangible assets that have finite useful lives is generally recorded on a straight-line basis over their useful lives. A summary of the Company's identifiable intangible assets as of March 31, 2018 and December 31, 2017 is as follows (in thousands):

	March 31, 2018					
	Gross Carrying Amount		Accumulated Amortization		Intangibles, net	
Customer relationships	$	1,585	$	1,164	$	421
Acquired technology		3,410		753		2,657
Acquired in-process research and development		37,660		—		37,660
Patent rights		32,720		3,106		29,614
Total intangible assets	$	75,375	$	5,023	$	70,352

	December 31, 2017					
	Gross Carrying Amount		Accumulated Amortization		Intangibles, net	
Customer relationships	$	1,585	$	1,091	$	494
Acquired technology		3,410		709		2,701
Acquired in-process research and development		37,660		—		37,660
Patent rights		32,720		2,562		30,158
Total intangible assets	$	75,375	$	4,362	$	71,013

As of March 31, 2018, the remaining weighted average life for identifiable intangible assets is 15 years.

Patent rights are stated at cost and amortized on a straight-line basis over the estimated useful lives of the assets, determined to be approximately fifteen years or nineteen years from the date of transfer of the rights to the Company. Amortization expense for the three months ended March 31, 2018 and 2017 was $545 thousand and $511 thousand, respectively, which has been included in intangible amortization on the condensed consolidated statement of operations.

Acquired technology is stated at cost and depreciated on a straight-line basis over the estimated useful lives of the assets, determined to be approximately 19 years from the date of acquisition of the technology in December 2013. Amortization expense for the three months ended March 31, 2018 and 2017 was $44 thousand and $44 thousand, respectively, which has been included in intangibles amortization on the condensed consolidated statement of operations.

Customer relationships are stated at cost and depreciated on a straight-line basis over the estimated useful lives of the assets, determined to be approximately five years from the date of acquisition. Amortization expense for the three months ended March 31, 2018 and 2017, was $73 thousand and $72 thousand, respectively, which has been included in intangibles amortization.

Acquired in-process research and development is stated at cost and may be immediately expensed if there is no alternative future use. Otherwise, the acquired in-process research and development is reviewed annually for impairment or more frequently as changes in circumstance or the occurrence of events suggest that the remaining value may not be recoverable.

Estimated future amortization expense related to intangible assets at March 31, 2018 is as follows (in thousands):

Years Ending December 31,		Amount
2018	$	2,342
2019		3,845
2020		3,845
2021		5,040
2022		5,040
Thereafter		50,240
Total	$	70,352

11. Significant Agreements and Contracts

License Agreement with Mabtech Limited

In August 2015, the Company entered into an exclusive licensing agreement to develop and commercialize multiple prespecified biosimilar and biobetter antibodies from Mabtech Limited. Under the terms of the agreement, the Company will develop and market four mAbs for the North American, European and Japanese markets. The Company made an initial license payment of $10.0 million and in February 2016, paid an additional $10.0 million license payment, both of which were recognized as acquired in-process research and development expense in the condensed consolidated statements of operations as the Company determined there was no alternative future use for the license.

In June 2016, the Company agreed to accelerate and pay a $30.0 million milestone license payment which has been recognized as acquired in-process research and development expense in the condensed consolidated statements of operations, in exchange for the purchase by Mabtech Limited in June 2016, of $10.0 million of shares of common stock and warrants.

In December 2017, the Company agreed to accelerate and, as a result, paid a $25.0 million milestone license payment, which has been recognized as acquired in-process research and development expense in the consolidated statements of operations for the year ended December 31, 2017. The amended agreement includes additional milestone payments totaling $125.0 million payable following the completion of the technology transfer from Mabtech Limited and for payables to extend the license agreement. The remaining anniversary payments are due on December 31, 2018 and 2019. The Company is not obligated to extend the license agreement. Accordingly, the additional future milestone payments have not yet been accrued as of March 31, 2018.

Immunotherapy Research Collaboration Agreement with Roger Williams Medical Center

In April 2016, the Company entered into an immunotherapy research collaboration agreement with RWMC to provide certain clinical trial, research and manufacturing services. Under the terms of the agreement, RWMC will perform pre-clinical and clinical research related to the development and delivery of CAR-T immunotherapies. In exchange, the Company granted RWMC $6.0 million in shares of TNK Class A Stock, subject to adjustment in certain circumstances, to be issued upon a financing resulting in gross proceeds (individually or in the aggregate) to TNK of at least $20.0 million. The Company determined the fair value of this obligation was $3.4 million as of the April of 2016 agreement effective date, and the amount was recognized as prepaid expense and other and acquisition consideration payable in the condensed consolidated balance sheet. The Company will recognize the upfront payment over the expected performance period of five years. During each of the quarters ended March 31, 2018 and 2017, the Company recognized approximately $170 thousand in pre-clinical research and development expense pursuant to the agreement.

License Agreement with NantCell

In April 2015, the Company and NantCell entered into a license agreement. Under the terms of the agreement the Company granted an exclusive license to NantCell covering patent rights, know-how, and materials related to certain antibodies, ADCs and two CAR-TNK products. NantCell agreed to pay a royalty not to exceed five percent (5%) to the Company on any net sales of products (as defined) from the assets licensed by the Company to NantCell. In addition to the future royalties payable under this agreement, NantCell paid an upfront payment of $10.0 million to the Company and issued 10 million shares of NantCell common stock to the Company valued at $100.0 million based on a recent equity sale of NantCell common stock to a third party. As of March 31, 2018, the Company had not yet provided all of the items noted in the agreement, including research services for and on behalf of NantCell, and therefore has recorded the entire upfront payment and value of the equity interest received as deferred revenue. Specifically, only a portion of the materials associated with the licensed assets have been delivered while the majority of the licensed assets remain undelivered and the related research activities are still to be performed. The Company will recognize the upfront payment and the value of the equity interest received over the period beginning with the commencement of the last item delivered. The Company's ownership interest in NantCell does not provide the Company with control or the ability to exercise significant influence; therefore the $100.0 million investment is carried at cost in the condensed consolidated balance sheets and evaluated for other-than-temporary impairment on a quarterly basis.

License Agreement with The Scripps Research Institute

In January 2010, the Company entered into a license agreement (the "TSRI License") with The Scripps Research Institute ("TSRI"). Under the TSRI License, TSRI granted the Company an exclusive, worldwide license to certain TSRI patent rights and materials based on quorum sensing for the prevention and treatment of Staphylococcus aureus ("*S. aureus*" or "Staph") infections, including Methicillin-resistant Staph. In consideration for the license, the Company: (i) issued TSRI a warrant for the purchase of common stock, (ii) agreed to pay TSRI a certain annual royalty commencing in the first year after certain patent filing milestones are achieved and (iii) agreed to pay a royalty on any sales of licensed products by the Company or its affiliates and a royalty for any revenues generated by the Company through its sublicense of patent rights and materials licensed from TSRI under the TSRI License. The TSRI License requires the Company to indemnify TSRI for certain breaches of the agreement and other matters customary for license agreements. The parties may terminate the TSRI License at any time by mutual agreement. In addition, the Company may terminate the TSRI License by giving 60 days' notice to TSRI and TSRI may terminate the TSRI License immediately in the event of certain breaches of the agreement by the Company or upon the Company's failure to undertake certain activities in furtherance of commercial development goals. Unless terminated earlier by either or both parties, the term of the TSRI License will continue until the final expiration of all claims covered by the patent rights licensed under the agreement. For the quarters ended March 31, 2018 and 2017, the Company recorded $0 and $27 thousand in patent prosecution and maintenance costs associated with the TSRI License, respectively. All such costs have been included in general and administrative expenses.

NIH Grants

In June 2014, the NIAID awarded the Company a Phase II Small Business Technology Transfer ("STTR") grant (the "Staph Grant III Award") to support the advanced preclinical development of human bispecific antibody therapeutics to prevent and treat Staph infections, including methicillin-resistant *S. aureus* ("MRSA"). The project period for the Staph Grant III Award covered a two-year period which commenced in June 2014, which was subsequently extended by one year, with total funds available of approximately $1.0 million per year for up to two years. The Staph Grant III Award was not extended beyond June 30, 2017 and the remaining amounts for the award have been recorded as of March 31, 2018. During each of the quarters ended March 31, 2018 and 2017, the Company recorded $0 and $101 thousand of revenue associated with the Staph Grant III Award, respectively.

12. Loan and Security Agreement and Convertible Notes

Loan and Security Agreement with Hercules Capital, Inc.

On November 23, 2016, the Company and certain of its domestic subsidiaries (together with the Company, the "Borrowers") entered into a Loan and Security Agreement (the "Loan Agreement") with Hercules Capital, Inc. ("Hercules"), as a lender and agent for several banks and other financial institutions or entities from time to time party to the Loan Agreement (collectively, the "Lenders") for a term loan of up to $75.0 million, subject to funding in multiple tranches (the "Term Loan"). The Term Loan will mature on December 1, 2020. The proceeds of the Term Loan will be used for general corporate purposes and coincided with the repayment of the outstanding debt financing arrangement with Oxford Finance LLC and Silicon Valley Bank.

The first tranche of $50.0 million was funded upon execution of the Loan Agreement on November 23, 2016. Under the terms of the Loan Agreement, the Borrowers may, but are not obligated to, request additional funds of up to $25.0 million which are available until June 30, 2018, subject to approval by Hercules' Investment Committee. Pursuant to the terms of the third amendment to the Loan Agreement entered into on March 15, 2017, the Company paid Hercules $1.5 million for a portion of the backend fee. Pursuant to the terms of the fourth amendment to the Loan Agreement entered into on March 23, 2017 (the "Fourth Amendment"), the Company repaid Hercules, without repayment penalty, $20.0 million of the outstanding principal and unpaid interest accrued thereon on March 23, 2017. The Fourth Amendment also provided for the following: (1) Hercules reduced the minimum amount of unrestricted cash that the Company must maintain under the Loan Agreement, and (2) the parties agreed to change the date by which the Company must achieve a fundraising milestone.

The Loan Agreement contains customary affirmative and restrictive covenants and representations and warranties, including financial reporting obligations and significant limitations on dividends, indebtedness, liens (including a negative pledge on intellectual property and other assets), collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, deposit accounts, and subsidiaries. Additionally, the Loan Agreement contains covenants requiring the Borrowers (i) to achieve certain fundraising requirements by certain dates and (ii) to maintain $20.0 million of unrestricted cash prior to achieving its corporate and fundraising milestones. The Company's public offering for net proceeds of $43.1 million satisfied the fundraising requirements and fundraising milestone.

Pursuant to the terms of the seventh amendment to the Loan Agreement entered into on November 6, 2017 (the "Seventh Amendment"), (i) the Company repaid Hercules, without repayment penalty, $10.0 million of the outstanding principal and unpaid interest accrued thereon on November 6, 2017, and (ii) Hercules agreed to reduce the minimum amount of unrestricted cash that the Company must maintain under the Loan Agreement from $20.0 million to $8.0 million.

On December 21, 2017, the Company paid off all obligations owing under, and terminated, the Loan Agreement. The secured interests were terminated in connection with the Company's discharge of indebtedness thereunder.

In connection with the Loan Agreement, the Company issued Hercules a warrant, dated November 23, 2016 (the "Hercules Warrant"), to purchase up to 460,123 shares of common stock, at an initial exercise price of $4.89, subject to adjustment as provided in the Hercules Warrant. The Hercules Warrant is initially exercisable for 306,748 shares of common stock, and may automatically become exercisable for additional shares of common stock on such dates (if any) based upon the funding amounts of any additional tranches of the Term Loan that may be extended to the Borrowers. The Hercules Warrant will terminate, if not earlier exercised, on the earlier of November 23, 2023 and the closing of certain merger or other transactions in which the consideration is cash, stock of a publicly-traded acquirer or a combination thereof.

In connection with the extinguishment of the Loan Agreement on December 21, 2017, a loss of $4.3 million on the extinguishment of debt was recorded representing the difference between the reacquisition price of debt and the net carrying amount of the loan as of December 21, 2017.

2018 Chinese Yuan ("RMB") Loan

In March 2018, the Company entered into a term loan in the aggregate principal amount of RMB 10.0 million with the Bank of China and the Agricultural Bank of China, which is guaranteed by Levena Suzhou Biopharma, Co. Ltd. This one year bank facility was used for working capital purposes. The outstanding balance is repayable from February 2018 to March 2019. The interest rate on this loan is 5%.

Securities Purchase Agreement in Private Placement

On December 11, 2017, the Company entered into the Securities Purchase Agreement with the Purchasers. Pursuant to the Securities Purchase Agreement, on December 21, 2017, the Company issued and sold to the Purchasers, in the Private

Placement, (1) the Notes, which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the Maturity Date, and (2) the Warrants to purchase an aggregate of 12,121,210 shares of common stock.

At any time and from time to time before the Maturity Date, each Purchaser shall have the option to convert any portion of the outstanding principal amount of such Purchaser's Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such Purchaser's Note into shares of common stock at a price per share of $2.26875, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with the year ending December 31, 2018. If a Purchaser elects to convert any of the principal amount of their Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type.

Each Warrant has an exercise price of $2.61 per share, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions, will become exercisable on June 20, 2018, has a term of five and a half years and is exercisable on a cash basis, unless there is not an effective registration statement covering the resale of the shares issuable upon exercise of the Warrants, in which case the Warrants shall also be exercisable on a cashless exercise basis.

See Note 3 for discussion of the Company's policies for accounting for debt with detachable warrants. In connection with the issuance of the Notes and Warrants, the Company recorded a debt discount of approximately $44.8 million based on an allocation of proceeds to the Warrants of approximately $12.7 million and a beneficial conversion feature of approximately $32.1 million, before issuance costs. The Company accounts for the debt at amortized cost and amortizes the debt discount to interest expense using the effective interest method over the expected term of the Notes.

The fair value of the Notes was estimated using a valuation model with Level 2 inputs including the stock price volatility, risk-free interest rate, and debt yield. As of March 31, 2018, the estimated fair value of the Notes was approximately $114.4 million, compared to the carrying value of $5.5 million, as a result of unamortized debt discount. A substantial portion of the market value of the Company's debt in excess of the outstanding principal amount relates to the conversion premium on the Notes.

Convertible debt and unamortized discount balances are as follows (in thousands):

Face value of loan	$	50,000
Debt discount - warrant		(12,669)
Debt discount - beneficial conversion feature		(32,062)
Capitalized debt issuance costs		(84)
Accretion of debt issuance costs and other		1
Accretion of debt discount		315
Balance at March 31, 2018		5,501

Future minimum payments under the amended and restated loan and security agreement are as follows (in thousands):

Years Ending December 31,		
2018		2,366
2019		2,500
2020		2,500
2021		2,500
2022		2,500
2023		50,134
Total future minimum payments		62,500
Unpaid interest		(12,500)
Unamortized debt discount		(44,415)
Unamortized capitalized debt issuance costs		(84)
Total minimum payment		5,501
Current portion		—
Long-term debt	$	5,501

13. Stock Incentive Plans

2009 Non-Employee Director Grants

In September 2009, prior to the adoption of the 2009 Stock Incentive Plan, the Company's Board of Directors approved the reservation and issuance of 8,000 non-statutory stock options to the Company's non-employee directors. The options vested on the one year anniversary of the vesting commencement date in October 2010, and are exercisable for up to ten years from the grant date. No further shares may be granted under this plan and, as of March 31, 2018, 3,200 options with a weighted-average exercise price of $1.12 were outstanding.

2009 Stock Incentive Plan

In October 2009, the Company's stockholders approved the 2009 Stock Incentive Plan. In July 2017, the Company's stockholders approved, among other items, the amendment and restatement of the 2009 Stock Incentive Plan (as amended and restated, the "Stock Plan") to increase the number of shares of the Company's common stock authorized to be issued pursuant to the Stock Plan to 11,260,000. Such shares of the Company's common stock are reserved for issuance to employees, non-employee directors and consultants of the Company. The Stock Plan provides for the grant of incentive stock options, non-incentive stock options, stock appreciation rights, restricted stock awards, unrestricted stock awards, restricted stock unit awards and performance awards to eligible recipients. Recipients of stock options shall be eligible to purchase shares of the Company's common stock at an exercise price equal to no less than the estimated fair market value of such stock on the date of grant. The maximum term of options granted under the Stock Plan is ten years. Employee option grants generally vest 25% on the first anniversary of the original vesting commencement date, with the balance vesting monthly over the remaining three years. The vesting schedules for grants to non-employee directors and consultants will be determined by the Company's Compensation Committee. Stock options are generally not exercisable prior to the applicable vesting date, unless otherwise accelerated under the terms of the applicable stock plan agreement.

The following table summarizes stock option activity as of March 31, 2018 and the changes for the period then ended (dollar values in thousands):

	Options Outstanding	Weighted-Average Exercise Price	Aggregate Intrinsic Value
Outstanding at December 31, 2017	6,343,400	$ 4.74	$ 6,290
Options Granted	816,200	$ 5.15	
Options Canceled	212,160	$ 4.92	
Options Exercised	24,090	$ 5.03	
Outstanding at March 31, 2018	7,395,850	$ 5.14	$ 617

The aggregate intrinsic value of options exercised during each of the three months ended March 31, 2018 and 2017 was $0. The Company uses the Black-Scholes valuation model to calculate the fair value of stock options. The fair value of employee stock options was estimated at the grant date using the following assumptions:

	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
Weighted-average grant date fair value	$ 7.25	$ 5.20
Dividend yield	—%	—%
Volatility	81%	64%
Risk-free interest rate	2.49%	2.16%
Expected life of options	6.1 years	6.1 years

The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. Due to the Company's limited historical data, the estimated volatility incorporates the historical and implied volatility of comparable companies whose share prices are publicly available. The risk-free interest rate assumption was based on the U.S. Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The weighted average expected life of options was estimated using the average of the contractual term and the weighted average vesting term of the options.

The total employee and director stock-based compensation recorded as operating expenses was $1.3 million and $1.2 million for the three months ended March 31, 2018 and 2017, respectively.

The total unrecognized compensation cost related to unvested employee and director stock option grants as of March 31, 2018 was $8.4 million and the weighted average period over which these grants are expected to vest is 3.0 years.

The Company records equity instruments issued to non-employees as expense at their fair value over the related service period as determined in accordance with the authoritative guidance and periodically revalues the equity instruments as they vest. Stock-based compensation expense related to non-employee consultants recorded as operating expenses was $74 thousand and $28 thousand for the three months ended March 31, 2018 and 2017, respectively.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance consists of the following at March 31, 2018:

Common stock warrants outstanding under the underwriters agreement	182,600
Common stock warrants outstanding under the loan and security agreement	65,892
Common stock warrants outstanding under the Hercules securities agreement	306,748
Common stock warrants outstanding under the convertible notes	12,121,210
Common stock warrants outstanding under private placements	4,153,620
Common stock options outstanding under the Non-Employee Director Plan	3,200
Authorized for future grant or issuance under the 2009 Stock Incentive Plan	10,758,006
Issuable under Virttu acquisition agreement	3,603,604
Issuable under assignment agreement based upon achievement of certain milestones	80,000
	31,274,880

2017 Equity Incentive Plan

In June 2017, the Company's subsidiary, Scilex, adopted the Scilex 2017 Equity Incentive Plan, reserved 4.0 million shares of Scilex common stock and awarded 1.0 million options to certain Company personnel, directors and consultants under such plan. Stock options granted under this plan typically vest 1/4th of the shares on the first anniversary of the vesting commencement date and 1/48th of the remaining options vest each month thereafter. As of March 31, 2018, 0.8 million options were outstanding.

2015 Stock Option Plans

In May 2015, the Company's subsidiary, TNK, adopted the TNK 2015 Stock Option Plan, reserved 10.0 million shares of TNK class A common stock and awarded 3.6 million options to certain Company personnel, directors and consultants under such plan. In November 2015, TNK awarded 0.5 million options to certain Company personnel. Stock options granted under this plan typically vest a portion immediately upon grant and the remaining options over two to four years or monthly over four years from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 1.0 million shares were canceled. As of March 31, 2018, 1.2 million options were outstanding.

In May 2015, TNK granted a warrant to the Company's CEO to purchase 9.5 million shares of TNK class B common stock, which have 10 to 1 voting rights. Warrant shares totaling 4.0 million were exercisable evenly over forty months and the remaining warrant shares were exercisable if certain defined events occur within four years from date of issuance at an initial exercise price of $0.01 per share. This warrant was canceled in its entirety effective August 29, 2017.

In May 2015, the Company's subsidiary, LA Cell, adopted the LA Cell 2015 Stock Option Plan reserved 10.0 million shares of LA Cell class A common stock and awarded 2.9 million options to certain Company personnel, directors and consultants under such plan. Stock options granted under this plan typically vest a portion immediately upon grant and the remaining options over two to four years or monthly over four years from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 1.5 million shares were cancelled. As of March 31, 2018, 0.5 million options were outstanding.

In May 2015, LA Cell granted a warrant to the Company's CEO to purchase 9.5 million shares of LA Cell class B common stock, which have 10 to 1 voting rights. Warrant shares totaling 4.0 million were exercisable evenly over forty months and the remaining warrant shares were exercisable if certain defined events occur within four years from date of issuance at an initial exercise price of $0.01 per share. This warrant was canceled in its entirety effective August 29, 2017.

In October 2015, the Company's subsidiary, Concortis Biosystems, Corp. ("CBC"), adopted the CBC 2015 Stock Option Plan and reserved 10.0 million shares of CBC class A common stock and awarded 1.8 million options to certain Company personnel, directors and consultants under such plan. Stock options granted under this plan typically vest a portion immediately upon grant and the remaining options over two to four years or monthly over four years from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 1.6 million shares were cancelled. As of March 31, 2018, 0.1 million options were outstanding.

In October 2015, CBC granted a warrant to the Company's CEO to purchase 9.5 million shares of CBC class B common stock, which have 10 to 1 voting rights. Warrant shares totaling 4.0 million were exercisable evenly over forty months and the remaining warrant shares were exercisable if certain defined events occur within four years from date of issuance at an initial exercise price of $0.25 per share. This warrant was canceled in its entirety effective August 29, 2017.

In October 2015, the Company's subsidiary, Scintilla, adopted the Scintilla 2015 Stock Option Plan, reserved 10.0 million shares of Scintilla class A common stock and awarded 2.1 million options to certain Company personnel, directors and consultants under such plan. Stock options granted under this plan typically vest a portion immediately upon grant and the remaining options over two to four years or monthly over four years from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 0.8 million shares were canceled. As of March 31, 2018, 0.1 million options were outstanding.

In October 2015, Scintilla granted a warrant to the Company's CEO to purchase 9.5 million shares of Scintilla class B common stock, which have 10 to 1 voting rights. Warrant shares totaling 4.0 million were exercisable evenly over forty months and the remaining warrant shares were exercisable if certain defined events occur within four years from date of issuance at an initial exercise price of $0.01 per share. This warrant was canceled in its entirety effective August 29, 2017.

In October 2015, the Company's subsidiary, Sorrento Biologics, Inc. ("Biologics"), adopted the Biologics 2015 Stock Option Plan, reserved 10.0 million shares of Biologics class A common stock and awarded 2.6 million options to certain Company personnel, directors and consultants under such plan. Stock options granted under this plan typically vest a portion immediately upon grant and the remaining options over two to four years or monthly over four years from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 1.3 million shares were cancelled. As of March 31, 2018, 75 thousand options were outstanding.

In October 2015, Biologics granted a warrant to the Company's CEO to purchase 9.5 million shares of Biologics class B common stock which have 10 to 1 voting rights. Warrant shares totaling 4.0 million were exercisable evenly over forty months and the remaining warrant shares were exercisable if certain defined events occur within four years from date of issuance at an initial exercise price of $0.01 per share. This warrant was canceled in its entirety effective August 29, 2017.

On August 29, 2017, the options and warrants were canceled in accordance with the terms of a settlement agreement with Wildcat Liquid Alpha, LLC and, as a result, unrecognized compensation expense of $281 thousand associated with these previously issued shares was accelerated and recognized upon cancellation.

The total director stock-based compensation recorded as operating expenses by the Company for TNK, LA Cell, CBC, Scintilla and Biologics for the three months ended March 31, 2018 and 2017 was $285 thousand and $42 thousand, respectively. No unrecognized stock-based compensation expense related to unvested director stock option and warrant grants remained for these entities as of March 31, 2018. The Company records equity instruments issued to non-employees as expense at their fair value over the related service period as determined in accordance with the authoritative guidance and periodically revalues the equity instruments as they vest. Stock based compensation expense related to non-employee consultants recorded as operating expenses by the Company for TNK, LA Cell, CBC, Scintilla and Biologics was $48 thousand and $48 thousand for the three months ended March 31, 2018 and 2017, respectively.

The weighted-average assumptions used in the Black-Scholes option and warrant pricing model used by TNK, LA Cell, CBC, Scintilla and Biologics to determine the fair value of stock option grants for directors and non-employee consultants for the three months ended March 31, 2018 were as follows: expected dividend yield – 0%, risk-free interest rate –2.42% to 2.48%, expected volatility – 65% to 77%, and expected term of 4.0 to 6.1 years.

2014 Stock Option Plan

In May 2014, the Company's subsidiary, Ark Animal Health, Inc. ("Ark"), adopted the Ark 2014 Stock Option Plan and reserved and awarded 600,000 options to certain directors and consultants under such plan. Stock options granted under such plan typically vest a portion immediately upon grant and the remaining options over one year from the grant date and have a contractual term of ten years. Effective August 29, 2017, options to purchase an aggregate of 135,000 shares were canceled. As of March 31, 2018, 88,000 options were outstanding.

The total director and consultant stock-based compensation recorded as operating expenses by the Company for Ark for each of the three months ended March 31, 2018 and 2017 was $0 for each of the three months ended March 31, 2018 and 2017. No unrecognized stock-based compensation expense remains related to stock option grants as of March 31, 2018.

14. Commitments and Contingencies

Litigation

In the normal course of business, the Company may be named as a defendant in one or more lawsuits. The Company is not a party to any outstanding material litigation and management is currently not aware of any legal proceedings that, individually or in the aggregate, are deemed to be material to the Company's financial condition or results of operations.

Derivative Action Litigation

On September 8, 2016, Yvonne Williams filed an action both derivatively and on behalf of a purported class of stockholders in the Court of Chancery of the State of Delaware (the "Court") against each of the members of the Henry Ji, William S. Marth, Kim D. Janda, Jaisim Shah, David H. Deming, and Douglas Ebersole (the "Prior Board"); George Ng, the Company's Executive Vice President, Chief Administrative Officer, and Chief Legal Officer; Jeffrey Su, the Company's Executive Vice President & Chief Operating Officer; and the Company as nominal defendant, alleging: (1) breach of fiduciary duty with respect to the formation of, and certain options and warrants issued by, certain of the Company's subsidiaries to Dr. Ji and members of the Prior Board; (2) breach of fiduciary duty with respect to the Company's prior announcement that it had entered into a voting agreement with Yuhan Corporation in connection with a transaction through which it purchased $10 million of shares of the Company's common stock and warrants (the "Williams Action"). On November 14, 2016, the Company filed motions to dismiss or in the alternative stay the Williams Action. George Ng and Jeffrey Su were dismissed as defendants by plaintiff during the briefing on the motions. The Court denied the motions on June 28, 2017.

On October 25, 2017, Yvonne Williams filed a Supplemental and Amended Class Action and Derivative Complaint which re-added George Ng as a defendant, added Eragon Ventures, LLC as a defendant, and added certain claims challenging transactions whereby Eragon Ventures, LLC agreed to purchase certain stock in the Company's subsidiary, LA Cell, Inc. Following a mediation held on November 16, 2017, the parties agreed that day to a term sheet reflecting a settlement of the Williams Action, which agreement was memorialized in a Stipulation and Agreement of Settlement executed on December 22, 2017 and filed with the Court. The settlement and plaintiff's counsel's request for an award of attorneys' fees in the amount of $5 million have been submitted to the Court for approval. The Court has set a hearing on the request for approval of the settlement for May 15, 2018 and the Company has caused notice to be provided concerning the settlement and settlement hearing. Objections to the settlement or the requested award of attorneys' fees were due no later than March 5, 2018. The Company initially objected to the amount of fees being requested by plaintiff's counsel. The parties thereafter agreed that plaintiff's counsel could seek attorneys' fees of up to $3.25 million, to which the Company and defendants would not object. As a result, the Company has estimated a range of possible loss to be from approximately $1.0 million to $3.25 million and has recorded its best estimate of the potential liability associated with the legal proceeding which the Company expects to be covered in large part but not in whole by insurance.

If the Court approves the settlement, this case will be dismissed with prejudice. The settlement consists of non-monetary consideration, such as the cancellation of certain subsidiary shares of stock that were obtained by defendants pursuant to options previously exercised by defendants. Accordingly, the Company does not anticipate any monetary loss with respect to the Williams Action other than for potential payment of the amount of fees and costs that may be awarded to plaintiff's counsel by the Court as described above.

Immunomedics Litigation

On June 26, 2015, Immunomedics, Inc. ("Immunomedics") filed a complaint in the United States District Court for the District of New Jersey (the "Immunomedics Action") against the Board of Directors of RWMC, Dr. Richard P. Junghans, Dr. Steven C. Katz, the Office of the Board of Advisors of Tufts University School of Medicine, and one or more individuals or entities to be identified later. This complaint (the "Initial Complaint") alleged, among other things: (1) breach of contract; (2) breach of covenant of good faith and fair dealing; (3) tortious interference with prospective economic gain; (4) tortious interference with contracts; (5) misappropriation; (6) conversion; (7) bailment; (8) negligence; (9) vicarious liability; and (10) patent infringement. Overall, the allegations in the Initial Complaint were generally directed to an alleged material transfer agreement dated December 2008 and Immunomedics' alleged request for the return of certain alleged research material, as well as the alleged improper use and conversion of such research materials outside the scope of the material transfer agreement.

On October 22, 2015, Immunomedics filed an amended complaint (the “First Amended Complaint”), which, among other things, no longer named the Board of Directors of RWMC and The Office of the Board of Advisors of Tufts University School of Medicine as defendants. RWMC and Tufts Medical Center were added as new defendants. On January 14, 2016, Immunomedics filed a second amended complaint (the "Second Amended Complaint"), which, among other things, no longer named Tufts Medical Center as a defendant. In addition, the Second Amended Complaint contained allegations directed to two additional alleged material transfer agreements dated September 1993 and May 2010, respectively, and also added an allegation of unjust enrichment. The Second Amended Complaint also no longer asserted claims for (1) breach of covenant of good faith and fair dealing; (2) misappropriation; (3) bailment; (4) negligence; and (5) vicarious liability.

On October 12, 2016, Immunomedics filed a third amended complaint (the “Third Amended Complaint”), which added the Company, TNK, BDL and CARgenix as defendants. TNK is a subsidiary of the Company and purchased BDL and CARgenix in August 2015. The Third Amended Complaint includes, among other things, allegations against the Company, TNK, BDL and CARgenix regarding (1) conversion; (2) tortious interference; and (3) unjust enrichment. On December 2, 2016, the Company, TNK, BDL, and CARgenix filed a motion to dismiss Immunomedics’s complaint against them for lack of personal jurisdiction. On January 25, 2017, the District of New Jersey granted this motion, and the Company, TNK, BDL and CARgenix were dismissed as defendants from the case. Although dismissed from the case, under various agreements, TNK has certain indemnification obligations to RWMC, Dr. Richard P. Junghans and Dr. Steven C. Katz that may be implicated by the case. The Immunomedics Action remains pending in the District of New Jersey against defendants RWMC, Dr. Junghans, and Dr. Katz. A trial date has not yet been set.

In addition, on April 27, 2018, Immunomedics filed suit against the Company and TNK in San Diego Superior Court (the “Immunomedics San Diego Action”). The complaint alleges, among other things: (1) conversion; (2) intentional interference with contracts; (3) intentional interference with prospective economic advantage; (4) negligent interference with prospective economic advantage; and (5) inducing breach of contract. The complaint has not yet been served on the Company or TNK, and no trial date has yet been set.

The Company believes that the Immunomedics Action and the Immunomedics San Diego Action are without merit, and will vigorously defend itself against these actions and any further actions. However, should Immunomedics prevail against the Company, RWMC or other defendants, certain patent rights optioned, owned and/or licensed by the Company could be at risk of invalidity or enforceability, or the litigation could otherwise adversely impact the Company’s ownership or other rights in certain intellectual property. At this point in time, the Company is unable to determine whether any loss will occur with respect to the Immunomedics Action or the Immunomedics San Diego Action to estimate the range of such potential loss; therefore, no amount of loss has been accrued by the Company as of the date of filing of this Quarterly Report on Form 10-Q.

Operating Leases

The Company currently leases in San Diego, California approximately 130,575 square feet of corporate office and laboratory space, approximately 6,350 square feet of laboratory and office space at a second location and approximately 1,405 square feet of office space at a third location as well as approximately 36,400 square feet for offices, facilities for cGMP fill and finish and storage space.

The Company’s lease agreements in San Diego, as amended, for its corporate office and laboratory space, its second laboratory and office space and its third office space, expire in December 2026, November 2025 and September 2020, respectively. The Company also leases 25,381 square feet of office and laboratory space in Suzhou, China, which lease expires in June 2018. The Company leases 2,312 square feet of office, laboratory, and storage space in Scotland, which lease expires in March 2021. The Company subleases in New York, New York for approximately 4,550 square feet of additional corporate office space. The sublease began in July of 2017 and expires in December 2020.

15. Income Taxes

The Company maintains deferred tax assets that reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. These deferred tax assets include net operating loss carryforwards, research credits and temporary differences. In assessing the Company's ability to realize deferred tax assets, management considers, on a periodic basis, whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. As such, management has determined that it is appropriate to maintain a valuation allowance against the Company's U.S. federal and state deferred tax assets, with the exception of an amount equal to its deferred tax liabilities, an amount equal to its alternative minimum tax credits and state research and development tax credits for which there is no expiration and the deferred tax assets related to its Scilex subsidiary.

The Company’s income tax benefit of $0.9 million and $1.7 million reflect effective tax rates of 2.8% and 6.7% for the three months ended March 31, 2018 and 2017, respectively.

The difference between the expected statutory federal tax expense of 21% and the 2.8% effective tax expense for the three months ended March 31, 2018 was primarily attributable to the valuation allowance against most of the Company’s deferred tax assets.

The Company is subject to taxation in the U.S. and various state jurisdictions. The Company's tax years for 2007 and later are subject to examination by the U.S. and state tax authorities due to the existence of the NOL carryforwards.

As of March 31, 2018, the Company had approximately $3.9 million of unrecognized tax benefits that, if recognized, would impact the effective income tax rate for continuing operations, subject to possible offset by an increase in the deferred tax asset valuation allowance. As of March 31, 2017, the Company had approximately $2.8 million of unrecognized tax benefits that, if recognized, would impact the effective income tax rate for continuing operations, subject to possible offset by an increase in the deferred tax asset valuation allowance.

The Company recognizes interest and penalties related to unrecognized tax benefits in its provision for income taxes. For the three months ended March 31, 2018 and 2017, no expense was recorded related to interest and penalties. The Company believes that no significant amount of the liabilities for uncertain tax positions will expire within twelve months of March 31, 2018.

U.S. Tax Reform

The Tax Cuts and Jobs Act (“Tax Act”) was enacted on December 22, 2017. The Tax Act reduces the U.S. federal corporate tax rate from 35% to 21%, as well as making several other significant changes to the tax law, effective January 1, 2018. Pursuant to the Securities and Exchange Commission Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), given the amount and complexity of the changes in tax law resulting from the Tax Act, the Company has not finalized the accounting for the income tax effects of the Tax Act. This includes the provisional amounts recorded related to the re-measurement of the deferred taxes and the change to the Company's valuation allowance. The impact of the Tax Act may differ from this estimate, during the one-year measurement period due to, among other things, further refinement of the Company's calculation, changes in interpretations and assumptions the Company has made, guidance that may be issued and actions the Company may take as a result of the Tax Act. The Company is still analyzing certain aspects of the Tax Act and refining its calculations, which could potentially affect the analysis of the Company’s deferred tax assets and liabilities. Any subsequent adjustment is expected to be offset by a change in valuation allowance and have no impact on the Company’s financial position or results of operations.

16. Related Party Agreements

During the year ended December 31, 2015, the Company entered into a joint venture called NANTibody, with NantCell, a subsidiary of NantWorks. In July 2015, the Company contributed its portion of the initial joint funding of $40.0 million to the NANTibody joint venture. The Company and NantCell have also entered into a license agreement pursuant to which the Company received a $10.0 million upfront license payment and $100.0 million of vested NantCell common stock.

During the year ended December 31, 2015, the Company entered into a joint venture called NantStem, with NantBioScience, a wholly-owned subsidiary of NantWorks. In connection with negotiated changes to the structure of NantStem the Company issued a call option on shares of NantKwest that it owned to Cambridge, a related party to the Company and to NantBioScience. In April 2015, the Company purchased 1.0 million shares of NantBioScience common stock for $10.0 million.

In March 2016, the Company and Yuhan entered into an agreement to form a joint venture company called ImmuneOncia Therapeutics, LLC, to develop and commercialize a number of immune checkpoint antibodies against undisclosed targets for both hematological malignancies and solid tumors. As of March 31, 2018, the carrying value of the Company’s investment in ImmuneOncia Therapeutics, LLC was approximately $6.1 million. During the three months ended June 30, 2016, Yuhan purchased $10.0 million of common stock and warrants.

In June 2016, the Company and TNK entered into a joint venture agreement with 3SBio to develop and commercialize proprietary immunotherapies, including those developed from, including or using TNK’s CAR-T technology targeting CEA positive cancers. In June 2016, 3SBio purchased $10.0 million of common stock and warrants.

On August 15, 2017, the transactions contemplated by the Contribution Agreement closed. Dr. Henry Ji, the Company's Chairman of the Board, President and Chief Executive Officer, Jaisim Shah, a member of the Company’s Board of Directors and David Deming, a member of the Company's Board of Directors, were previously appointed as members of the board of directors of Celularity.

On November 8, 2016, the Company entered into the Scilex Purchase Agreement, pursuant to which the Company acquired from the Scilex Stockholders approximately 72% of the outstanding capital stock of Scilex. Dr. Henry Ji, the Company's President and Chief Executive Officer and a member of the Company's Board of Directors, and George K. Ng, the Company's Vice President, Chief Administrative Officer and Chief Legal Officer, were stockholders of Scilex prior to the acquisition transaction.

17. Loss Per Share

For the quarters ended March 31, 2018 and 2017, basic loss per common share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Diluted loss per common share is calculated to give effect to all dilutive securities, using the treasury stock method.

The following table sets forth the reconciliation of basic and diluted loss per share for the quarters ended March 31, 2018 and 2017 (in thousands):

	Quarters Ended March 31,	
	2018	**2017**
Basic and Diluted		
Net loss	(32,574)	(23,064)
Denominator for Basic and Diluted Loss Per Share	84,941	50,886
Basic and Diluted Loss Per Share	$ (0.38)	$ (0.45)

The potentially dilutive stock options that would have been excluded because the effect would have been antidilutive for quarters ended March 31, 2018 and 2017 were 3.3 million and 4.3 million, respectively. The potentially dilutive warrants that would have been excluded because the effect would have been antidilutive for quarters ended March 31, 2018 and 2017 were 2.0 million and 2.4 million, respectively. Basic and diluted per share amounts are computed independently in the consolidated statements of income. Therefore, the sum of per share components may not equal the per share amounts presented.

18. Subsequent Events

Effective April 27, 2018, the Company, TNK, and Dayspring Ventures Limited, as representative of the Virttu Shareholders and Virttu entered into an amendment to the Virttu Purchase Agreement (the "Amendment").

Under the terms of the Amendment, among other things, the Company agreed that the $19.9 million in consideration otherwise payable on April 27, 2018 to the Virttu Shareholders in shares of the Company's common stock would be payable: (1) 50% in shares of the Company's common stock (valued at $5.55 per share) to be issued on April 27, 2018, and (2) 50% in cash payable by June 27, 2018. In accordance with the Virttu Purchase Agreement, as amended by the Amendment, the Company issued an aggregate of 1,795,011 shares of its common stock to the Virttu Shareholders on April 27, 2018.

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

This Quarterly Report on Form 10-Q contains "forward-looking statements" about our expectations, beliefs or intentions regarding our potential product offerings, business, financial condition, results of operations, strategies or prospects. You can identify forward-looking statements by the fact that these statements do not relate strictly to historical or current matters. Rather, forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made and are often identified by the use of words such as "assumes," "plans," "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," or "will," and similar expressions or variations. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause our actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause our actual activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those described under the caption "Risk Factors" included elsewhere in this Quarterly Report on Form 10-Q and in our other filings with the Securities and Exchange Commission (the "SEC"). Furthermore, such forward-looking statements speak only as of the date of this report. We undertake *no obligation to update any forward-looking statements to reflect events or circumstances occurring after the date of such statements.*

Overview

We are a clinical stage biotechnology company focused on delivering clinically meaningful therapies to patients and their families, globally. Our primary focus is to transform cancer into a treatable or chronically manageable disease. We also have programs assessing the use of our technologies and products in auto-immune, inflammatory, neurodegenerative and infectious diseases and pain indications with high unmet medical needs.

At our core, we are an antibody-centric company and leverage our proprietary G-MAB™ library and targeted delivery modalities to generate the next generation of cancer therapeutics. Our validated fully human antibodies include PD-1, PD-L1, CD38, CD123, CD47, c-MET, VEGFR2, CCR2, OX40, TIGIT and CD137 among others. Our vision is to leverage these antibodies in conjunction with proprietary targeted delivery modalities to generate the next generation of cancer therapeutics. These modalities include proprietary antibody drug conjugates (“ADCs”), bispecific approaches, as well as TCR-like antibodies. With LA Cell, Inc. (“LA Cell”), our joint venture with City of Hope, our objective is to become the global leader in the development of antibodies against intracellular targets such as STAT3, mutant KRAS, MYC, p53 and TAU. Additionally, we have acquired and are assessing the regulatory and strategic path forward for our portfolio of late stage biosimilar/biobetter antibodies based on Erbitux®, Remicade®, Xolair®, and Simulect® as these may represent nearer term commercial opportunities.

Although we intend to retain ownership and control of product candidates by advancing their development, we regularly also consider, (i) partnerships with pharmaceutical or biopharmaceutical companies and (ii) license or sale of certain products in each case, in order to balance the risks and costs associated with drug discovery, development and commercialization with efforts to maximize our stockholders’ returns. Our partnering objectives include generating revenue through license fees, milestone-related development fees and royalties as well as profit shares or joint ventures to generate potential returns from our product candidates and technologies.

Recent Developments

Acquisition of Virttu Biologics Limited

On April 27, 2017, we entered into a Share Purchase Agreement (the “Virttu Purchase Agreement”) with TNK Therapeutics, Inc., our majority-owned subsidiary (“TNK”), Virttu Biologics Limited (“Virttu”), the shareholders of Virttu (the “Virttu Shareholders”) and Dayspring Ventures Limited, as the representative of the Virttu Shareholders, pursuant to which, among other things, TNK acquired from the Virttu Shareholders 100% of the outstanding ordinary shares of Virttu (the “Virttu Acquisition”).

Virttu focuses on the development of oncolytic viruses that infect and selectively multiply in and destroy tumor cells without damaging healthy tissue. Its lead oncolytic virus candidate, Seprehvir, infects and replicates in cancer cells selectively, leaving normal cells unharmed.

Under the Virttu Purchase Agreement, the total amount of the consideration payable to the Virttu Shareholders in the Virttu Acquisition is equal to $25 million, less Virttu’s net debt (the “Virttu Base Consideration”). An additional $10 million contingent consideration is payable upon the achievement of certain regulatory milestones (as described below) (the “Regulatory Approval Consideration”).

At the closing of the Virttu Acquisition (the “Closing”), we issued to the Virttu Shareholders consideration valued at approximately $2.2 million, which consisted primarily of an aggregate of 797,081 shares (the “Virttu Closing Shares”) and approximately $557,000 in cash (the “Cash Consideration”). The issuance of the Virttu Closing Shares and the payment of the Cash Consideration satisfied TNK’s obligation to pay 20% of the Virttu Base Consideration at the Closing. Under the terms of the Virttu Purchase Agreement, we agreed to provide additional consideration to the Virttu Shareholders, as follows:

(1) Upon a financing resulting in gross proceeds (individually or in the aggregate) to TNK of at least $50.0 million (a “Qualified Financing”), TNK will issue to the Virttu Shareholders an aggregate number of shares of its capital stock (“TNK Capital Stock”) as is equal to the quotient obtained by dividing 80% of the Virttu Base Consideration by the lowest per share price paid by investors in the Qualified Financing (the “TNK Financing Consideration”); provided, however, that 20% of the TNK Financing Consideration shall be held in escrow until April 27, 2018 (the “Financing Due Date”), to be used to, among other things, satisfy the indemnification obligations of the Virttu Shareholders. In the event that a Qualified Financing does not occur, then on the Financing Due Date, we will issue to the Virttu Shareholders an aggregate number of shares of our common

stock as is equal to the quotient obtained by dividing 80% of the Virttu Base Consideration, by $5.55 (as adjusted, as appropriate, to reflect any stock splits or similar events affecting our common stock after the Closing).

(2) Within 45 business days after Virttu becomes aware that certain governmental bodies in the United States, the European Union, the United Kingdom or Japan have approved for commercialization, on or before October 26, 2024, Seprehvir (or any enhancement, combination or derivative thereof) as a monotherapy or in combination with one or more other active components (each of the first two such approvals by a governmental body being a "Regulatory Approval"), TNK shall pay half of the Regulatory Approval Consideration to the Virttu Shareholders, in a combination of (a) up to $5.0 million in cash (the "Regulatory Approval Cash") and/or (b) (i) such number of shares of our common stock as is equal to the quotient obtained by dividing $5.0 million less the Regulatory Approval Cash (the "Regulatory Approval Share Value") by the 30 Day VWAP (as defined below) of one share of our common stock; (ii) if TNK has completed its first public offering of TNK Capital Stock, the number of shares of TNK Capital Stock as is equal to the quotient obtained by dividing the Regulatory Approval Share Value by the 30 Day VWAP of one share of TNK Capital Stock; or (iii) such number of shares of common stock of a publicly traded company as is equal to the quotient obtained by dividing the Regulatory Approval Share Value by the volume weighted average price of the relevant security, as reported on the Nasdaq Capital Market (or other principal stock exchange or securities market on which the shares are then listed or quoted) for the thirty trading days immediately following the receipt of Regulatory Approval (the "30 Day VWAP"), with the composition of the Regulatory Approval Consideration to be at TNK's option. In order for a second regulatory approval to qualify as a Regulatory Approval under the Purchase Agreement, the second approval must be granted by a different governmental body in a different jurisdiction than that which granted the first Regulatory Approval.

Celularity Transaction

On November 1, 2016, we loaned $5.0 million to Celularity, Inc., a research and development company ("Celularity"), pursuant to a promissory note issued by us to Celularity, as amended (as so amended, the "Celularity Note"), in connection with the entry into a nonbinding term sheet by us, TNK and Celularity. Pursuant to the terms of the Celularity Note, the loan will be due and payable in full on the earlier of November 1, 2017 and the occurrence of an event of default under the Celularity Note (the "Celularity Maturity Date"). Under the terms of the Celularity Note, in the event that Celularity met certain minimum financing conditions prior to the Maturity Date, all outstanding amounts under the Celularity Note would be forgiven and converted to equity. On May 31, 2017, we loaned an additional $2.0 million to Celularity pursuant to the terms of the Celularity Note. On June 14, 2017, we loaned an additional $1.0 million to Celularity. Additionally, on July 7, 2017, we loaned an additional $2.0 million to Celularity. The loan amounts were forgiven and converted to additional equity investment in Celularity as part of the closing of the Contribution Agreement (as defined below) on June 12, 2017.

On June 12, 2017, we entered into a Contribution Agreement (the "Contribution Agreement") with TNK and Celularity, pursuant to which, among other things, we and TNK agreed to contribute certain intellectual property rights related to our proprietary chimeric antigen receptor ("CAR") constructs and related CARs to Celularity in exchange for shares of Celularity's Series A Preferred Stock equal to 25% of Celularity's outstanding shares of capital stock, calculated on a fully-diluted basis (the "Celularity Shares").

On August 15, 2017, the transactions contemplated by the Contribution Agreement closed, the loan amounts were forgiven, and, on such date, among other things, (a) Celularity issued the Celularity Shares to TNK, and (b) we, TNK and Celularity entered into a License and Transfer Agreement (the "License Agreement"). Pursuant to the License Agreement (i) TNK and we agreed to provide to Celularity (1) our CAR constructs and related CARs for use worldwide in combination with placenta-derived cells and/or cord blood-derived cells for the treatment of any disease or disorder except that anti-CD38 CAR constructs and related CARs may also be used in adult cells for the treatment of multiple myeloma unless TNK exercises its termination rights, and (2) our know-how relating to the foregoing, (ii) TNK and we granted to Celularity a limited, perpetual, transferable and sublicensable license and covenant not to sue with respect to certain of their patents and other intellectual property rights, which license is exclusive for a subset of such patents, and (iii) Celularity agreed to pay to TNK 50% of the first $200 million and 20% thereafter of any upfront and milestone payments that Celularity receives in connection with any sublicense of a combination of anti-CD38 CAR constructs and either placenta-driven cells and/or cord blood–derived cells or adult cells.

On April 5, 2018, we issued a press release announcing that we and Celularity have started screening patients for our leading CD 38 CAR T cell therapy drug development program, following the U.S. Food and Drug Administration's (the "FDA") review allowing clinical trial initiation.

Scilex Pharmaceuticals: ZTlido™ (lidocaine topical system 1.8%)

ZTlido™ (lidocaine topical system 1.8%) is based on a novel and proprietary technology that contains only 36 mg of lidocaine versus Endo Pharmaceuticals, Inc.'s Lidoderm® (lidocaine patch 5%), which holds 700 mg of lidocaine per patch. In December 2016 and January 2017, Scilex Pharmaceuticals Inc. ("Scilex") reported key endpoints were met in the pivotal bioequivalence clinical trials for ZTlido™ (lidocaine topical system 1.8%). The full data package was resubmitted (the first 505(b)(2) new drug application filed in 2015 resulted in a Complete Response Letter from the FDA in May 2016, which meant that the FDA considered the drug application not ready for approval at that time) to the FDA as part of the 505(b)(2) new drug application ("NDA") and accepted by the FDA in September 2017 (setting the Prescription Drug User Fee Act or FDA decision date on the resubmitted 505(b)(2) NDA for February 28, 2018) and filed with the Medicines and Healthcare products Regulatory Agency in the United Kingdom a hybrid Marketing Authorization Application in November 2017. On February 28, 2018, the FDA approved ZTlido™ (lidocaine topical system 1.8%) for the relief of pain associated with post-herpetic neuralgia. Scilex is currently in preparations for a commercial launch of ZTlido™ (lidocaine topical system 1.8%) and exploring potential partnerships for the product.

Private Placement of Convertible Promissory Notes and Warrants

2017 Securities Purchase Agreement in Private Placement

On December 11, 2017, we entered into a Securities Purchase Agreement (the "Securities Purchase Agreement" or "Note SPA") with certain accredited investors (collectively, the "Purchasers"). Pursuant to the Securities Purchase Agreement, on December 21, 2017, we issued and sold to the Purchasers, in a private placement transaction (the "Private Placement"), (1) convertible promissory notes in an aggregate principal amount of $50,000,000 (the "Notes"), which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of (a) December 21, 2022, and (b) the date of the closing of a change in control (the "Maturity Date"), and (2) warrants (the "Warrants") to purchase an aggregate of 12,121,210 shares of our common stock.

At any time and from time to time before the Maturity Date, each Purchaser shall have the option to convert any portion of the outstanding principal amount of such Purchaser's Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such Purchaser's Note into shares of common stock at a price per share of $2.26875, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with the year ending December 31, 2018. If a Purchaser elects to convert any of the principal amount of their Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type.

Each Warrant has an exercise price of $2.61 per share, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions, will become exercisable on June 20, 2018, has a term of five and a half years and is exercisable on a cash basis, unless there is not an effective registration statement covering the resale of the shares issuable upon exercise of the Warrants, in which case the Warrants shall also be exercisable on a cashless exercise basis.

2018 Securities Purchase Agreement in Private Placement

On March 26, 2018, we entered into a Securities Purchase Agreement (the "March 2018 Securities Purchase Agreement" or "March 2018 Note SPA") with certain accredited investors (collectively, the "March 2018 Purchasers"). Pursuant to the March 2018 Securities Purchase Agreement, we agreed to issue and sell to the March 2018 Purchasers, in a private placement transaction (the "March 2018 Private Placement"), (1) convertible promissory notes in an aggregate principal amount of $120,500,000 (the "March 2018 Notes"), which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of (a) the date that is five years from the date of issuance, and (b) the date of the closing of a change in control (the "March 2018 Maturity Date"), and (2) warrants (the "March 2018 Warrants") to purchase an aggregate of 8,591,794 shares of our common stock.

At any time and from time to time before the March 2018 Maturity Date, each March 2018 Purchaser shall have the option to convert any portion of the outstanding principal amount of such March 2018 Purchaser's March 2018 Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such March 2018 Purchaser's March 2018 Note into shares of our common stock at a price per share of $7.0125, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the March 2018 Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with the year ending December 31, 2018. If a March 2018 Purchaser elects to convert any of the principal amount of their March 2018 Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The March 2018 Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type.

Each March 2018 Warrant has an exercise price of $8.77 per share, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions, will become exercisable on on the date that is 181 days following the date of the closing of the March 2018 Private Placement, has a term of five and a half years and is exercisable on a cash basis, unless there is not an effective registration statement covering the resale of the shares issuable upon exercise of the March 2018 Warrants, in which case the March 2018 Warrants shall also be exercisable on a cashless exercise basis.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements which are prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, related disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We continually evaluate our estimates and judgments, the most critical of which are those related to income taxes and stock-based compensation. We base our estimates and judgments on historical experience and other factors that we believe to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known.

During the quarter ended March 31, 2018, there were no significant changes to the items that we disclosed as our critical accounting policies and estimates in Note 4 to our consolidated financial statements for the year ended December 31, 2017 contained in our Annual Report on Form 10-K for the year ended December 31, 2017, as amended, as filed with the SEC.

Results of Operations

The following describes certain line items set forth in our condensed consolidated statements of operations.

Comparison of the Three Months Ended March 31, 2018 and 2017

Revenues. Revenues were $6.2 million for the three months ended March 31, 2018, as compared to $4.9 million for the three months ended March 31, 2017. The net increase of $1.3 million is primarily due to an increase in our sales and services revenue of $6.1 million resulting primarily from our contract manufacturing arrangements related to the sale of customized reagents.

In June 2014, the National Institute of Allergy and Infectious Diseases, a division of the National Institutes of Health (the "NIH") awarded us a Phase II STTR grant to support the advanced preclinical development of human bispecific antibody therapeutics to prevent and treat *Staphylococcus aureus* ("*S. aureus"* or "Staph") infections. During the three months ended March 31, 2018 and 2017, we recorded $0 and $101 thousand of revenue, respectively, associated with the Staph Grant III award.

We expect that any revenue we generate will fluctuate from quarter to quarter as a result of the unpredictability of the demand for products and services offered as well as the timing and amount of grant awards, research and development reimbursements and other payments received under any strategic collaborations, if any.

Cost of revenues. Cost of revenues for the three months ended March 31, 2018 and 2017 were $1.3 million and $1.1 million, respectively, and relate to the sale of customized reagents and providing contract development services. The costs generally include employee-related expenses including salary and benefits, direct materials and overhead costs including rent, depreciation, utilities, facility maintenance and insurance. The increase of $0.2 million is primarily attributable to increased indirect costs associated with the higher sales and service revenues for next generation homogenous antibody drug conjugate development and contract manufacturing services.

Research and Development Expenses. Research and development expenses for the three months ended March 31, 2018 and 2017 were $14.6 million and $14.9 million, respectively. Research and development expenses include the costs to advance our Chimeric Antigen Receptor T-Cell ("CAR-T") programs for solid tumors, our resiniferatoxin ("RTX") program towards entering into future clinical trials, our biosimilar/biobetter antibodies development, costs to identify, isolate and advance human antibody drug candidates derived from our libraries as well as advancing our antibody drug conjugate ("ADC") preclinical drug candidates, preclinical testing expenses and the expenses associated with fulfilling our development obligations related to the NIH grant awards, collectively the NIH Grants. Such expenses consist primarily of salaries and personnel related expenses, stock-based compensation expense, clinical development expenses, preclinical testing, lab supplies, consulting costs, depreciation and other expenses. The decrease of $0.3 million is primarily attributable to the change in payroll expense for research and development. We expect research and development expenses to increase in absolute dollars as we: (i) advance our CAR-T programs, (ii) advance RTX into clinical trials and pursue other potential indications, the cost of acquiring, developing and manufacturing clinical trial materials, and other regulatory operating activities, (iii) advance our biosimilar/biobetter antibodies clinical development program, (iv) incur incremental expenses associated with our efforts to further advance a number of potential product candidates into preclinical development activities, (v) continue to identify and advance a number of fully human therapeutic antibody and ADC preclinical product candidates, (vi) incur higher salary, lab supply and infrastructure costs incurred in connection with supporting all of our programs, and (vii) invest in our JVs or other third party agreements.

Acquired In-process Research and Development Expenses. Acquired in-process research and development expenses for the three months ended March 31, 2018 and 2017 were $0 and $200 thousand, respectively.

General and Administrative Expenses. General and administrative expenses for the three months ended March 31, 2018 and 2017 were $9.9 million and $11.9 million, respectively. General and administrative expenses consist primarily of salaries and personnel related expenses for executive, finance and administrative personnel, stock-based compensation expense, professional fees, infrastructure expenses, legal and accounting expenses and other general corporate expenses.

We expect general and administrative expenses to increase in absolute dollars as we: (i) incur incremental expenses associated with expanded operations and development efforts, (ii) compliance with our public reporting obligations, (iii) increased infrastructure costs, and (iv) invest in our JVs or other third party agreements.

Intangible Amortization. Intangible amortization for the three months ended March 31, 2018 and 2017 was $662 thousand and $627 thousand, respectively. The increase in the three months ended March 31, 2018 as compared to the same period in 2017 is due to the intangible assets acquired the prior year.

Interest Expense. Interest expense for the three months ended March 31, 2018 and 2017 was $1.1 million and $1.6 million, respectively. The decrease in interest expense resulted primarily from lower average borrowings compared to the prior year period.

Interest Income. Interest income for the three months ended March 31, 2018 and 2017 was $4 thousand and $225 thousand, respectively. We expect that continued low interest rates will significantly limit our interest income in the near term.

Income tax expense (benefit). Income tax for the three months ended March 31, 2018 and 2017 was benefit of $948 thousand and benefit of $1.7 million, respectively. The decrease in income tax benefit resulted mainly from the reduced effective tax rate due to U.S. tax reform.

Income (loss) on equity method investments. Income (loss) on equity method investments for the three months ended March 31, 2018 and 2017 was $(922) thousand and $(948) thousand, respectively. (See Note 9).

Net Income (Loss). Net loss for the three months ended March 31, 2018 and 2017 was $(33.5) million and $(23.8) million, respectively.

Liquidity and Capital Resources

As of March 31, 2018, we had $24.3 million in cash and cash equivalents attributable in part to the net proceeds received in connection with the December 2017 Private Placement. Pursuant to the Securities Purchase Agreement, we issued and sold to the Purchasers, in the Private Placement, (1) the Notes, which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the Maturity Date, and (2) the Warrants to purchase an aggregate of 12,121,210 shares of common stock. We cannot be certain that additional funding will be available on acceptable terms, or at all. If we issue additional equity securities to raise funds, the ownership percentage of existing stockholders would be reduced. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates. We may also seek collaborators for one or more of our current or future product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available. These factors raise substantial doubt about our ability to continue as a going concern. Our condensed consolidated financial statements and related notes thereto included elsewhere in this Quarterly Report on Form 10-Q do not include any adjustments that might result from the outcome of this uncertainty.

Cash Flows from Operating Activities. Net cash used for operating activities was $24.0 million for the three months ended March 31, 2018 and is primarily attributable to an increase in cash flow associated with accrued expenses, acquisition consideration payable, and other operating activities.

We expect to continue to incur substantial and increasing losses and negative net cash flows from operating activities as we seek to expand and support our clinical and pre-clinical development and research activities and fund our joint ventures, collaborations and other third party agreements.

Cash Flows from Investing Activities. Net cash used for investing activities was $0.4 million for the three months ended March 31, 2018 as compared to $4.2 million for the three months ended March 31, 2017. The net cash used related primarily to equipment acquired for research and development activities.

We expect to increase our investment in equipment as we seek to expand and progress our research and development capabilities.

Cash Flows from Financing Activities. Net cash provided by financing activities was $28.2 million for the three months ended March 31, 2018 as compared to net cash used in financing of $22.5 million for the three months ended March 31, 2017, which was primarily due to sales of shares under the ATM Facility (as defined below) in the current year partially offset by the payments associated with the Scilex earn-out settlement.

Future Liquidity Needs. We have principally financed our operations through underwritten public offerings and private equity financings with aggregate net proceeds of approximately $260.4 million since inception, as we have not generated any product related revenue from our principal operations to date, and do not expect to generate significant revenue for several years, if ever. We will need to raise additional capital before we exhaust our current cash resources in order to continue to fund our research and development, including our plans for clinical and preclinical trials and new product development and commercialization, as well as to fund operations generally. As and if necessary, we will seek to raise additional funds through various potential sources, such as equity and debt financings, or through corporate collaboration and license agreements. We can give no assurances that we will be able to secure such additional sources of funds to support our operations, or, if such funds are available to us, that such additional financing will be sufficient to meet our needs.

We anticipate that we will continue to incur net losses into the foreseeable future as we: (i) advance RTX and other product candidates into clinical trials and potentially pursue other development, (ii) continue to identify and advance a number of potential mAb and ADC product candidates into preclinical development activities, (iii) continue our development of, and seek regulatory approvals for, our product candidates, (iv) expand our corporate infrastructure, including the costs associated with being a Nasdaq listed public company, and (v) incur our share of joint venture and collaboration costs for our products and technologies.

We plan to continue to fund our operating losses and capital funding needs through public or private equity or debt financings, strategic collaborations, licensing arrangements, asset sales, government grants or other arrangements.

In November 2014, we filed a universal shelf registration statement on Form S-3 with the SEC, which was declared effective by the SEC in December 2014 (the "2014 Shelf Registration"). The 2014 Shelf Registration Statement provided us with the ability to offer up to $250 million of securities, including equity and other securities as described in the registration statement. Included in the November 2014 shelf registration was a sales agreement prospectus covering the offering, issuance and sale by us of up to a maximum aggregate offering price of $50.0 million of our common stock that may be issued and sold under a sales agreement with MLV & Co. LLC. On April 19, 2017, we completed the offering of $47.5 million shares of common stock pursuant to the 2014 Shelf Registration Statement and received net proceeds of approximately $43.5 million. On November 9, 2017, we filed a universal shelf registration statement on Form S-3 with the SEC (the "2017 Shelf Registration Statement") to replace the 2014 Shelf Registration Statement. The 2014 Shelf Registration Statement expired on December 6, 2017, when the 2017 Shelf Registration Statement was declared effective by the SEC. Included in the 2017 Shelf Registration Statement is a sales agreement prospectus covering the offering, issuance and sale by us of up to a maximum aggregate offering price of $100.0 million of our Common Stock that may be issued and sold under a sales agreement with B. Riley FBR, Inc. (the "ATM Facility"). During the twelve months ended December 31, 2017 and the three months ended March 31, 2018, we sold approximately $0.9 million and approximately $50.6 million in shares of common stock under the ATM Facility, respectively. We have the ability to offer up to approximately $48.5 million of additional shares of common stock under the ATM Facility, subject to certain limitations.

Pursuant to this 2017 Shelf Registration Statement, we may offer additional securities from time to time and through one or more methods of distribution, subject to market conditions and our capital needs. Specific terms and prices will be determined at the time of each offering under a separate prospectus supplement, which will be filed with the SEC at the time of any offering.

On April 13, 2017, we entered into an underwriting agreement (the "Underwriting Agreement") with underwriters (the "Underwriters"), relating to the offering of 23,625,084 shares of our common stock (the "Offering"). The public offering price was $2.00 per share of our common stock and the Underwriters agreed to purchase the shares of common stock pursuant to the

Underwriting Agreement at a price of $1.8571 per share. Under the terms of the Underwriting Agreement, we also granted to the Underwriters an option, exercisable in whole or in part at any time for a period of 30 days from the date of the closing of the Offering, to purchase up to an additional 3,543,763 shares of our common stock at the public offering price.

On April 19, 2017, the Offering was completed and resulted in net proceeds of approximately $43.5 million (excluding any sale of shares of common stock pursuant to the option granted to the Underwriters), after deducting underwriting discounts and commissions and estimated Offering expenses payable by us.

On December 11, 2017, we entered into the Securities Purchase Agreement with the Purchasers. Pursuant to the Securities Purchase Agreement, on December 21, 2017, we issued and sold to the Purchasers, in the Private Placement, (1) the Notes, which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the Maturity Date, and (2) the Warrants to purchase an aggregate of 12,121,210 shares of our common stock. (See Note 12).

If we raise additional funds by issuing equity securities, substantial dilution to existing stockholders would result. If we raise additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict our ability to operate our business.

Off-Balance Sheet Arrangements

Since our inception through March 31, 2018, we have not engaged in any off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K.

New Accounting Pronouncements

Refer to Note 3, “Significant Accounting Policies,” in the accompanying notes to the condensed consolidated financial statements for a discussion of recent accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk. Our exposure to market risk is confined to our cash and cash equivalents. We have cash and cash equivalents and invest primarily in high-quality money market funds, which we believe are subject to limited credit risk. Due to the low risk profile of our investments, an immediate 10% change in interest rates would not have a material effect on the fair market value of our portfolio. We do not believe that we have any material exposure to interest rate risk arising from our investments.

Capital Market Risk. We currently do not have significant revenues from grants or sales and services and we have no product revenues from our planned principal operations and therefore depend on funds raised through other sources. One source of funding is through future debt or equity offerings. Our ability to raise funds in this manner depends upon, among other things, capital market forces affecting our stock price.

Item 4. Controls and Procedures.

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), is recorded, processed, summarized and reported within the time periods specified in the SEC’s regulations, rules and forms and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure.

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. As required by Rule 13a-15(b) promulgated by the SEC under the Exchange Act, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on the foregoing, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were not effective as of the end of the period covered by this Quarterly Report on Form 10-Q as a result of the material weaknesses described below.

In March 2017, in connection with the preparation of our 2016 financial statements, we identified certain purchase agreements which contained terms for contingent consideration that were not identified timely and accounted for in our historical financial statements on a timely basis. Further, certain other purchase agreements containing terms for contingent consideration were identified timely, but we failed to adjust the liabilities for changes in fair value at each subsequent reporting period. Accordingly, we did not appropriately account for liabilities for contingent consideration payable and the related adjustments to earnings.

Based on these findings and the criteria discussed above, our management identified a material weakness in our review controls over unusual or non-recurring and significant transactions. Specifically, our controls were not properly designed to provide reasonable assurance that we (1) timely identify and assess the accounting implications of terms in unusual or non-recurring agreements and (2) reassess the valuation of associated assets or liabilities at the end of each reporting period.

As a result of the material weakness, we have initiated and will continue to implement remediation measures including, but not limited to, improving centralized documentation control, improving the internal communication procedures between senior executive management, accounting personnel, and related business owners, leveraging external accounting experts as appropriate, and strengthening policies and procedures related to the transferring of responsibilities and the handoff of personnel duties. We believe that our remediation measures, when implemented, will ensure that we timely identify terms in agreements that could have material accounting implications, assesses the accounting and disclosures implications of the terms, and accounts for such items in the financial statements appropriately. Any failure to implement these improvements to our internal control over financial reporting may render our future assertions as ineffective and potentially impact our ability to produce reliable financial reports, effectively manage the company or prevent fraud, and could potentially harm our business and our performance.

As a result of the restatement of the condensed consolidated financial statements for the three and nine months ended September 30, 2017 for the impairment discussed in Note 9 to the financial statements, our management identified a material weakness in our review controls with respect to our equity method investments. Specifically, our review controls to assess and monitor the appropriateness of the financial information provided by our equity method investees were not operating effectively beginning in the quarter ended September 30, 2017, to provide reasonable assurance that we timely identify and assess the accounting implications of transactions and events occurring at our equity method investees and properly report such investee financial information in our financial statements. Accordingly, our principal executive officer and principal financial officer concluded that, at September 30, 2017, our internal control over financial reporting was not effective.

As a result of the material weakness, we will implement remediation measures including, but not limited to, establishing procedures to ensure that our existing controls to assess and monitor the appropriateness of the financial information provided by our equity method investees operate as designed. We believe that our remediation measures, when implemented, will provide reasonable assurance that we timely identify transactions and events occurring at our equity method investments that could have material accounting implications, assess the accounting and disclosures implications of the transactions and events, and account for such items in the financial statements appropriately in the time period in which such transactions and events occur. Any failure to implement these improvements to our internal control over financial reporting may render our future assertions as ineffective and potentially impact our ability to produce reliable financial reports, effectively manage the company or prevent fraud, and could potentially harm our business and our performance.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during the quarter ended March 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Our plans for remediating such material weaknesses, as identified above, are still in progress and would constitute changes in our internal control over financial reporting prospectively once implemented, are also enumerated above.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

To the best of our knowledge, we (the "Company") are not a party to any legal proceedings that, individually or in the aggregate, are deemed to be material to our financial condition or results of operations.

In the normal course of business, we may be named as a defendant in one or more lawsuits. We are not a party to any outstanding material litigation and management is currently not aware of any legal proceedings that, individually or in the aggregate, are deemed to be material to our financial condition or results of operations.

Derivative Action Litigation

On September 8, 2016, Yvonne Williams filed an action both derivatively and on behalf of a purported class of stockholders in the Court of Chancery of the State of Delaware (the "Court") against each of the members of the Henry Ji, William S. Marth, Kim D. Janda, Jaisim Shah, David H. Deming, and Douglas Ebersole (the "Prior Board"); George Ng, the Company's Executive Vice President, Chief Administrative Officer, and Chief Legal Officer; Jeffrey Su, the Company's Executive Vice President & Chief Operating Officer; and the Company as nominal defendant, alleging: (1) breach of fiduciary duty with respect to the formation of, and certain options and warrants issued by, certain of the Company's subsidiaries to Dr. Ji and members of the Prior Board; (2) breach of fiduciary duty with respect to the Company's prior announcement that it had entered into a voting agreement with Yuhan Corporation in connection with a transaction through which it purchased $10 million of shares of our common stock and warrants (the "Williams Action"). On November 14, 2016, the Company filed motions to dismiss or in the alternative stay the Williams Action. George Ng and Jeffrey Su were dismissed as defendants by plaintiff during the briefing on the motions. The Court denied the motions on June 28, 2017.

On October 25, 2017, Yvonne Williams filed a Supplemental and Amended Class Action and Derivative Complaint which re-added George Ng as a defendant, added Eragon Ventures, LLC as a defendant, and added certain claims challenging transactions whereby Eragon Ventures, LLC agreed to purchase certain stock in the Company's subsidiary, LA Cell. Following a mediation held on November 16, 2017, the parties agreed that day to a term sheet reflecting a settlement of the Williams Action, which agreement was memorialized in a Stipulation and Agreement of Settlement executed on December 22, 2017 and filed with the Court. The settlement and plaintiff's counsel's request for an award of attorneys' fees in the amount of $5 million have been submitted to the Court for approval. The Court has set a hearing on the request for approval of the settlement for May 15, 2018 and the Company has caused notice to be provided concerning the settlement and settlement hearing. Objections to the settlement or the requested award of attorneys' fees were due no later than March 5, 2018. The Company initially objected to the amount of fees being requested by plaintiff's counsel. The parties thereafter agreed that plaintiff's counsel could seek attorneys' fees of up to $3.25 million, to which the Company and defendants would not object. As a result, the Company has estimated a range of possible loss to be from approximately $1.0 million to $3.25 million and has recorded its best estimate of the potential liability associated with the legal proceeding which the Company expects to be covered in large part but not in whole by insurance.

If the Court approves the settlement, this case will be dismissed with prejudice. The settlement consists of non-monetary consideration, such as the cancellation of certain subsidiary shares of stock that were obtained by defendants pursuant to options previously exercised by defendants. Accordingly, the Company does not anticipate any monetary loss with respect to the Williams Action other than for potential payment of the amount of fees and costs that may be awarded to plaintiff's counsel by the Court as described above.

Immunomedics Litigation

On June 26, 2015, Immunomedics, Inc. ("Immunomedics") filed a complaint in the United States District Court for the District of New Jersey (the "Immunomedics Action") against the Board of Directors of Roger Williams Medical Center, Dr. Richard P. Junghans, Dr. Steven C. Katz, the Office of the Board of Advisors of Tufts University School of Medicine, and one or more individuals or entities to be identified later. This complaint (the "Initial Complaint") alleged, among other things: (1) breach of contract; (2) breach of covenant of good faith and fair dealing; (3) tortious interference with prospective economic gain; (4) tortious interference with contracts; (5) misappropriation; (6) conversion; (7) bailment; (8) negligence; (9) vicarious liability; and (10) patent infringement. Overall, the allegations in the Initial Complaint were generally directed to an alleged material transfer agreement dated December 2008 and Immunomedics' alleged request for the return of certain alleged research material, as well as the alleged improper use and conversion of such research materials outside the scope of the material transfer agreement.

On October 22, 2015, Immunomedics filed an amended complaint (the "First Amended Complaint"), which, among other things, no longer named the Board of Directors of Roger Williams Medical Center and The Office of the Board of

Advisors of Tufts University School of Medicine as defendants. Roger Williams Medical Center and Tufts Medical Center were added as new defendants. On January 14, 2016, Immunomedics filed a second amended complaint (the "Second Amended Complaint"), which, among other things, no longer named Tufts Medical Center as a defendant. In addition, the Second Amended Complaint contained allegations directed to two additional alleged material transfer agreements dated September 1993 and May 2010, respectively, and also added an allegation of unjust enrichment. The Second Amended Complaint also no longer asserted claims for (1) breach of covenant of good faith and fair dealing; (2) misappropriation; (3) bailment; (4) negligence; and (5) vicarious liability.

On October 12, 2016, Immunomedics filed a third amended complaint (the "Third Amended Complaint"), which added the Company, TNK, BDL and CARgenix as defendants. TNK is a subsidiary of the Company and purchased BDL and CARgenix in August 2015. The Third Amended Complaint includes, among other things, allegations against the Company, TNK, BDL and CARgenix regarding (1) conversion; (2) tortious interference; and (3) unjust enrichment. On December 2, 2016, the Company, TNK, BDL, and CARgenix filed a motion to dismiss Immunomedics's complaint against them for lack of personal jurisdiction. On January 25, 2017, the District of New Jersey granted this motion, and the Company, TNK, BDL and CARgenix were dismissed as defendants from the case. Although dismissed from the case, under various agreements, TNK has certain indemnification obligations to Roger Williams Medical Center, Dr. Richard P. Junghans and Dr. Steven C. Katz that may be implicated by the case. The Immunomedics Action remains pending in the District of New Jersey against defendants Roger Williams Medical Center ("RWMC"), Dr. Junghans, and Dr. Katz. A trial date has not yet been set.

In addition, on April 27, 2018, Immunomedics filed suit against the Company and TNK in the San Diego Superior Court (the "Immunomedics San Diego Action"). The complaint alleges, among other things: (1) conversion; (2) intentional interference with contracts; (3) intentional interference with prospective economic advantage; (4) negligent interference with prospective economic advantage; and (5) inducing breach of contract. The complaint has not yet been served on the Company or TNK, and no trial date has yet been set.

The Company believes that the Immunomedics Action and the Immunomedics San Diego Action are without merit, and will vigorously defend itself against these actions and any further actions. However, should Immunomedics prevail against the Company, RWMC or other defendants, certain patent rights optioned, owned and/or licensed by the Company could be at risk of invalidity or enforceability, or the litigation could otherwise adversely impact the Company's ownership or other rights in certain intellectual property. At this point in time, the Company is unable to determine whether any loss will occur with respect to the Immunomedics Action or the Immunomedics San Diego Action to estimate the range of such potential loss; therefore, no amount of loss has been accrued by the Company as of the date of filing of this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors.

Our Annual Report on Form 10-K for the year ended December 31, 2017, Part I –Item 1A, Risk Factors, describes important risk factors that could cause our business, financial condition, results of operations and growth prospects to differ materially from those indicated or suggested by forward-looking statements made in this Quarterly Report on Form 10-Q or presented elsewhere by management from time to time. Except as set forth below, there have been no material changes in our risk factors since the filing of our Annual Report on Form 10-K for the year ended December 31, 2017. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially and adversely affect our business.

Risks Related to Our Business and Industry

We have incurred significant losses since inception and anticipate that we will incur continued losses for the foreseeable future.

As of March 31, 2018 and December 31, 2017, we had an accumulated deficit of $196.8 million and $165.1 million, respectively. We continue to incur significant research and development and other expenses related to our ongoing operations. We have incurred operating losses since our inception, expect to continue to incur significant operating losses for the foreseeable future, and we expect these losses to increase as we: (i) advance resiniferatoxin ("RTX") and our other product candidates into clinical trials and pursue other development, acquire, develop and manufacture clinical trial materials and increase other regulatory operating activities, (ii) incur incremental expenses associated with our efforts to further advance a number of potential product candidates into preclinical development activities, (iii) continue to identify and advance a number of fully human therapeutic antibody and antibody drug conjugate ("ADC") preclinical product candidates, (iv) incur higher salary, lab supply and infrastructure costs incurred in connection with supporting all of our programs, (v) invest in our joint ventures, collaborations or other third party agreements, (vi) incur expenses in conjunction with defending and enforcing our rights in various litigation matters, (vii) expand our corporate, development and manufacturing infrastructure, and (viii) support our subsidiaries, such as Scilex Pharmaceuticals Inc. ("Scilex"), in their commercialization efforts. As such, we are subject to all risks incidental to the development of new biopharmaceutical products and related companion diagnostics, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Risks Related to Our Business and Industry

Drug development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is risky and uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. It is not uncommon for companies in the pharmaceutical industry to suffer significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Our future clinical trial results may not be successful.

This drug candidate development risk is heightened by any changes in the planned clinical trials compared to the completed clinical trials. As product candidates are developed through preclinical to early and late stage clinical trials towards approval and commercialization, it is customary that various aspects of the development program, such as manufacturing and methods of administration, are altered along the way in an effort to optimize processes and results. While these types of changes are common and are intended to optimize the product candidates for late stage clinical trials, approval and commercialization, such changes do carry the risk that they will not achieve these intended objectives.

Other than with respect to ZTlido™ (lidocaine topical system 1.8%), we have not previously initiated or completed a corporate-sponsored clinical trial. Consequently, we may not have the necessary capabilities, including adequate staffing, to successfully manage the execution and completion of any clinical trials we initiate, including our planned clinical trials of RTX, clinical trials of CAR-T including targeting CD38 using a CAR-T cell therapy, our biosimilar/biobetters antibodies and other product candidates, in a way that leads to our obtaining marketing approval for our product candidates in a timely manner, or at all.

In the event we are able to conduct a pivotal clinical trial of a product candidate, the results of such trial may not be adequate to support marketing approval. Because our product candidates are intended for use in life-threatening diseases, in some cases we ultimately intend to seek marketing approval for each product candidate based on the results of a single pivotal clinical trial. As a result, these trials may receive enhanced scrutiny from the U.S. Food and Drug Administration ("FDA"). For any such pivotal trial, if the FDA disagrees with our choice of primary endpoint or the results for the primary endpoint are not robust or significant relative to control, are subject to confounding factors, or are not adequately supported by other study endpoints, including possibly overall survival or complete response rate, the FDA may refuse to approve a New Drug Application, Biologics License Application or other application for marketing based on such pivotal trial. The FDA may require additional clinical trials as a condition for approving our product candidates.

The terms of our outstanding convertible promissory notes place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

On December 21, 2017, we issued and sold convertible promissory notes in an aggregate principal amount of $50 million (the “Convertible Notes”) to certain accredited investors pursuant to a Securities Purchase Agreement (the “Securities Purchase Agreement” or “Note SPA”). The Convertible Notes accrue interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of December 21, 2022 and the date of the closing of a change of control (the “Maturity Date”). At any time and from time to time before the Maturity Date, the holders of the Convertible Notes have the option to convert any portion of the outstanding principal amount of the Convertible Notes that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of the Convertible Note being converted into shares of common stock at a price per share of $2.26875, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Any conversion of the Convertible Notes could result in material dilution to the Company's existing stockholders. Accrued but unpaid interest on the Convertible Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with the year ending December 31, 2018. If a holder elects to convert any of the principal amount of their Convertible Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The Note SPA and the Convertible Notes contain customary restrictive covenants, which will remain in effect so long as the aggregate outstanding principal amount of the Convertible Notes is at least $25 million, including significant limitations on incurring additional indebtedness, liens, declaring cash dividends or making cash distributions and dispositions of our assets, in each case subject to customary exceptions. The breach of such covenants or the occurrence of certain other events would result in the occurrence of an event of default. Upon the occurrence of an event of default and following any applicable cure periods, the interest rate under the Convertible Notes will automatically increase to 12.0% per annum, effective until the day after such default is cured, and the holders of the Convertible Notes may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Convertible Notes, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. Any declaration by the holders of the Convertible Notes of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline.

On March 26, 2018, the Company entered into a Securities Purchase Agreement (the “March 2018 Securities Purchase Agreement”) with certain accredited investors (collectively, the “March 2018 Purchasers”), pursuant to which, among other things, the Company agreed to issue and sell to the March 2018 Purchasers, in a private placement transaction (the “March 2018 Private Placement”), convertible promissory notes in an aggregate principal amount of $120,500,000 (the “March 2018 Notes”), which will accrue simple interest at a rate equal to 5.0% per annum and mature upon the earlier to occur of (a) the date that is five years from the date of issuance, and (b) the date of the closing of a change in control of the Company (the “March 2018 Maturity Date”). At any time and from time to time before the March 2018 Maturity Date, each March 2018 Purchaser shall have the option to convert any portion of the outstanding principal amount of such March 2018 Purchaser’s March 2018 Note that is equal to or greater than the lesser of: (1) $4,000,000, and (2) the then-outstanding principal amount of such Purchaser’s Note into shares of common stock at a price per share of $7.0125, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. Accrued but unpaid interest on the March 2018 Notes shall be paid in cash semi-annually in arrears on or prior to the 30th day of June and 31st day of December of each calendar year commencing with December 31, 2018. If a March 2018 Purchaser elects to convert any of the principal amount of their March 2018 Note, then all accrued but unpaid interest on such portion of the principal amount shall become due and payable in cash. The March 2018 Notes contain restrictive covenants and event of default provisions that are customary for transactions of this type. The March 2018 Securities Purchase Agreement and the March 2018 Notes contain customary restrictive covenants, which will remain in effect so long as the aggregate outstanding principal amount of the March 2018 Notes is at least $60.25 million, including significant limitations on incurring additional indebtedness, liens, declaring cash dividends or making cash distributions and dispositions of our assets, in each case subject to customary exceptions. The breach of such covenants or the occurrence of certain other events would result in the occurrence of an event of default. Upon the occurrence of an event of default and following any applicable cure periods, the interest rate under the March 2018 Notes will automatically increase to 12.0% per annum, effective until the day after such default is cured, and the holders of the March 2018 Notes may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the March 2018 Notes, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. Any declaration by the holders of the March 2018 Notes of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

Our operations in China subject us to risks and uncertainties relating to the laws and regulations of China.

Certain of our operations are currently based in China. Under its current leadership, the government of China has been pursuing economic reform policies, including by encouraging foreign trade and investment. However, there is no assurance that the Chinese government will continue to pursue such policies, that such policies will be successfully implemented, that such policies will not be significantly altered, or that such policies will be beneficial to our operations in China. China's system of laws can be unpredictable, especially with respect to foreign investment and foreign trade. The promulgation of new laws and regulations and changes to existing laws and regulations may adversely affect foreign investors and foreign entities with operations in China. In addition, any changes in U.S. trade policy could trigger retaliatory actions by affected countries, including China, resulting in trade wars and in increased costs for goods imported into the United States and our ability to sell goods and services in the affected countries, which may reduce customer demand for our products and services, especially if the parties having to pay those tariffs increase their prices, or in trading partners limiting their trade with the United States. If these consequences are realized, this may materially and adversely affect our sales and our business.

Additionally, the biopharmaceutical industry in particular in China is strictly regulated by the Chinese government. Changes to Chinese regulations affecting biopharmaceutical companies are unpredictable and may have a material adverse effect on our Chinese operations and on our business and financial condition.

Risks Related to Ownership of Our Common Stock

We have not paid cash dividends in the past and do not expect to pay cash dividends in the foreseeable future. Any return on investment may be limited to the value of our common stock.

We have never paid cash dividends on our common stock and do not anticipate paying cash dividends on our common stock in the foreseeable future. Pursuant to our outstanding convertible notes issued in December 2017, so long as the outstanding principal amount under all such notes is at least $25,000,000, we are prohibited from paying any dividends without the prior written consent of the holders of such notes. Pursuant to our convertible notes offering proposed in March 2018, so long as the outstanding principal amount under all such notes is at least $60,250,000, we will be prohibited from paying any dividends without the prior written consent of the holders of such notes. The payment of dividends on our capital stock will depend on our earnings, financial condition and other business and economic factors affecting us at such time as the board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if the common stock price appreciates.

These risks and others as described in our Annual Report on Form 10-K for the year ended December 31, 2017 may have a material adverse effect on our global operations and on our business and financial condition.

Item 5. Other Information.

Item 6. Exhibits.

EXHIBIT INDEX

10.1	Offer Letter, dated March 15, 2018, by and between Sorrento Therapeutics, Inc. and Jiong Shao.
10.2	Securities Purchase Agreement, dated as of March 26, 2018, by and among Sorrento Therapeutics, Inc. and the purchasers identified on Schedule A thereto.
12.1	Ratio of Earnings to Fixed Charges
31.1	Certification of Henry Ji, Ph.D., Principal Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, as amended.
31.2	Certification of Jiong Shao, Principal Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, as amended.
32.1	Certification of Henry Ji, Ph.D., Principal Executive Officer and Jiong Shao, Principal Financial Officer, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, as amended.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

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

Sorrento Therapeutics, Inc.

Date:	May 10, 2018	By:	/s/ Henry Ji, Ph.D.
			Henry Ji, Ph.D.
			Chairman of the Board of Directors, Chief Executive Officer & President
			(Principal Executive Officer)
Date:	May 10, 2018	By:	/s/ Jiong Shao
			Jiong Shao
			Executive Vice President & Chief Financial Officer
			(Principal Financial Officer)

Exhibit 10.1

sorrentotherapeutics.com

4955 Directors Place
San Diego, CA 92121

March 15, 2018

Jiong Shao
[…***…]
[…***…]

Dear Jiong,

Sorrento Therapeutics, Inc., would like to offer you a position as an **employee** effective **March 16, 2018**. In this position you will report to Henry Ji, President, Chief Executive Officer, and Chairman of the Board. You will then be appointed **EVP, Chief Financial Officer** effective **March 19, 2018**.

Your base pay will be $450,000 per annum, payable at a rate of $18,750.00 gross semi-monthly. This will be paid to you during the Company's standard payroll cycle that pays on the 15th and last day of the month.

Additionally, you have a bonus target of 35% of your base salary, upon achieving goals set by the Board of Directors.

You will be eligible to participate in the Company's comprehensive benefits, which includes: fifteen (15) days Paid Time Off (PTO) per annum, 10 paid holidays, a matching retirement plan (401k), life and AD&D, long-term disability, and a flexible reimbursement plan.

Medical, dental, vision insurance coverage is available the first of the month after your start date. Long-term disability coverage begins the first of the month after 90 days of service.

Additionally, you will be eligible to participate in the Company's employee stock option plan.

As an employer, Sorrento requires its employees to maintain high standards of ethics and professionalism, and we specifically require the protection of proprietary information. As a condition of employment, you will be required to sign our standard employment, Proprietary Information and Inventions Agreement.

As per state law, your employment at Sorrento is "at will." This means that the terms and conditions of employment may be changed by you or Sorrento, with or without cause and with or without notice, including but not limited to, promotion, transfer, compensation, benefits, duties and location of work, demotion or termination. Any modifications to this "at-will" term of your employment must be in writing and signed by you and by the President of Sorrento.

Any and all representations made by Sorrento are contained in this offer. No other oral representations are binding on the company. All compensation indicated in this letter is subject to continued employment. This offer constitutes our complete offer package to recognize your new responsibilities and is revocable at any time.

We are all really looking forward to you joining Sorrento. The position represents an excellent opportunity for you, and we feel you have the drive, knowledge and ability to perform as challenged.

As a formality, please sign and return the original or scanned copy of this letter within seven (7) days to Pam Fettu indicating your acceptance of the position offered and retain a copy for your records.

Sincerely,

/s/ Henry Ji, Ph.D.
Henry Ji, Ph.D.
President, Chief Executive Officer

By signing below, I accept this offer of employment.

/s/ Jiong Shao 3/15/2018

Signature Date

Exhibit 10.2

SECURITIES PURCHASE AGREEMENT

THIS SECURITIES PURCHASE AGREEMENT (the "***Agreement***") is dated this 26th day of March, 2018, by and among SORRENTO THERAPEUTICS, INC., a Delaware corporation (the "***Company***"), and the purchasers identified on **SCHEDULE A** hereto (each, a "***Purchaser***" and collectively, the "***Purchasers***").

WHEREAS, the Purchasers desire to purchase convertible promissory notes in the form attached hereto as **EXHIBIT A** in an aggregate principal amount of $120,500,000 (each, a "***Note***" and collectively, the "***Notes***"), which are convertible into shares of common stock, $0.0001 par value (the "***Common Stock***"), of the Company (the "***Note Shares***"), and warrants in the form attached hereto as **EXHIBIT B** (each, a "***Warrant***" and collectively, the "***Warrants***" and, together with the Notes, the "***Securities***") to purchase an aggregate of 8,591,794 shares of Common Stock (the "***Warrant Shares***"), and the Company desires to sell the Securities to the Purchasers (the "***Sale***"), all on the terms and conditions set forth in this Agreement; and

WHEREAS, in reliance upon the representations made by the Purchasers and the Company in this Agreement, the transactions contemplated by this Agreement are such that the offer and sale of securities by the Company under this Agreement will be exempt from registration under applicable United States securities laws as a result of the Sale being undertaken pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (the "***Securities Act***"), and/or Regulation S promulgated thereunder; and

WHEREAS, on the Closing Date, the parties hereto will execute and deliver a Registration Rights Agreement, substantially in the form attached hereto as **EXHIBIT C** (the "***Registration Rights Agreement***"), pursuant to which, among other things, the Company will agree to provide certain registration rights with respect to the Note Shares and the Warrant Shares under the Securities Act and the rules and regulations promulgated thereunder and applicable state securities laws.

NOW, THEREFORE, in consideration of the terms and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Company and each of the Purchasers hereby agree as follows:

Section 1. Sale. Subject to and upon the terms and conditions set forth in this Agreement, each Purchaser agrees to purchase from the Company, and the Company agrees to sell to such Purchaser, severally and not jointly, a Note in the aggregate principal amount set forth opposite such Purchaser's name on **SCHEDULE A** hereto (the "***Applicable Note***"), and a Warrant to purchase such number of shares of Common Stock set forth opposite such Purchaser's name on **SCHEDULE A** hereto (the "***Applicable Warrant***") in exchange for a payment by such Purchaser to the Company of an amount in cash equal to the aggregate principal amount of the Applicable Note as set forth opposite such Purchaser's name on **SCHEDULE A** hereto (the "***Applicable Purchase Price***").

1.1 Closing. On the Closing Date (as defined below), upon the terms and subject to the conditions set forth herein, the Company agrees to sell to each Purchaser, and each Purchaser agrees to purchase, such Purchaser's Applicable Note and such Purchaser's Applicable Warrant at the Applicable Purchase Price. The closing of the Sale (the "***Closing***") shall occur after 4:00 PM Eastern

Time on the fifth (5th) business day following the Purchasers' receipt of a written notice from the Company indicating that all the conditions set forth in Section 5 and Section 6 have been satisfied or waived in accordance with this Agreement (other than those conditions that by their terms are to be satisfied at the Closing, it being understood that the occurrence of the Closing shall remain subject to the satisfaction or waiver of such conditions at the Closing), but in any event not earlier than ten (10) business days after the date of this Agreement, or on such other date as the parties may mutually agree in writing (the "***Closing Date***"). The Securities issuable at the Closing shall bear a restrictive legend as follows:

> THIS [NOTE/WARRANT] AND THE SECURITIES ISSUABLE UPON [CONVERSION/EXERCISE] HEREOF HAVE NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR APPLICABLE STATE SECURITIES LAWS AND MAY BE OFFERED, SOLD, ASSIGNED, PLEDGED, HYPOTHECATED, TRANSFERRED OR OTHERWISE DISPOSED OF (EACH, A "TRANSFER") ONLY IF SUCH SECURITIES ARE REGISTERED UNDER THE SECURITIES ACT AND ANY APPLICABLE STATE SECURITIES LAWS OR IF SUCH TRANSFER IS MADE PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT AND SUCH STATE SECURITIES LAWS AFTER PROVIDING AN OPINION OF COUNSEL TO SUCH EFFECT.

1.2 Section 4(a)(2). Assuming the accuracy of the representations and warranties of each of the Company and the Purchasers set forth in Section 2 and Section 3, respectively, the parties acknowledge and agree that the purpose of such representations and warranties is, among other things, to ensure that the Sale qualifies as a sale of securities under Section 4(a)(2) of the Securities Act.

1.3 Deliveries.

(a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to each Purchaser the following:

(i) such Purchaser's Applicable Note, registered in the name of such Purchaser;

(ii) such Purchaser's Applicable Warrant, registered in the name of such Purchaser;

(iii) the Registration Rights Agreement, duly executed by the Company;

(iv) a certificate executed by the principal executive officer and the principal financial or accounting officer of the Company (solely in their capacities as such), dated the Closing Date, in form and substance reasonably satisfactory to the Purchasers, to the effect that: (A) the representations and warranties of the Company set forth in Section 2 are true and correct in all material respects (other than representations and warranties which are already qualified as to materiality, which shall be true and correct in all respects) as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date, and (B) the Company has complied with all the agreements and satisfied all the conditions herein on its part to be performed or satisfied by the Company on or prior to the Closing Date (the "***Officer's Certificate***");

(v) an updated group chart of the Company in the same form as the group chart on **SCHEDULE B** hereto that is accurate and complete as of the Closing Date;

(vi) an updated capitalization table of the Company in the same form as the capitalization table on **SCHEDULE C** hereto that is accurate and complete as of the Closing Date;

(vii) updated capitalization tables of Concortis Biosystems, Corp., LA Cell, Inc., Scintilla Pharmaceuticals, Inc., Sorrento Biologics, Inc. and TNK Therapeutics, Inc., each in the same form as the capitalization tables on **SCHEDULE D** hereto that are accurate and complete as of the Closing Date; and

(viii) a copy of the resolutions adopted by the Company's Board of Directors approving and authorizing the execution, delivery and performance of this Agreement and each of the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby, certified by the Secretary of the Company; and

(ix) an opinion of counsel to the Company addressed to the Purchasers in form and substance reasonably satisfactory to the Purchasers.

(b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company the following:

(i) the Applicable Purchase Price by wire transfer in immediately available funds to the account specified by the Company; and

(ii) the Registration Rights Agreement, duly executed by such Purchaser.

1.4 Allocation of Purchase Price. The Company and the Purchasers, as a result of arm's length bargaining, agree that (a) none of the Purchasers nor any of their respective Affiliates (as defined below) have rendered services to the Company in connection with this Agreement, and (b) except as otherwise required by a final "determination" within the meaning of Section 1313(a)(1) of the U.S. Internal Revenue Code of 1986, as amended, all tax returns and other information returns of each party relative to this Agreement, the Securities issued pursuant hereto shall consistently reflect the matters agreed to in clause (a) of this Section 1.4.

Section 2. Representations and Warranties of the Company. The Company hereby represents and warrants to the Purchasers, as of the date of this Agreement and as of the Closing Date, that:

2.1 Organization and Qualification. The Company and each majority-controlled subsidiary of the Company (collectively, the "***Subsidiaries***") is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company, nor any Subsidiary is in violation or default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not reasonably be expected to result in: (a) a material adverse effect on the legality, validity or enforceability of this Agreement, the Warrants, the Notes, the Officer's Certificate or the Registration Rights Agreement (collectively, the "***Transaction Documents***"), (b) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (c) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (a), (b) or (c), a "***Material Adverse Effect***") and no proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification. For purposes of this Agreement, a "controlled subsidiary of the Company" is a subsidiary of the Company for which the Company has the power to vote or direct the voting of a majority of the outstanding voting power, or for which the Company has the power to elect a majority of the members of the board of directors or similar governing body, in either case as of the date of this Agreement.

2.2 Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, its Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals (as defined below). This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms.

2.3 Capitalization, Issuance of Securities, Note Shares and Warrant Shares. The information contained on (a) the group chart setting forth the ownership structure of certain of the Company's Subsidiaries on **SCHEDULE B** hereto**,** (b) the capitalization table of the Company on **SCHEDULE C** hereto, and (c) the capitalization tables of five (5) of the Company's direct Subsidiaries on **SCHEDULE D** hereto are accurate and complete as of the date of this Agreement. Subject to the Company receiving the written confirmation from Nasdaq (as defined below) as contemplated by Section 5.4, the issuance of the Securities is duly authorized by all necessary action on the part of the Company and no further action is required by the Company, its Board of Directors or the Company's stockholders in connection herewith or therewith. Subject to the Company receiving the written confirmation from Nasdaq as contemplated by Section 5.4, the issuance of the Note Shares is duly authorized by all necessary action on the part of the Company and no further action is required by the Company, its Board of Directors or the Company's stockholders in connection herewith or therewith. The Note Shares have been reserved for issuance upon conversion of the Notes and, upon issuance in accordance with the terms of the Notes, the Note Shares will be validly issued, fully paid and non-assessable shares of Common Stock. Subject to the Company receiving the written confirmation from Nasdaq as contemplated by Section 5.4, the issuance of the Warrant Shares is duly authorized by all necessary action on the part of the Company and no further action is required by the Company, its Board of Directors or the Company's stockholders in connection herewith or therewith. The Warrant Shares have been reserved for issuance upon exercise of the Warrants and, upon issuance in accordance with the terms of the Warrants, the Warrant Shares will be validly issued, fully paid and non-assessable shares of Common Stock. Assuming the truth and accuracy of each of the representations and warranties of the Purchasers contained in Section 3, the issuance by the Company of the Securities, upon conversion of the Notes, the Note Shares, and, upon exercise of the Warrants, the Warrant Shares, is exempt from registration under the Securities Act and will be free of any Liens (as defined below). The authorized capital stock of the Company consists of 750,000,000 shares of common stock, $0.0001 par value, and 100,000,000 shares of preferred stock, $0.0001 par value. As of March 26, 2018, 91,028,089 shares of the Common Stock and no shares of Preferred Stock were issued and outstanding, 16,830,070 shares of Common Stock are issuable upon the exercise of outstanding warrants, 7,035,017 shares of Common Stock are issuable upon the exercise of options to purchase shares of Common Stock and 22,038,565 shares of Common Stock are issuable upon the conversion of outstanding convertible notes. Except for the transactions contemplated hereby and except as set forth in the SEC Reports (as defined below), the Company has not granted any option (except for stock options granted under the Company's stock option plans), warrants, rights (including conversion or preemptive rights, except for stock purchases under the Company's employee stock purchase plan), or similar rights to any person or entity to purchase or acquire any rights with respect to any shares of capital stock of the Company. The Common Stock is currently listed on the Nasdaq Capital Market and the Company knows of no reason or set of facts which is likely to result in the termination of listing of the Common Stock on the Nasdaq Capital Market or the inability of such stock to continue to be listed on the Nasdaq Capital Market. The Company shall, so long as any of the Notes are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued capital stock, solely for the purpose of effecting the conversion of any then-outstanding Notes, the number of shares of Common Stock issuable upon conversion of any then-outstanding Notes. The Company shall, so long as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued capital stock, solely for the purpose of effecting the exercise of any then-outstanding Warrants, the number of shares of Common Stock issuable upon exercise of any then-outstanding Warrants.

2.4 No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not: (a) conflict with or violate any provision of the Purchaser's Applicable Note, the Purchaser's Applicable Warrant, the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, (b) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any options, contracts, agreements, liens, security interests, or other encumbrances ("***Liens***") upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (c) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (b) and (c), such as would not have or reasonably be expected to result in a Material Adverse Effect.

2.5 Acknowledgment Regarding the Sale. The Company acknowledges and agrees that each Purchaser is acting solely in the capacity of an arm's length third party with respect to this Agreement and the transactions contemplated hereby. The Company also acknowledges that it is not relying on any advice or representation of the Purchasers in connection with entering into this Agreement or the transactions contemplated hereunder other than the representations made by the Purchasers in this Agreement. The Company further acknowledges each Purchaser is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to this Agreement and the transactions contemplated hereby, and any advice given by any Purchaser or any of its respective representatives or agents in connection with this Agreement is merely incidental to the Sale. None of the Company, any of its Affiliates or any person acting on its or their behalf has conducted any general solicitation (as that term is used in Rule 502(c) of Regulation D) or general advertising with respect to any of the Securities, or made any offers or sales of any security or solicited any offers to buy any security under any circumstances that would require registration of the Securities under the Securities Act.

2.6 SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), including pursuant to Section 13(a) or 15(d) of the Exchange Act, for the two years preceding the date of this Agreement (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "***SEC Reports***") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Securities Exchange Commission (the "***SEC***") with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with generally accepted accounting principles in the United States applied on a consistent basis during the periods involved ("***GAAP***"), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. As of the date of this Agreement, there are no outstanding or unresolved comments received from the staff of the SEC with respect to the SEC Reports, and to the Company's knowledge, none of the SEC Reports is the subject of any ongoing SEC review or investigation.

2.7 Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth in the SEC Reports. The capital stock or other equity interests of each Subsidiary that are owned by the Company are owned by the Company free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary of the Company that are owned by the Company are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

2.8 Filings, Consents and Approvals. Except for (a) a waiver from the holders of those certain Convertible Promissory Notes issued by the Company on December 21, 2017 in an aggregate principal amount of $50,000,000 (the "***Existing Convertible Notes***") with respect to the right of first refusal granted in favor of such holders pursuant to the Existing Notes, (b) a consent from the holders of the Existing Convertible Notes for the offer and sale of securities by the Company under the Transaction Documents, and (c) the filing with the SEC of one or more registration statements as may be required from time to time under the Registration Rights Agreement, the Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than the notice and/or application(s) to each applicable Trading Market for the issuance and the listing of the Note Shares and the Warrant Shares for trading thereon in the time and manner required thereby (collectively, the "***Required Approvals***"). For purposes of this Agreement, "***Person***" shall mean any individual, corporation (including any non-profit corporation), general partnership, limited partnership, limited liability partnership, joint venture, estate, trust, company (including any limited liability company or joint stock company), firm or other enterprise, association, organization, entity, domestic or foreign multinational, federal, state, provincial, municipal or local government (or any political subdivision thereof) or any domestic or foreign governmental, regulatory or administrative authority or any department, commission, board, agency, court, tribunal, judicial body or instrumentality thereof, or any other body exercising, or entitled to exercise, any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power of any nature (including any arbitral body). For purposes of this Agreement, "***Trading Market***" shall mean any market or exchange of The Nasdaq Stock Market LLC or the New York Stock Exchange.

2.9 Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date of this Agreement: (a) there has been no event, occurrence or development that has had or that would reasonably be expected to result in a Material Adverse Effect, (b) the Company has not incurred any liabilities (contingent or otherwise) other than (i) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice, and (ii) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the SEC, (c) the Company has not altered its method of accounting, (d) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock, and (e) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. Except for the issuance of the Securities contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, properties, operations, assets or financial condition, that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed prior to the date that this representation is made.

2.10 Litigation. Except as disclosed in the SEC Reports, there is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an "***Action***") which (a) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents, the Note Shares or the Warrant Shares, (b) adversely affects or imposes any liabilities on any of the Purchasers or any of their respective Affiliates with respect the Applicable Note or Applicable Warrant, or (c) would, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Except as disclosed in the SEC Reports, none of the Company, any Subsidiary, or any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. To the knowledge of the Company, there is no pending or contemplated investigation by the SEC involving the Company or any current or former director or officer of the Company. The SEC has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

2.11 Compliance. Except as disclosed in the SEC Reports, neither the Company nor any Subsidiary: (a) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received any notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (b) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority, or (c) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, anti-corruption, anti-money laundering, SEC reporting, occupational health and safety, product quality and safety and employment and labor matters (collectively, "***Laws***"), except in each case as would not have, or reasonably be expected to result in, a Material Adverse Effect. The Company holds all material licenses, franchises, permits, certificates, approvals and authorizations from each governmental body, or required by Laws or any governmental body to be obtained, in each case necessary for the lawful conduct of its business and operations as currently conducted (collectively, "***Permits***"). The Company is in compliance in all material respects with the terms of all Permits. To the Company's knowledge, it has not received written notice since January 2018 to the effect that a governmental body (i) claimed or alleged that the Company was not in compliance with all Laws applicable to the Company, any of its properties or other assets or any of its business or operations other than as previously disclosed to the Purchasers in writing, or (ii) was considering the amendment, termination, revocation or cancellation of any Permit. The consummation of the transactions contemplated hereby, in and of itself, will not cause the revocation or cancellation of any Permit.

2.12 Certain Fees. No brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiaries to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents.

2.13 Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.

2.14 Disclosure. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, is true and correct in all material respects and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement, taken as a whole, do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that the Purchasers make no, nor have made any, representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.

2.15 No Integrated Offering. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3, none of the Company, any of its Affiliates, or any Person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause the Sale to be integrated with prior offerings by the Company for purposes of (a) the Securities Act, which would require the registration of any such securities under the Securities Act, or (b) any applicable stockholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

2.16 Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (a) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the issuance or resale of any of the Securities, the Note Shares or the Warrant Shares, (b) sold, bid for, purchased or paid any compensation for soliciting purchases of, any of the Securities, the Note Shares or the Warrant Shares, or (c) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company.

2.17 Taxes. The Company and the Subsidiaries have filed all federal, state, local and foreign tax returns that have been required to be filed and paid all taxes shown thereon through the date of this Agreement, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to do so would not reasonably be expected to have a Material Adverse Effect. Except as disclosed in the SEC Reports, no tax deficiency has been determined adversely to the Company or any Subsidiary which has had, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would reasonably be expected to have a Material Adverse Effect.

2.18 Intellectual Property. The Company and the Subsidiaries own or possess adequate enforceable rights to use all patents, patent applications, trademarks (both registered and unregistered), service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) (collectively, the "***Intellectual Property***"), necessary for the conduct of their respective businesses as conducted as of the date of this Agreement, except to the extent that the failure to own or possess adequate rights to use such Intellectual Property would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; the Company and the Subsidiaries have not received any written notice of any claim of infringement or conflict which asserted Intellectual Property rights of others, which infringement or conflict, if the subject of an unfavorable decision, would reasonably be expected to result in a Material Adverse Effect; there are no pending, or to the Company's knowledge, threatened judicial proceedings or interference proceedings against the Company or its Subsidiaries challenging the Company's or any of its Subsidiary's rights in or to or the validity of the scope of any of the Company's or any Subsidiary's patents, patent applications or proprietary information, except for such right or claim that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; to the Company's knowledge no other entity or individual has any right or claim in any of the Company's or any of its Subsidiary's patents, patent applications or any patent to be issued therefrom by virtue of any contract, license or other agreement entered into between such entity or individual and the Company or any Subsidiary or by any non-contractual obligation, other than by written licenses granted by the Company or any Subsidiary, except for such right or claim that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; the Company and the Subsidiaries have not received any written notice of any claim challenging the rights of the Company or its Subsidiaries in or to any Intellectual Property owned, licensed or optioned by the Company or any Subsidiary which claim, if the subject of an unfavorable decision, would reasonably be expected to result in a Material Adverse Effect.

2.19 Disclosure Controls. The Company maintains systems of internal accounting controls designed to provide reasonable assurance that (a) transactions are executed in accordance with management's general or specific authorizations; (b) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (c) access to assets is permitted only in accordance with management's general or specific authorization; and (d) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the SEC Reports, the Company is not aware of any material weakness in its internal control over financial reporting. Since the date of the latest audited financial statements of the Company included within the SEC Reports, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company and the Subsidiaries is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's controls and procedures as of a date within 90 days prior to the filing date of the Annual Report on Form 10-K for the fiscal year most recently ended (such date, the "***Evaluation Date***"). The Company presented in its Annual Report on Form 10-K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the most recent Evaluation Date. Since the most recent Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S-K under the Securities Act) or, to the Company's knowledge, in other factors that would significantly adversely affect the Company's internal controls.

2.20 No "Bad Actor" Disqualifying Events. No "Bad Actor" disqualifying event described in Rule 506(d)(1)(i) to (viii) of the Securities Act (a "***Disqualification Event***") is applicable to the Company, except for a Disqualification Event as to which Rule 506(d)(2)(ii–iv) or (d)(3), is applicable; *provided* that, for purposes of this representation and warranty, the Company relied exclusively on completed and executed questionnaires delivered to the Company by its directors and executive officers and beneficial owners of twenty percent (20%) or more of the Company's outstanding voting equity securities.

2.21 Environmental Laws. The Company (i) is in compliance with any and all Environmental Laws (as hereinafter defined), (ii) has received all permits, licenses or other approvals required of it under applicable Environmental Laws to conduct its business and (iii) is in compliance with all terms and conditions of any such permit, license or approval except where, in each of the foregoing clauses (i), (ii) and (iii), the failure to so comply would reasonably be expected to result in a Material Adverse Effect. The term "***Environmental Laws***" means all federal, state, local or foreign laws relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), including, without limitation, laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "***Hazardous Materials***") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of

Hazardous Materials, as well as all authorizations, codes, decrees, demands or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations issued, entered, promulgated or approved thereunder.

2.22 Foreign Corrupt Practices Act. None of the Company, the Subsidiaries, or, to the knowledge of the Company, any agent or other person acting in the course of its actions on behalf of the Company or the Subsidiaries, has, directly or indirectly, (i) used any corporate funds, or will use any proceeds from the sale of the Securities, for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful influence payment to foreign or domestic government officials or to any foreign or domestic political parties or campaigns from corporate funds, or (iii) violated in any material respect any provision of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder which was or is applicable to the Company or any of the Subsidiaries.

2.23 Compliance with Anti-Money Laundering Laws. The operations of the Company are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements and all other applicable U.S. and non-U.S. anti-money laundering laws and regulations, including, but not limited to, those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the USA Patriot Act of 2001 and the applicable money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "***Anti-Money Laundering Laws***"), the Company has in place policies and procedures reasonably designed to ensure that its and its Subsidiaries', if any, operations will continue to be conducted in compliance with all applicable Money Laundering Laws and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or the Subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

2.24 Sarbanes-Oxley Act. The Company is in compliance in all material respects with any and all applicable requirements of the Sarbanes-Oxley Act of 2002, as amended, that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the SEC thereunder that are effective as of the date hereof.

2.25 Application of Takeover Protections. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, interested stockholder, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation, Bylaws or other organizational documents or the laws of the jurisdiction of its formation which is or could become applicable to any Purchaser as a result of the transactions contemplated by this Agreement, including, without limitation, the Company's issuance of the Securities and any Purchaser's ownership of the Securities.

2.26 Insurance. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the business in which the Company is engaged. The Company has not been refused any insurance coverage sought or applied for, the refusal of which would reasonably be expected to have a Material Adverse Effect. The Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not reasonably be expected to have a Material Adverse Effect.

2.27 Title. The Company has marketable title to all personal property owned by it which is material to the business of the Company, in each case free and clear of all Liens except for Liens which do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company. Any real property and facilities held under material lease by the Company are held by it under valid and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company.

2.28 Third Party Indebtedness. Other than the Existing Convertible Notes and indebtedness incurred in the ordinary course of business, the Company does not have any indebtedness for borrowed money that is owed to a third party.

Section 3. Representations and Warranties of the Purchasers. Each Purchaser represents and warrants to the Company, severally and not jointly, as of the date of this Agreement and as of the Closing Date, that:

3.1 No Public Sale or Distribution. Such Purchaser is acquiring the Applicable Note and the Applicable Warrant, and, upon conversion of such Applicable Note, will acquire the Note Shares, and, upon exercise of such Applicable Warrant, will acquire the Warrant Shares, in the ordinary course of business for its own account and not with a view toward, or for resale in connection with, the public sale or distribution thereof. Such Purchaser does not presently have any agreement or understanding, directly or indirectly, with any person to distribute, or transfer any interest or grant participation rights in the Securities, the Note Shares or the Warrant Shares.

3.2 Accredited Investor and Affiliate Status. Such Purchaser is an "accredited investor" as that term is defined in Rule 501 of Regulation D under the Securities Act. Such Purchaser is not, and has not been, for a period of at least three months prior to the date of this Agreement (a) an officer or director of the Company, (b) an "affiliate" of the Company (as defined in Rule 144) (an "***Affiliate***"), or (c) a "beneficial owner" of more than 10% of the common stock of the Company (as defined for purposes of Rule 13d-3 of the Exchange Act).

3.3 Reliance on Exemptions. Such Purchaser understands that the Sale is being made in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and such Purchaser's compliance with, the representations, warranties, agreements, acknowledgments and understandings of such Purchaser set forth herein in order to determine the availability of such exemptions and the eligibility of such Purchaser to complete the Sale and to acquire the Applicable Note and the Applicable Warrant.

3.4 Information. Such Purchaser has been furnished with all materials relating to the business, finances and operations of the Company and materials relating to the Sale which have been requested by such Purchaser. Such Purchaser has been afforded the opportunity to ask questions of the Company. Neither such inquiries nor any other due diligence investigations conducted by such Purchaser or its representatives shall modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained herein. Such Purchaser acknowledges that all of the documents filed by the Company with the SEC under Sections 13(a), 14(a) or 15(d) of the Exchange Act that have been posted on the SEC's EDGAR site are available to such Purchaser.

3.5 Risk. Such Purchaser understands that its investment in the Securities involves a high degree of risk. Such Purchaser is able to bear the risk of an investment in the Securities including, without limitation, the risk of total loss of its investment. Such Purchaser has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to the Sale. Such Purchaser is not relying on any advice or representation of the Company in connection with entering into this Agreement or the Registration Rights Agreement or the transactions contemplated hereunder or thereunder (other than the representations made by the Company in this Agreement) and has not received from the Company any assurance or guarantee as to the merits (whether legal, regulatory, tax, financial or otherwise) of entering into this Agreement or the Registration Rights Agreement or the performance of such Purchaser's obligations hereunder or thereunder.

3.6 No Governmental Review. Such Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement in connection with the Sale or the fairness or suitability of the investment in the Securities.

3.7 Organization; Authorization. If such Purchaser is an entity, such Purchaser is duly organized, validly existing and in good standing under the laws of jurisdiction set forth opposite its name on **SCHEDULE A** hereto and has the requisite organizational power and authority to enter into and perform its obligations under this Agreement and the Registration Rights Agreement.

3.8 Validity; Enforcement. This Agreement and the Registration Rights Agreement have been duly and validly authorized, executed and delivered on behalf of such Purchaser and constitute the legal, valid and binding obligations of such Purchaser enforceable against such Purchaser in accordance with their terms. The execution, delivery and performance of this Agreement and the Registration Rights Agreement by such Purchaser and the consummation by such Purchaser of the transactions contemplated hereby and thereby will not result in a violation of the organizational documents of such Purchaser.

3.9 Prior Investment Experience. Such Purchaser acknowledges that it has prior investment experience, including investment in securities of the type being sold, including the Securities, and has read all of the documents furnished or made available by the Company to it and is able to evaluate the merits and risks of such an investment on its behalf, and that it recognizes the highly speculative nature of this investment.

3.10 Tax Consequences. Such Purchaser acknowledges that the Company has made no representation regarding the potential or actual tax consequences for such Purchaser that will result from entering into this Agreement and from consummation of the Sale. Such Purchaser acknowledges that it bears complete responsibility for obtaining adequate tax advice for such Purchaser itself regarding this Agreement and the Sale.

3.11 No Registration, Review or Approval; Restricted Securities. Such Purchaser acknowledges, understands and agrees that the Securities are being sold hereunder pursuant to an offer exemption under Section 4(a)(2) of the Securities Act and/or the safe harbor provided under Regulation S promulgated thereunder. Such Purchaser understands that the Securities, the Note Shares and the Warrant Shares constitute "restricted securities" within the meaning of Rule 144 under the Securities Act and may not be sold, pledged or otherwise disposed of unless they are subsequently registered under the Securities Act and applicable state securities laws or unless an exemption from registration thereunder is available.

3.12 Jurisdiction. Such Purchaser made its investment decision to purchase the Securities at its offices located at the address set forth opposite such Purchaser's name on **SCHEDULE A** hereto. If such Purchaser is an individual, such Purchaser resides in the jurisdiction listed in the address set forth opposite such Purchaser's name on **SCHEDULE A** hereto. If such Purchaser is an entity, such Purchaser's principal place of business is located in the jurisdiction listed in the address set forth opposite such Purchaser's name on **SCHEDULE A** hereto.

3.13 Exculpation Among Purchasers. Such Purchaser acknowledges that it is not relying upon any Person, other than the Company and its officers and directors, in making its investment or decision to invest in the Company. Such Purchaser agrees that neither such Purchaser nor its controlling Persons, officers, directors, partners, agents or employee shall be liable to any other Purchaser for any action heretofore taken or omitted to be taken by any of them in connection with the purchase of the Securities, the Note Shares and the Warrant Shares.

3.14 No Disqualifying Events. Neither (a) such Purchaser; nor (b) any of such Purchaser's directors, executive officers, other officers that may serve as a director or officer of any company in which it invests, general partners or managing members, is subject to any of Disqualification Events, except for Disqualification Events covered by Rule 506(d)(2)(ii) or (iii) or (d)(3) under the Securities Act and disclosed reasonably in advance of the Closing in writing in reasonable detail to the Company.

3.15 No Short Sales. Such Purchaser has not engaged in any "short sales" (as defined in Rule 200 of Regulation SHO of the Exchange Act) of the Common Stock or instructed any third parties to engage in any short sales of the Common Stock on such Purchaser's behalf prior to the Closing Date. Such Purchaser covenants and agrees that it will not be in a net short position with respect to the shares of Common Stock. For purposes of this Section 3.15, a "net short position" means a sale of Common Stock by a Purchaser that is marked as a short sale and that is made at a time when there is no equivalent offsetting long position in Common Stock held by such Purchaser.

Section 4. Covenants of the Company.

4.1 Covenants of the Company between Signing and Closing. From the date of this Agreement until the Closing Date, the Company shall not, without the prior written consent of the Purchasers purchasing at least a majority of the aggregate principal amount of the Notes, as set forth on **SCHEDULE A** hereto: (a) increase, reduce or cancel any authorized or issued Common Stock of the Company or issue, allot, purchase or redeem any Common Stock or other securities of the Company, undertake any recapitalization or similar transaction or do any act which has the effect of diluting or reducing the current and prospective shareholding of the current stockholders of the Company on a fully diluted basis in the Company; or amend, modify or waive any provision of any document related to any authorized or issued Common Stock of the Company; issue, redeem, repurchase any securities (including equity and debt securities) of the Company, or cause or permit the Company to undertake any recapitalization or similar transaction; or consolidate, sub-divide, convert, reclassify or re-designate any of the share capital of the Company; provided, however, that the foregoing shall not apply to (i) the issuance of shares of Common Stock Shares or options to purchase shares of Common Stock, or the issuance of shares of Common Stock upon exercise of options, pursuant to any stock option, stock bonus or other stock plan or arrangement described in the SEC Reports; (ii) the issuance of shares of Common Stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants outstanding on the date hereof and described in the SEC Reports; (iii) the issuance of shares of Common Stock upon the achievement of certain milestones pursuant to that certain Share Purchase Agreement, dated April 27, 2017, by and among the Company, TNK Therapeutics, Inc., Virttu Biologics Limited, the shareholders of Virttu Biologics Limited and Dayspring Ventures Limited, as representative of the shareholders of Virttu Biologics Limited, as may be amended or restated from time to time; (iv) acquisitions, cancellations or repurchases of Common Stock by the Company pursuant to employee or consultant agreements that permit the Company to repurchase such shares; or (v) the issuance and sale of shares of Common Stock pursuant to that certain At Market Issuance Sales Agreement, dated November 9, 2017, by and between the Company and B. Riley FBR, Inc., as may be amended or restated from time to time; or (b) change the dividend policy, propose or approve any distribution of profits by way of interim or final dividend, capitalization of reserve or otherwise by the Company.

4.2 Negative Pledge Covenants of the Company. The Company covenants and agrees that, so long as the aggregate principal amount of all outstanding Notes is at least $60,250,000, it will not create or permit any Lien, other than Permitted Liens, on any of the Company's assets to secure (a) any of the Company's indebtedness or obligations, or (b) the indebtedness of any other person, unless the Company contemporaneously creates or permits such Lien to equally and ratably secure the Company's obligations under the Transaction Documents or the Company provides such other security for the Notes as is duly approved by the Purchasers holding a majority of the aggregate principal amount of the then-outstanding Notes. For purposes of this Agreement, "***Permitted Liens***" means (i) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; *provided*, that the Company maintains adequate reserves therefor in accordance with GAAP (to the extent required thereby); (ii) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of the Company's business; (iii) Liens arising from judgments, decrees or attachments which do not constitute an "Event of Default" under the Notes; (iv) deposits to secure the performance of obligations (including by way deposits to secure letters of credit issued to secure the same) under commercial supply and/or manufacturing agreements; (v) pledges or deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations or surety or appeal bonds, or to secure indemnity, performance or other similar bonds, in each case, to the extent made in the ordinary course of business; (vi) Liens on equipment or software or other intellectual property constituting purchase money Liens and Liens in connection with capital leases; (vii) leasehold interests in leases or subleases and licenses and sublicenses granted in the ordinary course of business; (viii) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (ix) Liens securing the payment of financed insurance premiums that are promptly paid on or before the date they become due and incurred in the ordinary course of business; (x) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xi) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business; (xii) Liens on cash securing reimbursement obligations in connection with letters of credit and cash management services (including credit cards, debit cards and other similar instruments); (xiii) security deposits in connection with real property leases; (xiv) Liens of landlords arising by statute or under any lease entered into in the ordinary course of business; (xv) Liens relating to intercompany borrowings between or among a person and its subsidiaries; (xvi) sales, transfers, licenses, sublicenses, leases, subleases or other dispositions of assets and, in connection therewith, customary rights and restrictions contained in agreements relating to such transactions pending the completion thereof or during the term thereof, and any option or other agreement to sell, transfer, license, sublicense, lease, sublease or dispose of an asset; (xvii) Liens securing indebtedness that does not require the prior written consent of the Requisite Purchasers (as defined in the Notes) under Section 16(a) of the Notes; and (xviii) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (i) through (ix) above; *provided*, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

4.3 Use of Proceeds. The Company shall use the proceeds from the sale of the Securities hereunder for working capital and general corporate purposes.

Section 5. Conditions Precedent to Obligations of the Company. The obligation of the Company to consummate the transactions contemplated by this Agreement is subject to the satisfaction of each of the following conditions; *provided* that these conditions are for the Company's sole benefit and may be waived by the Company at any time in its sole discretion by providing the Purchasers with prior written notice thereof:

5.1 Delivery of Purchase Price. Each of the Purchasers shall have delivered to the Company the Applicable Purchase Price;

5.2 No Prohibition. No order of any court, arbitrator or governmental or regulatory authority shall be in effect which purports to enjoin or restrain any of the transactions contemplated by this Agreement;

5.3 Representations. The representations and warranties of the Purchasers contained in Section 3 shall be true and correct in all material respects (other than representations and warranties which are already qualified as to materiality, which shall be true and correct in all respects) as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date; and

5.4 Nasdaq Approval. The Company shall have received from The Nasdaq Stock Market LLC ("***Nasdaq***") written confirmation that Nasdaq has completed its review of the Listing of Additional Shares Notification Form submitted by the Company to Nasdaq in connection with the proposed issuance of the Securities pursuant to this Agreement.

Section 6. Conditions Precedent to Obligations of the Purchasers. The obligation of the Purchasers to consummate the transactions contemplated by this Agreement is subject to the satisfaction of each of the following conditions; *provided* that these conditions are for each Purchaser's sole benefit and may be waived by such Purchaser, on behalf of itself, at any time in its sole discretion by providing the Company with prior written notice thereof:

6.1 Delivery. The Company shall have delivered or caused to be delivered to the Purchasers the items set forth in Section 1.3(a);

6.2 No Prohibition. No order of any court, arbitrator, or governmental or regulatory authority shall be in effect which purports to enjoin or restrain any of the transactions contemplated by this Agreement;

6.3 Representations. The representations and warranties of the Company contained in Section 2 shall be true and correct in all material respects (other than representations and warranties which are already qualified as to materiality, which shall be true and correct in all respects) as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date;

6.4 Due Diligence. The Purchasers shall have completed, to their satisfaction, all legal, financial and business due diligence of the Company and the results thereof shall be satisfactory to the Purchasers.

6.5 Trading. From the date of this Agreement to the relevant Closing Date, trading in the Company's Common Stock shall not have been suspended by the SEC or any Trading Market and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any trading market, nor shall a banking moratorium have been declared either by the United States or California authorities nor shall there have occurred any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of the Purchasers purchasing a majority of the aggregate principal amount of the Notes, as set forth on **SCHEDULE A** hereto, makes it impracticable or inadvisable to purchase the Securities at the Closing.

Section 7. Listing of Common Stock. The Company hereby agrees to use its best efforts to maintain the listing or quotation (as the case may be) of the Common Stock on the Trading Market on which it is currently listed or designated for quotation (as the case may be). The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Note Shares and the Warrant Shares, and will use its best efforts to take such other action as is necessary to cause all of the Note Shares and the Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then use its best efforts to take all action necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 7.

Section 8. Furnishing of Information. As long as a Purchaser owns any Securities, Note Shares or Warrant Shares, the Company covenants to use its best efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date of this Agreement pursuant to the Exchange Act. As long as a Purchaser owns any Securities, Note Shares or Warrant Shares, if the Company is not required to file reports pursuant to the Exchange Act, the Company will use its best efforts to prepare and furnish to such Purchaser and make publicly available in accordance with Rule 144(c) such information as is required for such Purchaser to sell the Note Shares or the Warrant Shares under Rule 144. The Company further covenants that it will use its best efforts to take such further action as a Purchaser may reasonably request, all to the extent required from time to time to enable such Purchaser to sell the Note Shares or the Warrant Shares without registration under the Securities Act within the limitation of the exemptions provided by Rule 144.

Section 9. Indemnification. In addition to any other indemnity provided in the Transaction Documents, the Company will indemnify and hold each Purchaser and its directors, officers, stockholders, partners, employees, advisers, affiliates and agents (each, a "***Purchaser Party***") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation (collectively, "***Losses***") that any such Purchaser Party may suffer or incur as a result of or relating to (a) any misrepresentation, breach or inaccuracy of any representation, warranty, covenant or agreement made by the Company in any Transaction Document, and (b) any action instituted against a Purchaser Party in any capacity, or any of them or their respective affiliates, by any individual who is not an affiliate of such Purchaser Party, with respect to any of the transactions contemplated by this Agreement. In addition to the indemnity contained herein, the Company will reimburse each Purchaser Party for its reasonable legal and other expenses (including the cost of any investigation, preparation and travel in connection therewith) incurred in connection therewith, as such expenses are incurred.

Section 10. Governing Law; Jurisdiction; Waiver of Jury Trial. This Agreement shall be construed under the laws of the State of California, without regard to principles of conflicts of law or choice of law that would permit or require the application of the laws of another jurisdiction. The Company and each of the Purchasers hereby agrees that all actions or proceedings arising directly or indirectly from or in connection with this Agreement shall be litigated only in the Superior Court of the State of California or the United States District Court for the Southern District of California located in San Diego County, California. The Company and each of the Purchasers consent to the exclusive jurisdiction and venue of the foregoing courts and consents that any process or notice of motion or other application to either of said courts or a judge thereof may be served inside or outside the State of California or the Southern District of California by generally recognized overnight courier or certified or registered mail, return receipt requested, directed to such party at its or his address set forth below (and service so made shall be deemed "personal service") or by personal service or in such other manner as may be permissible under the rules of said courts. THE COMPANY AND EACH OF THE PURCHASERS HEREBY WAIVES ANY RIGHT TO A JURY TRIAL IN CONNECTION WITH ANY LITIGATION PURSUANT TO THIS AGREEMENT.

Section 11. Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party; *provided* that a .pdf or other form of electronic signature shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original, not a .pdf or other form of electronic signature.

Section 12. Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

Section 13. Fees and Expenses. Except as otherwise provided in this Agreement, all expenses incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such expenses; *provided*, *however*, that in the event the Closing does not occur solely due to the failure by the Company to obtain the written confirmation from Nasdaq as contemplated by Section 5.4, then the Company shall reimburse the Purchasers for their actual, reasonable and documented expenses incurred in connection with the transactions contemplated by this Agreement in an amount not to exceed an aggregate of $30,000.

Section 14. Severability. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

Section 15. Entire Agreement; Amendments. This Agreement supersedes all other prior oral or written agreements between the Purchasers, the Company, their Affiliates and persons acting on their behalf with respect to the matters discussed herein, and this Agreement, the Notes, the Warrants and the instruments referenced herein contain the entire understanding of the parties with respect to the matters covered herein and therein and, except as specifically set forth herein or therein, none of the Company or any of the Purchasers makes any representation, warranty, covenant or undertaking with respect to such matters. No provision of this Agreement may be amended, waived or modified other than by an instrument in writing signed by the Company and: (a) prior to the Closing, the Purchasers purchasing at least a majority of the aggregate principal amount of the

Notes, as set forth on **SCHEDULE A** hereto, or (b) after the Closing, the Purchasers holding at least a majority of the aggregate principal amount of the then-outstanding Notes. Any such amendment, waiver or modification effected in accordance with this Section 15 shall be binding upon all Purchasers and each transferee of the Securities (or the Note Shares or Warrant Shares), each future holder of all such securities and the Company.

Section 16. Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (a) upon receipt, when delivered personally; (b) upon receipt, when sent by e-mail (*provided* confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (c) one calendar day (excluding Saturdays, Sundays, and national banking holidays in the United States) after deposit with an overnight courier service, in each case properly addressed to the party to receive the same.

The addresses and e-mail addresses for such communications shall be:

If to the Company:

Sorrento Therapeutics Inc.
4955 Directors Place
San Diego, California 92121
E-mail: hji@sorrentotherapeutics.com
Attn: Henry Ji, Ph.D.

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

Paul Hastings LLP
4747 Executive Drive, 12th Floor
San Diego, CA 92121
E-mail: jeffhartlin@paulhastings.com
Attn: Jeffrey Hartlin, Esq.

If to a Purchaser: To the address set forth opposite such Purchaser's name on **SCHEDULE A** hereto;

or to such other address and/or e-mail address and/or to the attention of such other person as the recipient party has specified by written notice given to each other party five (5) days prior to the effectiveness of such change.

Section 17. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including any purchasers of the Securities.

Section 18. No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other person.

Section 19. Survival of Representations. The representations, warranties and covenants of the Company and the Purchasers contained in this Agreement shall survive the Closing and shall in no way be affected by any investigation of the subject matter thereof made by or on behalf of any of the Purchasers or the Company. The Company shall indemnify and hold harmless each of the Purchasers for any and all losses suffered by such Purchaser as a result of, in connection with, or relating to, any breach by the Company of any representation, warranty and/or covenant of the Company in this Agreement or in any certificate, document or other writing delivered by the Company to such Purchaser pursuant to this Agreement.

Section 20. Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as any other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

Section 21. Language; Currency. This Agreement has been prepared in the English language and the English language shall control its interpretation. In addition, all notices required or permitted to be given hereunder, and all written, electronic, oral or other communications between the parties regarding this Agreement, shall be in the English language. All references to "$" contained in this Agreement shall refer to United States Dollars unless otherwise stated.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

COMPANY:

SORRENTO THERAPEUTICS, INC.

By: /s/ Henry Ji, Ph.D.
Name: Henry Ji, Ph.D.
Title: Chairman of the Board, President & Chief Executive Officer

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

ASIA PACIFIC MEDTECH (BVI) LIMITED

By: /s/ Nana Gu
Name: Nanu Gu
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

FAMOUS SINO LIMITED

By: /s/ WU Guangze
Name: WU Guangze
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

CHINA IN SHINE INVESTMENT LIMITED

By: /s/ FUNG Chit
Name: FUNG Chit
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

GRAND SHINE ASIA LIMITED

By: /s/ Chaoxin Zhou
Name: Chaoxin Zhou
Title: Director

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

PORT BLISS HOLDINGS LIMITED

By: /s/ HU Yu
Name: HU Yu
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

HIMARK GROUP (HOLDINGS) COMPANY LIMITED

By: /s/ Na O
Name: Na O
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

SUCCESS INDICATOR INVESTMENTS LIMITED

By: /s/ LI Kang
Name: LI Kang
Title: Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

XIANJIAN ADVANCED TECHNOLOGY LIMITED

By: /s/ XIE Yuehui
Name: XIE Yuehui
Title: Director

IN WITNESS WHEREOF, the parties have executed this Securities Purchase Agreement as of the date first written above.

PURCHASER:

PIPELINE VENTURES, LLC

By: /s/ Patrick Lin
Name: Patrick Lin
Title: Partner

SCHEDULE A

SCHEDULE OF PURCHASERS

Name of Purchaser	Address	Jurisdiction of Formation (for Entities)	Principal Amount of Note Purchased	Number of Warrant Shares
Asia Pacific MedTech (BVI) Limited	c/o Offshore Incorporations Limited, P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands	British Virgin Islands	$10,000,000	713,012
Famous Sino Limited	Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands	British Virgin Islands	$20,000,000	1,426,024
China In Shine Investment Limited	Flat F, 12/F, Tower 5, Harbour Green, 8 Sham Mong Road, Tai Kok Tsui, Kowloon, Hong Kong	British Virgin Islands	$20,000,000	1,426,024
Grand Shine Asia Limited	Units 389-391, 3rd Floor, Peninsula Centre, 67 Mody Road, Tsimshatsui East, Kowloon, Hong Kong	British Virgin Islands	$10,000,000	713,012
Port Bliss Holdings Limited	Vistra Corporate Services Centre, Ground Floor NPF Building, Beach Road, Apia, Samoa	Samoa	$20,000,000	1,426,024
Himark Group (Holdings) Company Limited	Flat C, 7/F, One Island Place, 51 Tanner Road, North Point, Hong Kong	British Virgin Islands	$20,000,000	1,426,024

Name of Purchaser	Address	Jurisdiction of Formation (for Entities)	Principal Amount of Note Purchased	Number of Warrant Shares
Success Indicator Investments Limited	P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands	British Virgin Islands	$15,000,000	1,069,518
Xianjian Advanced Technology Limited	Cybio Electronic Building, Langshan 2nd Street, North Area of High-tech Park, Nanshan District, Shenzhen 518057, P. R. China	British Virgin Islands	$5,000,000	356,506
Pipeline Ventures, LLC	Pipeline Ventures, LLC c/o Patrick Lin 21 “C” Orinda Way #138 Orinda, CA 94563	California	$500,000	35,650
		TOTAL	**$120,500,000**	8,591,794

Exhibit 12.1

Sorrento Therapeutics, Inc.
Ratio of Earnings to Fixed Charges
(Dollars in thousands)

(in $ thousands)	Three Months Ended March 31, 2018	Fiscal Year Ended December, 31 2017	2016	2015	2014	2013
Pretax Income (Loss) from Continuing Operations	(33,574)	15,315	(65,268)	(9,719)	(36,359)	(21,911)
Fixed Charges (per below)	1,904	5,201	1,712	1,651	1,628	254
Interests Capitalized	(1)	-	-	-	-	-
Earnings	**(32,481)**	**20,516**	**(63,556)**	**(8,068)**	**(34,731)**	**(21,657)**
Interests and Other Financial Charges	1,042	4,980	1,615	1,651	1,628	254
Interests Portion of Rental Expense	52	221	97	-	-	-
Fixed Charges	1,094	5,201	1,712	1,651	1,628	254
Ratio of Earnings to Fixed Charges	**(29.7)**	**3.9**	**(37.1)**	**(4.9)**	**(21.3)**	**(85.3)**

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
Pursuant to Rule 13a-14(a) adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Henry Ji, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Sorrento Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Henry Ji, Ph.D.

Henry Ji, Ph.D.
Chairman of the Board of Directors, Chief Executive Officer and President
(Principal Executive Officer)

Dated: May 10, 2018

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
Pursuant to Rule 13a-14(a) adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jiong Shao, certify that:

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

/s/ Jiong Shao

Jiong Shao
Chief Financial Officer
(Principal Financial Officer)

Dated: May 10, 2018

Exhibit 32.1

CERTIFICATIONS OF
PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Henry Ji, Principal executive officer of Sorrento Therapeutics, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to my knowledge:

1. The Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date:	May 10, 2018	By:	/s/ Henry Ji, Ph.D.
			Henry Ji, Ph.D.
			Chairman of the Board of Directors, Chief Executive Officer and President
			(Principal Executive Officer)

I, Jiong Shao, Principal financial officer of Sorrento Therapeutics, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to my knowledge:

1. The Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date:	May 10, 2018	By:	/s/ Jiong Shao
			Jiong Shao
			Chief Financial Officer
			(Principal Financial Officer)

A signed original of these certifications has been provided to Sorrento Therapeutics, Inc. and will be retained by Sorrento Therapeutics, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

These certifications are being furnished solely to accompany this quarterly report pursuant to 18 U.S.C. Section 1350, and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934 and are not to be incorporated by reference into any filing of Sorrento Therapeutics, Inc., whether made before or after the date hereof, regardless of any general incorporation language in such filing.