MANNKIND CORP
Form 10-Q
August 02, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 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: 000-50865

MannKind Corporation

(Exact name of registrant as specified in its charter)

Delaware	13-3607736
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
30930 Russell Ranch Road, Suite 301 Westlake Village, California	91362
(Address of principal executive offices)	(Zip Code)

(818) 661-5000

(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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

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

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

As of July 17, 2018, there were 152,988,367 shares of the registrant’s common stock, $0.01 par value per share, outstanding.

MANNKIND CORPORATION

Form 10-Q

For the Quarterly Period Ended June 30, 2018

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ITEM 1. FINANCIAL STATEMENTS

MANNKIND CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited)

(In thousands, except per share data)

	As of June 30, 2018	As of December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$26,178	$43,946
Restricted cash	527	4,409
Accounts receivable, net	2,848	2,789
Inventory	3,676	2,657
Deferred costs from commercial product sales	—	405
Prepaid expenses and other current assets	2,570	3,010
Total current assets	35,799	57,216
Property and equipment, net	26,036	26,922
Other assets	320	437
Total assets	$62,155	$84,575
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$9,237	$6,984
Accrued expenses and other current liabilities	14,075	12,449
Facility financing obligation	38,002	52,745
Deferred revenue, net	—	3,038
Deferred payments from collaboration - current	396	250
Recognized loss on purchase commitments - current	13,191	12,131
Total current liabilities	74,901	87,597
Note payable to related party	72,196	79,666
Accrued interest - note payable to related party	4,566	2,347
Senior convertible notes	19,161	24,411
Recognized loss on purchase commitments - long term	88,346	97,585
Deferred payments from collaboration - long term	2,403	500
Milestone rights liability	7,201	7,201
Total liabilities	268,774	299,307
Commitments and contingencies (Note 12)		
Stockholders' deficit:		
Undesignated preferred stock, $0.01 par value - 10,000,000 shares authorized;	—	—

no shares issued or outstanding at June 30, 2018 and December 31, 2017		
Common stock, $0.01 par value - 280,000,000 shares authorized, 145,619,293 and 119,053,414 shares issued and outstanding at June 30, 2018 and December 31, 2017, respectively	1,456	1,192
Additional paid-in capital	2,698,028	2,638,992
Accumulated other comprehensive loss	(18)	(18)
Accumulated deficit	(2,906,085)	(2,854,898)
Total stockholders' deficit	(206,619)	(214,732)
Total liabilities and stockholders' deficit	$62,155	$84,575

See notes to condensed consolidated financial statements.

MANNKIND CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(In thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Revenues:				
Net revenue - commercial product sales	$3,753	$1,548	$7,155	$2,745
Net revenue - collaboration	87	63	150	125
Revenue - other	53	552	53	2,302
Total revenues	3,893	2,163	7,358	5,172
Expenses:				
Cost of goods sold	5,095	5,086	9,103	7,635
Research and development	2,967	3,123	5,611	6,251
Selling, general and administrative	21,731	18,566	42,349	33,956
Property and equipment impairment	—	111	—	111
(Gain) Loss on foreign currency translation	(5,363)	6,848	(2,379)	8,392
Total expenses	24,430	33,734	54,684	56,345
Loss from operations	(20,537)	(31,571)	(47,326)	(51,173)
Other (expense) income:				
Change in fair value of warrant liability	—	147	—	6,776
Interest income	55	58	161	114
Interest expense on notes	(1,709)	(2,422)	(3,503)	(5,128)
Interest expense on note payable to related party	(1,046)	(721)	(2,160)	(1,435)
Gain (Loss) on extinguishment of debt	772	(830)	(53)	(830)
Other income	30	—	61	13
Total other (expense)	(1,898)	(3,768)	(5,494)	(490)
Loss before provision for income taxes	(22,435)	(35,339)	(52,820)	(51,663)
Income tax expense	(240)	—	(240)	—
Net loss	$(22,675)	$(35,339)	$(53,060)	$(51,663)
Net loss per share - basic and diluted	$(0.16)	$(0.35)	$(0.41)	$(0.53)
Shares used to compute basic and diluted net loss per share	140,054	99,864	130,535	97,816

See notes to condensed consolidated financial statements.

MANNKIND CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(Unaudited)

(In thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Net loss	$(22,675)	$(35,339)	$(53,060)	$(51,663)
Other comprehensive income:				
Cumulative translation (loss) gain	(3)	3	—	3
Comprehensive loss	$(22,678)	$(35,336)	$(53,060)	$(51,660)

See notes to condensed consolidated financial statements.

MANNKIND CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(In thousands)

	Six Months Ended June 30,	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(53,060)	$(51,663)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation, amortization and accretion	1,459	1,787
Stock-based compensation expense	4,152	2,516
Loss on extinguishment of debt, net	53	830
Loss on sale, abandonment/disposal or impairment of property and equipment	—	87
(Gain) Loss on foreign currency translation	(2,379)	8,392
Interest on note payable to related party	2,219	1,435
Change in fair value of warrant liability	—	(6,776)
Write-off of inventory	779	1,460
Other, net	106	3
Changes in operating assets and liabilities:		
Accounts receivable, net	(170)	(1,010)
Receivable from Sanofi	—	30,557
Inventory	(1,798)	(2,301)
Deferred costs from commercial product sales	—	(191)
Prepaid expenses and other current assets	440	1,800
Other assets	79	125
Accounts payable	2,253	3,357
Accrued expenses and other current liabilities	818	(483)
Deferred revenue	—	(827)
Deferred payments from collaboration	2,049	(125)
Recognized loss on purchase commitments	(5,800)	(500)
Net cash used in operating activities	(48,800)	(11,527)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Net proceeds from sale of asset held for sale	—	16,651
Proceeds from sale of property and equipment	—	24
Net cash provided by investing activities	—	16,675
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from direct placement of common stock	28,000	—
Issuance cost associated with direct placement	(1,610)	—
Principal payments on facility financing obligation	—	(4,000)
Borrowings on note payable to related party	—	19,429
Payment of employment taxes related to vested restricted stock units	(184)	(88)
Proceeds from issuance of common stock pursuant to at-the-market issuance	634	—

Issuance cost of at-the-market transactions	(25)	—
Proceeds from executive stock purchase plan	335	—
Net cash provided by financing activities	27,150	15,341
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS AND RESTRICTED CASH	(21,650)	20,489
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, BEGINNING OF PERIOD	48,355	22,895
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, END OF PERIOD	$26,705	$43,384
SUPPLEMENTAL CASH FLOWS DISCLOSURES:		
Interest paid in cash, net of amounts capitalized	$1,860	$4,141
NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Payment of note obligations through common stock issuance, net of issuance costs	$20,405	$11,000
Payment of note payable to related party through common stock issuance	$8,160	$—
Capitalization of interest on note payable to related party	$—	$10,716
Accrued but unpaid debt issuance costs	$156	$—

See notes to condensed consolidated financial statements.

MANNKIND CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

1. Description of Business and Significant Accounting Policies

The accompanying unaudited condensed consolidated financial statements of MannKind Corporation and its subsidiaries ("MannKind," the "Company," "we" or "us"), have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X of the Securities and Exchange Commission (the "SEC"). Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. The information included in this quarterly report on Form 10-Q should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's annual report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC on February 27, 2018 (the "Annual Report").

In the opinion of management, all adjustments, consisting only of normal, recurring adjustments, considered necessary for a fair presentation of the results of these interim periods have been included. The results of operations for the three and six months ended June 30, 2018 may not be indicative of the results that may be expected for the full year.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates or assumptions. Management considers many factors in selecting appropriate financial accounting policies, and in developing the estimates and assumptions that are used in the preparation of the financial statements. Management must apply significant judgment in this process. The more significant estimates reflected in these accompanying condensed consolidated financial statements include revenue recognition and gross-to-net adjustments, assessing long-lived assets for impairment, clinical trial expenses, inventory costing and recoverability, recognized loss on purchase commitments, milestone rights liability, stock-based compensation and the determination of the provision for income taxes and corresponding deferred tax assets and liabilities and the valuation allowance recorded against net deferred tax assets.

Business — MannKind is a biopharmaceutical company focused on the development and commercialization of inhaled therapeutic products for diseases such as diabetes and pulmonary arterial hypertension. The Company's only approved product, Afrezza (insulin human) Inhalation Powder, is a rapid-acting inhaled insulin that was approved by the U.S. Food and Drug Administration (the "FDA") in June 2014 to improve glycemic control in adults with diabetes. Afrezza became available by prescription in U.S. retail pharmacies in February 2015. Currently, the Company promotes Afrezza to endocrinologists and certain high-prescribing primary care physicians in the United States through its own specialty sales force. Outside of the United States, subject to receipt of the necessary foreign regulatory approvals, the Company is seeking to establish regional partnerships for the commercialization of Afrezza in foreign jurisdictions where there are commercial opportunities.

Basis of Presentation - 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 is not currently profitable and has rarely generated positive net cash flow from operations. As of June 30, 2018, the Company had an accumulated deficit of $2.9 billion.

At June 30, 2018, the Company's capital resources consisted of cash and cash equivalents of $26.2 million. The Company expects to continue to incur significant expenditures to support commercial manufacturing, sales and

marketing of Afrezza and the development of product candidates in the Company's pipeline. The facility agreement (the "Facility Agreement") with Deerfield Private Design Fund II, L.P. ("Deerfield Private Design Fund") and Deerfield Private Design International II, L.P. (collectively, "Deerfield") that resulted in the issuance of 9.75% Senior Convertible Notes due 2019 ("2019 notes") and the First Amendment to Facility Agreement and Registration Rights Agreement (the "First Amendment") that resulted in the issuance of an additional tranche of 8.75% Senior Convertible Notes due 2019 ("Tranche B notes") (see Note 7 — Borrowings) requires the Company to maintain at least $20.0 million in cash and cash equivalents as of the end of each fiscal quarter through December 31, 2018 and $25.0 million for fiscal quarters thereafter.

As of June 30, 2018, the Company had $129.2 million principal amount of outstanding borrowings. The Company entered into certain transactions related to these borrowings during 2017 and 2018 that are more fully described in Note 6 — Related-Party Arrangements, Note 7 – Borrowings and Note 15 – Subsequent Events.

The Company's current available cash and financing sources will not be sufficient to meet its current and anticipated cash requirements. The Company plans to raise additional capital, whether through a sale of equity or debt securities, a strategic business collaboration with another company, the establishment of other funding facilities, licensing arrangements, asset sales or other means, in order to continue the development and commercialization of Afrezza and other product candidates and to support its other ongoing activities. The Company cannot provide assurances that such additional capital will be available on acceptable terms or at all. Successful completion of these plans is dependent on factors outside of the Company's control. As such, management cannot be certain that such plans will be effectively implemented within one year after the date that the financial statements are issued. These factors raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Reverse Stock-Split - On March 1, 2017, following stockholder approval, the Company's board of directors approved a 1-for-5 reverse stock split of the Company's outstanding common stock. On March 1, 2017, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment of the Company's Amended and Restated Certificate of Incorporation (the "Charter Amendment") to effect the 1-for-5 reverse stock split of the Company's outstanding common stock (the "Reverse Stock Split") . The Company's common stock began trading on the Nasdaq Global Market on a split-adjusted basis when the market opened on March 3, 2017.

As a result, prior to March 3, 2017, all common stock share amounts included in these condensed consolidated financial statements have been retroactively reduced by a factor of five, and all common stock per share amounts have been increased by a factor of five, with the exception of the Company's common stock par value.

Principles of Consolidation – The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. Intercompany balances and transactions have been eliminated.

Segment Information – Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. To date, the Company has viewed its operations and manages its business as one segment operating in the United States of America.

Revenue Recognition — The Company adopted Accounting Standards Codification ("ASC") Topic 606 - Revenue from Contracts with Customers ("the new revenue guidance"), on January 1, 2018. Under Topic 606, the Company recognizes revenue when its customers obtain control of promised goods or services, in an amount that reflects the consideration which the Company expects to be entitled in exchange for those goods or services. See below for more information about the impact of adoption of the new revenue guidance.

To determine revenue recognition for arrangements that are within the scope of Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract, and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to arrangements that meet the definition of a contract under Topic 606, including when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer.

At contract inception, once the contract is determined to be within the scope of Topic 606, the Company assesses the goods or services promised within each contract, determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company has three types of contracts with customers: contracts with wholesale distributors and specialty pharmacies for commercial product sales, collaboration arrangements, and arrangements with parties to whom it has sold intellectual property.

Revenue Recognition – Net Revenue – Commercial Product Sales – The Company sells Afrezza to a limited number of wholesale distributors and specialty pharmacies in the U.S. (collectively, its "Customers"). These Customers subsequently resell the Company's products to retail pharmacies and certain medical centers or hospitals. Specialty pharmacies sell directly to patients. In addition to distribution agreements with Customers, the Company enters into arrangements with health care providers and payors that provide for government mandated and/or privately negotiated rebates, chargebacks, and discounts with respect to the purchase of the Company's products.

The Company recognizes revenue on product sales when the Customer obtains control of the Company's product, which occurs at a point in time (based on the terms of the relevant contracts which are at delivery for wholesale distributors and at shipment for specialty pharmacies). Product revenues are recorded net of applicable reserves for variable consideration, including discounts and allowances.

Voucher Program – Under the voucher program, potential new patients are given vouchers which they can provide to retailers for a free product. The retailers provide the product to the patient for free and pay the wholesaler for the product, who pays the Company. The retailers submit the vouchers to a program administrator which pays the retailer for the product. The administrator then invoices the Company for the amount of vouchers paid plus a fee. Accordingly, on a net basis, it is not probable that the Company will receive the consideration to which it is entitled for these products. Therefore, the Company excludes such amounts from both gross and net revenue. The cost of product associated with the voucher program is included in cost of goods sold.

Reserves for Variable Consideration — Revenues from product sales are recorded at the net sales price (transaction price), which includes estimates of variable consideration for which reserves are established. Components of variable consideration include trade discounts and allowances, product returns, provider chargebacks and discounts, government rebates, payor rebates, and other incentives, such as voluntary patient assistance, and other allowances that are offered within contracts between the Company and its Customers, payors, and other indirect customers relating to the Company's sale of its products. These reserves, as detailed below, are based on the amounts earned, or to be claimed on the related sales, and result in a reduction of accounts receivable or establishment of a current liability.

Where appropriate, these estimates take into consideration a range of possible outcomes which are probability-weighted in accordance with the expected value method in Topic 606 for relevant factors such as current contractual and statutory requirements, specific known market events and trends, industry data, and forecasted customer buying and payment patterns. Overall, these reserves reduce recognized revenue to the Company's best estimates of the amount of consideration to which it is entitled based on the terms of the respective underlying contracts.

The amount of variable consideration which is included in the transaction price may be constrained, and is included in the net sales price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized under the contract will not occur in a future period. The Company's analyses also contemplates application of the constraint in accordance with the guidance, under which it determined a material reversal of revenue would not occur in a future period for the estimates detailed below as of June 30, 2018 and, therefore, the transaction price was not reduced further during the six months ended June 30, 2018. Actual amounts of consideration ultimately received may differ from the Company's estimates. If actual results in the future vary from the Company's estimates, the Company will adjust these estimates, which would affect net revenue – commercial product sales and earnings in the period such variances become known.

Trade Discounts and Allowances — The Company generally provides Customers with discounts which include incentive fees, such as prompt pay discounts, that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. In addition, the Company compensates (through trade discounts and allowances) its Customers for sales order management, data, and distribution services. However, the Company has determined such services received to date are not distinct from the Company's sale of products to the Customer and, therefore, these payments have been recorded as a reduction of revenue and a reduction to accounts receivable, net.

Product Returns — Consistent with industry practice, the Company generally offers Customers a right of return for unopened product that has been purchased from the Company for a period beginning six months prior to and ending twelve months after its expiration date, which lapses upon shipment to a patient. The Company estimates the amount of its product sales that may be returned by its Customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized, as well as reductions to accounts receivable, net. The Company currently estimates product returns using available industry data and its own sales information, including its visibility into the inventory remaining in the distribution channel. The Company currently estimates that 2.46% of products will be returned.

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

Government Rebates — The Company is subject to discount obligations under state Medicaid programs and Medicare. These reserves are recorded in the same period the related revenue is recognized, resulting in a reduction of product revenue and the establishment of a current liability which is included in accrued expenses and other current liabilities. For Medicare, the Company also estimates the number of patients in the prescription drug coverage gap for whom the Company will owe an additional liability under the Medicare Part D program. The Company's liability for these rebates consists of invoices received for claims from prior quarters that have not been paid or for which an invoice has not yet been received, estimates of claims for the current quarter, and estimated future claims that will be made for product that has been recognized as revenue, but which remains in the distribution channel inventories at the end of each reporting period.

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

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

As of December 31, 2017, prior to the adoption of Topic 606, the ending balance for net deferred revenue, was $3.0 million, on the Company's condensed consolidated balance sheets which is presented net of $1.5 million in gross-to-net revenue adjustments. On January 1, 2018, deferred revenue was adjusted to zero as a result of the adoption of Topic 606 as disclosed below. For the three and six months ended June 30, 2018, shipments to three wholesale distributors represented 89% and 88%, respectively, compared with 93% and 93% respectively, for the same periods in 2017.

Revenue Recognition – Net Revenue – Collaborations — The Company enters into out-licensing agreements under which the Company licenses certain rights to its product candidates to third parties. The terms of these arrangements may include payment to the Company of one or more of the following: non-refundable, up-front license fees; development, regulatory, and commercial milestone payments; payments for manufacturing supply services the Company provides; and royalties on net sales of licensed products and sublicenses of the rights. Each of these payments may result in license, collaboration, or other revenue, except revenue from royalties on net sales of licensed products, which would be classified as royalty revenue.

As part of the accounting for these arrangements, the Company must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. The Company uses key assumptions to determine the stand-alone selling price, which may include forecasted revenues, development timelines, reimbursement rates for personnel costs, discount rates, and probabilities of technical and regulatory success.

Licenses of Intellectual Property — If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenue from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are bundled with other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, up-front fees. The Company will evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition. Revenue from licenses of intellectual property is included in Net revenue - Collaboration in the condensed consolidated statement of operations.

Milestone Payments — At the inception of each arrangement that includes development milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the customer, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue as, or when, the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company

will re-evaluate the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license, collaboration, other revenue, and earnings in the period of adjustment.

Manufacturing Supply Services — Arrangements that include a promise for future supply of drug substance or drug product for either clinical development or commercial supply, at the customer's discretion, are generally considered as options. The Company assesses if these options provide a material right to the licensee and, if so, they are accounted for as separate performance obligations. If the Company is entitled to additional payments when the licensee exercises these options, any additional payments are recorded in license, collaboration, or other revenue when the customer obtains control of the goods, which is upon delivery.

Royalties — For licensing arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all the royalty has been allocated has been satisfied (or partially satisfied). For sales of intellectual property that include sales-based royalties, the Company estimates the amount of variable consideration that it will receive from the sales-based royalty. The Company has not recognized any royalty revenue resulting from the sale of its intellectual property in 2017 which is more fully described in Note 9, Sale of Intellectual Property.

Revenue Recognition — Revenue — Other — Revenue-other consists of revenue from revenue from research and development work on behalf of a third party as well as bulk insulin sales. For the three and six months ended June 30, 2017, revenue – other consists of $0.6 million and $2.3 million, respectively, of revenue from bulk insulin sales and sale of intellectual property to Shanghai Fosun Pharmaceutical Industrial Development Co. Ltd. ("Fosun") which is more fully described in Note 8 – Sale of Intellectual Property.

Cost of Goods Sold — A significant component of cost of goods sold is current period manufacturing costs in excess of costs capitalized into inventory (excess capacity costs). These costs, in addition to the impact of the annual revaluation of inventory to standard costs (and the annual revaluation of deferred costs of commercial sales to standard costs in 2017), and write-offs of inventory (and write-offs of deferred costs of commercial sales in 2017) are recorded as expenses in the period in which they are incurred, rather than as a portion of inventory costs. Cost of goods sold also includes the standard cost related to Afrezza sold during the period and related variances and realized currency gain or loss in connection with the Amphastar insulin contract. The cost of goods sold also excludes the write off of cost of insulin held in inventory at the end of 2015.

Restricted Cash – The Company records restricted cash when cash and cash equivalents are restricted as to withdrawal or usage. As of June 30, 2018 and December 31, 2017, there was restricted cash held in an escrow account used as collateral for a letter of credit.

Accounts Receivable and Allowance for Doubtful Accounts — Accounts receivable are recorded at the invoiced amount and are not interest bearing. Accounts receivable are presented net of an allowance for doubtful accounts if there are estimated losses resulting from the inability of its customers to make required payments. The Company makes ongoing assumptions relating to the collectability of its accounts receivable in its calculation of the allowance for doubtful accounts. Accounts receivable are also presented net of an allowance for product returns and trade discounts and allowances because the Company's customers have the right of setoff for these amounts against the related accounts receivable.

Inventories — Inventories are stated at the lower of cost or net realizable value. The Company determines the cost of inventory using the first-in, first-out, or FIFO, method. The Company capitalizes inventory costs associated with the Company's products based on management's judgment that future economic benefits are expected to be realized; otherwise, such costs are expensed as incurred as cost of goods sold. The Company periodically analyzes its inventory levels to identify inventory that may expire or has a cost basis in excess of its estimated realizable value and writes down such inventories, as appropriate. In addition, the Company's products are subject to strict quality control and monitoring which the Company performs throughout the manufacturing process. If certain batches or units of product no longer meet quality specifications or may become obsolete or are forecasted to become obsolete due to expiration, the Company will record a charge to write down such unmarketable inventory to its estimated net realizable value. The cost of goods sold also excludes the write off of insulin held in inventory at the end of 2015.

Leases – The Company records rent expense for leases that contain scheduled rent increases on a straight-line basis over the lease term which begins with the point at which the Company obtains control and possession of the leased property.

Recognized Loss on Purchase Commitments — The Company assesses whether losses on long term purchase commitments should be accrued. Losses that are expected to arise from firm, non-cancellable, commitments for the future purchases are recognized unless recoverable. When making the assessment, the Company also considers whether it is able to renegotiate with its vendors. The recognized loss on purchase commitments is reduced as inventory items are received. If, subsequent to an accrual, a purchase commitment is successfully renegotiated, the gain is recognized in the Company's condensed consolidated statement of operations.

The liability balance of the recognized loss on purchase commitments is $101.5 million as of June 30, 2018. No new contracts were identified in 2018 or 2017 that required a new loss on purchase commitment accrual.

Fair Value of Financial Instruments — The Company applies various valuation approaches in determining the fair value of its financial assets and liabilities within a hierarchy that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1 — Quoted prices for identical instruments in active markets.

Level 2 — Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.

Level 3 — Significant inputs to the valuation model are unobservable.

Contingencies — The Company records a loss contingency for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These accruals represent management's best estimate of probable loss. Disclosure also is provided when it is reasonably possible that a loss will be incurred or when it is reasonably possible that the amount of a loss will exceed the recorded provision. On a quarterly basis, the Company reviews the status of each significant matter and assesses its potential financial exposure. Significant judgment is required in both the determination of probability and the determination as to whether an exposure is reasonably estimable. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, the Company reassesses the potential liability related to pending claims and litigation and may revise its estimates.

Stock-Based Compensation — Share-based payments to employees, including grants of stock options, restricted stock units, performance-based awards and the compensatory elements of employee stock purchase plans, are recognized in the condensed consolidated statements of operations based upon the fair value of the awards at the grant date subject to an estimated forfeiture rate. The Company uses the Black-Scholes option valuation model to estimate the grant date fair value of employee stock options and the compensatory elements of employee stock purchase plans. Restricted stock units are valued based on the market price on the grant date. The Company evaluates stock awards with performance conditions as to the probability that the performance conditions will be met and estimates the date at

which the performance conditions will be met in order to properly recognize stock-based compensation expense over the requisite service period.

Clinical Trial Expenses — Clinical trial expenses, which are primarily reflected in research and development expenses in the accompanying condensed consolidated statements of operations, result from obligations under contracts with vendors, consultants and clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to the Company under such contracts. The appropriate level of trial expenses are reflected in the Company's condensed consolidated financial statements by matching period expenses with period services and efforts expended. These expenses are recorded according to the progress of the trial as measured by patient progression and the timing of various aspects of the trial. Clinical trial accrual estimates are determined through discussions with internal clinical personnel and outside service providers as to the progress or state of completion of trials, or the services completed. Service provider status is then compared to the contractually obligated fee to be paid for such services. During the course of a clinical trial, the Company may adjust the rate of clinical expense recognized if actual results differ from management's estimates.

Net Income (Loss) Per Share of Common Stock — Basic net income or loss per share excludes dilution for potentially dilutive securities and is computed by dividing net income or loss by the weighted average number of common shares outstanding during the period. Diluted net income or loss per share reflects the potential dilution under the treasury method that could occur if securities or other contracts to issue common stock were exercised or converted into common stock. For periods where the Company has presented a net loss, potentially dilutive securities are excluded from the computation of diluted net loss per share as they would be anti-dilutive.

The computation of basic and diluted net loss per share for the six months ended June 30, 2018 and 2017 excludes the common stock equivalents of the following potentially dilutive securities because their inclusion would be anti-dilutive:

	June 30,	
	2018	
	2018	2017
Vesting of restricted stock units	1,219,419	1,193,100
Employee stock purchase plan	248,067	—
Exercise of common stock options	11,368,356	7,972,175
Conversion of convertible notes into common stock	14,154,500	814,561
Conversion of convertible related party notes into common stock	21,909,541	—
Exercise of common stock warrants	31,856	9,740,597
Exercise of warrants associated with direct placement	14,000,000	—
	62,931,739	19,720,433

Impact of Adoption of the New Revenue Guidance – The Company applied the new revenue guidance using the modified retrospective approach to all contracts with the cumulative effect of initial application recognized as of January 1, 2018. The comparative information has not been restated and continues to be accounted for under the previous accounting guidance.

The previous accounting guidance required the Company to reliably estimate returns in order to recognize revenue upon shipment. While the Company could estimate returns within a range, it was not sufficiently precise to meet those requirements. Accordingly, under the previous guidance, the Company deferred recognition of revenue on Afrezza product deliveries to wholesalers until the right of return no longer existed, which occurred at the earlier of the time Afrezza was dispensed from pharmacies to patients or expiration of the right of return. Therefore, for deliveries to wholesalers, the Company recognized revenue based on estimated Afrezza patient prescriptions dispensed, a sell-through model.

Upon adoption of the new revenue guidance, the Company moved from the sell-through model to a sell-to model for revenue related to commercial sales of Afrezza to wholesalers and now records revenue when its customers take control of the product along with an estimate of potential returns as variable consideration. For sales of Afrezza to specialty pharmacies, the Company previously recognized revenue at the time of shipment because specialty pharmacies generally purchase on demand and estimated returns are minimal. Therefore, there was no impact upon adoption for sales to specialty pharmacies.

Additionally, the Company has historically entered into collaborative agreements and sales of intellectual property to third parties under which periodic payments have been received. In February 2017, the FASB issued ASU 2017-05 Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets to ASC Subtopic 610-20, Other Income-Gains and Losses from the Derecognition of Nonfinancial Assets which further clarified the new revenue recognition guidance under ASC Topic 606. The Company adopted the guidance on January 1, 2018 using the modified retrospective method. There was no impact upon adoption related to these arrangements. These transactions are more fully described in Note 8 - Collaborative Arrangements and Note 9 - Sale of Intellectual Property.

The cumulative effect of the changes made to the condensed consolidated January 1, 2018 balance sheet for the adoption of the new revenue guidance were as follows (in thousands):

	Balance at December 31, 2017	Adjustments due to new revenue guidance		Balance at January 1, 2018
Assets				
Accounts receivable, net	$ 2,789	$ (111)	(1)	$ 2,678
Deferred costs from commercial product sales	405	(405)	(2)	—
Liabilities				
Accrued expenses and other current liabilities	$ 12,449	$ 649	(3)	$ 13,098
Deferred revenue, net	3,038	(3,038)	(4)	—
Equity				
Accumulated deficit	$ (2,854,898)	$ 1,873	(5)	$ (2,853,025)

(1) To establish a reserve for product returns

(2) To eliminate deferred costs from commercial product sales previously required by the sell-through method

(3) To record additional accrual for estimated voucher payments related to inventory remaining in the distribution channel at January 1, 2018

(4) To eliminate deferred revenue previously required by the sell-through method

(5) To record the net impact of (1)-(4) in opening accumulated deficit

In accordance with the new revenue guidance, the disclosure of the impact of adoption on the condensed consolidated balance sheet and the condensed consolidated statement of operations and cash flows was as follows (in thousands):

Condensed Consolidated Balance Sheet	For the six months ended June 30, 2018		
	As Reported	Adjustments	Balances without adoption of Topic 606
Assets			
Accounts receivable, net	$2,848	$ 300	$ 3,148
Deferred costs from commercial product sales	—	406	406
Liabilities			
Accrued expenses and other current liabilities	$14,075	$ (479)	$ 13,596
Deferred revenue, net	—	2,690	2,690
Equity			
Accumulated deficit	$(2,906,085)	$ (1,506)	$ (2,907,591)

Condensed Consolidated Statement of Operations	For the six months ended June 30, 2018		
	As Reported	Adjustments	Balances without adoption of Topic 606
Revenue			
Net revenue - commercial product sales	$7,155	$ 201	$ 7,356
Expenses			
Cost of goods sold	$9,103	$ (1)	$ 9,102

Net loss	(53,060)	202	(52,858)

Change in Estimate – In the second quarter of 2018, the Company obtained new and more comprehensive prescription data from a third party. This data indicated that the net revenue amount was less than previously estimated in the first quarter 2018. Because the new data was more comprehensive than the data that was previously available to the Company, the Company adjusted the net revenue balance to match the new estimate. The net effect of this change was a reduction to net revenue of $0.4 million for the period ended March 31, 2018.

	For the three months ended June 30, 2018		
	As Reported	Adjustments	Balances without adoption of Topic 606
Revenue			
Net revenue - commercial product sales	$3,753	$ (388)	$ 3,365
Expenses			
Cost of goods sold	$5,095	$ (45)	$ 5,050
Net loss	(22,675)	(178)	(22,853)

	For the six months ended June 30, 2018		
	As Reported	Adjustments	Balances without adoption of Topic 606
Cash Flows from Operating Activities			
Net loss	$(53,060)	$ 202	$ (52,858)
Change in:			
Accounts receivable, net	(170)	(188)	(358)
Deferred costs from commercial product sales	—	(1)	(1)
Accrued expenses and other current liabilities	818	170	988
Deferred revenue, net	—	(348)	(348)
Cash (used in) provided by operating activities	(48,800)	(165)	(48,965)

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

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The new standard requires that all lessees recognize the assets and liabilities that arise from operating leases on the balance sheet and disclose qualitative and quantitative information about its leasing arrangements. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The new standard will be effective on January 1, 2019. The Company is evaluating the impact the adoption of ASU No. 2016-02 will have on its condensed consolidated financial statements.

2. Accounts Receivable

Accounts receivable, net consists of the following (in thousands):

	June 30, 2018	December 31, 2017

Accounts receivable, gross	$ 3,617	$ 2,842
Wholesaler distribution fees and prompt pay discounts	(664)	(53)
Reserve for returns	(105)	—
Accounts receivable, net	$ 2,848	$ 2,789

As of December 31, 2017 the Company did not have a return reserve as the Company was on the sell-through method (as described in Note 1 – Description of Business and Significant Accounting Policies).

As of June 30, 2018 and December 31, 2017, the allowance for doubtful accounts was de minimis. As of June 30, 2018 and December 31, 2017, the Company had three wholesale distributors representing approximately 92% and 93% of gross accounts receivable, respectively.

3. Inventories

Inventories consist of the following (in thousands):

	June 30, 2018	December 31, 2017
Raw materials	$ 1,111	$ 572
Work-in-process	1,502	1,273
Finished goods	1,063	812
Total inventory	$ 3,676	$ 2,657

Work-in-process and finished goods as of June 30, 2018 and December 31, 2017 include conversion costs but not all material costs because the materials used in its production were previously written off.

The Company analyzed its inventory levels to identify inventory that may expire or has a cost basis in excess of its estimated realizable value. The Company performed an assessment of projected sales and evaluated the lower of cost or net realizable value and the potential excess inventory on hand at June 30, 2018. For the three and six months ended June 30, 2018 the Company recorded a $0.2 million and $0.8 million charge, respectively, to write-off inventory that may expire prior to sale which was recorded as cost of goods sold. During the three and six months ended June 30, 2017, the Company recorded a write-down of inventory of approximately $1.5 million for inventory that was forecasted to become obsolete due to expiration which is recorded in costs of goods sold in the accompanying condensed consolidated statements of operations.

4. Property and Equipment

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

	Estimated Useful Life (Years)	June 30, 2018	December 31, 2017
Land	—	$875	$ 875
Buildings	39-40	17,389	17,389
Building improvements	5-40	34,957	34,957
Machinery and equipment	3-15	62,681	62,681
Furniture, fixtures and office equipment	5-10	3,106	3,556
Computer equipment and software	3	8,416	8,416
		127,424	127,874
Less accumulated depreciation		(101,388)	(100,952)
Total property and equipment, net		$26,036	$ 26,922

Depreciation expense related to property and equipment for the three and six months ended June 30, 2018 and 2017 was as follows (in thousands):

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2018	2017	2018	2017
Depreciation Expense	$445	$450	$886	$896

During the six months ended June 30, 2018, the Company disposed of $0.5 million of certain fully depreciated furniture, fixtures and office equipment which were no longer in service. Therefore, the cost and associated accumulated depreciation for these items were removed from the balance sheet.

5. Accrued Expenses and Other Current Liabilities

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

	June 30, 2018	December 31, 2017
Salary and related expenses	$6,951	$ 7,260
Current portion of milestone rights liability	1,643	1,643
Professional fees	887	1,007
Discounts and allowances for commercial product sales	1,286	873
Sales and marketing services	125	147
Restructuring	—	362
Accrued interest	1,501	567
External Clinical Trial	610	—
Other	1,072	590
Accrued expenses and other current liabilities	$14,075	$ 12,449

Accrued salary and related expenses includes $1.0 million in selling, general and administrative costs related to transitioning certain corporate support functions from Connecticut to the corporate headquarters in California.

6. Related Party Arrangements

Related party debt consist of the following (in thousands):

	June 30, 2018	December 31, 2017
Principal amount	$71,506	$ 79,666
Unamortized premium	758	—
Unaccreted debt issuance costs	(68)	—
Net carrying amount	$72,196	$ 79,666

In October 2007, the Company entered into a loan arrangement (the “Mann Group Loan Arrangement”) with The Mann Group LLC (the “The Mann Group”), which has been amended from time to time. At that time, Alfred Mann, the Company’s then Chairman and Chief Executive Officer, was the managing member of The Mann Group LLC. On October 31, 2013, the promissory note underlying the Mann Group Loan Arrangement, described in the Company’s condensed consolidated balance sheets as Note Payable to Related Party, was amended to, among other things, extend the maturity date of the loan to January 5, 2020, extend the date through which the Company can borrow under the

Mann Group Loan Arrangement to December 31, 2019, increase the aggregate borrowing amount under the Mann Group Loan Arrangement from $350.0 million to $370.0 million and provide that repayments or cancellations of principal under the Mann Group Loan Arrangement will not be available for reborrowing. At various times over the years that the Mann Group Loan Arrangement has been outstanding, the Company and The Mann Group have agreed to exchange portions of the outstanding principal for shares of the Company's common stock.

On June 27, 2017, the Company entered into an agreement with The Mann Group, pursuant to which the parties agreed to, among other things, (i) capitalize $10.7 million of accrued and unpaid interest as of June 30, 2017, resulting in such amount being classified as outstanding principal under The Mann Group Loan Arrangement; (ii) advance to the Company approximately $19.4 million of cash, the remaining amount available for borrowing by the Company under The Mann Group Loan Arrangement after the foregoing capitalization of accrued and unpaid interest; and (iii) defer all interest payable on the outstanding principal until July 1, 2018, unless such payments are otherwise permitted under the subordination agreement with Deerfield, and subject to further deferral pursuant to the terms of the subordination agreement with Deerfield which terms are more fully disclosed below.

On March 11, 2018, the Company amended and restated the Mann Group Loan Arrangement with The Mann Group to, among other things, (i) reflect the current outstanding principal balance of the existing loan of $71.5 million, after giving effect to the partial cancellation of principal in exchange for shares of the Company's common stock described below; (ii) extend the maturity date of the loan to July 1, 2021; (iii) for periods beginning after April 1, 2018 require interest to compound quarterly; and (iv) permit the principal and any accrued and unpaid interest under the Mann Group Loan Arrangement to be converted, at the option of The Mann Group, at any time on or prior to close of business on the business day immediately preceding the stated maturity date, into shares of the Company's common stock. The conversion rate of 250 shares per $1,000 principal amount of the Note, which is equal to $4.00 per share subject to adjustment under certain circumstances as described in the Mann Group Loan Arrangement.

The Company analyzed this amendment and concluded that the transaction represented an extinguishment of the related party note and recorded a $0.8 million loss on extinguishment of debt. As a result of the extinguishment the Company recorded a debt premium of $0.8 million and debt issuance costs of $0.1 million during the six months ended June 30, 2018.

On March 11, 2018, the Company and The Mann Group entered into a common stock purchase agreement pursuant to which the Company agreed to issue to The Mann Group and The Mann Group agreed to purchase 3,000,000 shares of the Company's common stock at a price per share of $2.72 which represented the closing price of the Company's common stock on March 9, 2018. As payment for the purchase price for the shares, The Mann Group agreed to cancel $8.2 million in principal amount under the Mann Group Loan Arrangement, with the principal payment to be reflected in the amended and restated Mann Group Loan Arrangement. The purchased shares were issued in a private placement.

Interest, at a fixed rate of 5.84%, is due and payable quarterly in arrears on the first day of each calendar quarter for the preceding quarter, or at such other time as the Company and The Mann Group mutually agree. Under the agreement, accrued and unpaid interest may be paid-in-kind. The Mann Group can require the Company to prepay up to $200.0 million in advances that have been outstanding for at least 12 months, less approximately $113.2 million aggregate principal amount that has been cancelled in connection with three common stock purchase agreements. If The Mann Group exercises this right, the Company will have 90 days after The Mann Group provides written notice, or the number of days to maturity of the note if less than 90 days, to prepay such advances. However, pursuant to a letter agreement entered into in August 2010, The Mann Group has agreed to not require the Company to prepay amounts outstanding under the amended and restated promissory note if the prepayment would require the Company to use its working capital resources. In addition, The Mann Group entered into a subordination agreement with Deerfield pursuant to which The Mann Group agreed with Deerfield not to demand or accept any payment under the Mann Group Loan Arrangement until the Company's payment obligations to Deerfield under the Facility Agreement have been satisfied in full. Subject to the foregoing, in the event of a default under The Mann Group Loan Arrangement, all unpaid principal and interest either becomes immediately due and payable or may be accelerated at The Mann Group's option, and the interest rate will increase to the one-year LIBOR calculated on the date of the initial advance or in effect on the date of default, whichever is greater, plus 5% per annum. All borrowings under the Mann Group Loan Arrangement are unsecured. The Mann Group Loan Arrangement contains no financial covenants.

As of June 30, 2018 and December 31, 2017, the Company had accrued unpaid interest related to the above note of $4.6 million and $2.3 million, respectively. As of June 30, 2018 and December 31, 2017 there were no additional amounts available for future borrowings. Interest expense (excluding the amortization of debt premium and debt issuance costs) for the three and six months ended June 30, 2018 and 2017 are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Interest expense on note payable to related party	$1,040	$721	$2,160	$1,435

Amortization of the premium and accretion of debt issuance costs related to the related party notes for the three and six months ended June 30, 2018 and 2017 are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Amortization of debt premium	$57	$ 61	$67	$120
Accretion expense - debt issuance cost	$6	$ 6	$8	$8

In May 2015, the Company entered into a sublease agreement with the Alfred Mann Foundation for Scientific Research (the “Mann Foundation”), a California not-for-profit corporation. The lease was for approximately 12,500 square feet of office space in Valencia, California, which expired in April 2017 and was renewed on a month-to-month basis at a rate of $20,000 per month until August 31, 2017 at which time the Company moved into its new corporate headquarters in Westlake Village, California (see Note 12 — Commitments and Contingencies). Lease Payments to the Mann Foundation for the three and six months ended June 30, 2017 were $60,000 and $122,000, respectively.

The Company has entered into indemnification agreements with each of its directors and executive officers, in addition to the indemnification provided for in its amended and restated certificate of incorporation and amended and restated bylaws (see Note 12 —Commitments and Contingencies).

On October 10, 2017, the Company entered into securities purchase agreements with certain institutional investors and a charitable foundation. Included in this offering were 166,600 shares at a purchase price of $6.00 per share issued to the Kresa Family Foundation, of which Kent Kresa, the Company's Chairman of the Board, is the President.

7. Borrowings

Borrowings consist of the following (in thousands):

	June 30, 2018	December 31, 2017
Facility Financing Obligation (2019 Notes and Tranche B notes)		
Principal amount	$39,000	$ 54,407
Unamortized debt issuance costs and debt discount	(998)	(1,662)
Net carrying amount	$38,002	$ 52,745
Senior Convertible Notes (2021 Notes)		
Principal amount	$18,690	$ 23,690
Unamortized premium	471	721
Net carrying amount	$19,161	$ 24,411
Note payable to related party - net carrying amount	$72,196	$ 79,666
Total debt - net carrying amount	$129,359	$ 156,822

In addition to the Mann Group Loan Arrangement described in Note 6, as of June 30, 2018, the Company outstanding borrowings consisted of has $18.7 million principal amount of the Senior Convertible Notes due 2021 bearing interest at 5.75% per annum and maturing on October 23, 2021, as well as $39.0 million principal amount of the Facility Financing Obligation, which is comprised of the following:

- $32.0 million principal amount of 2019 notes bearing interest at 9.75% per annum. Interest is payable in cash quarterly in arrears in the last business day of March, June, September and December of each year. As of June 30, 2018, the principal amount due and payable was as follows: $12.0 million in July 2018 (see Note 15, Subsequent Event), $15 million in July 2019, and $5.0 million in December 2019 (see Note 15 Subsequent Event); and
- $7.0 million principal amount of Tranche B notes bearing interest at 8.75% per annum. Interest is payable in cash quarterly in arrears on the last business day of March, June, September and December of each year. As of June 30, 2018, the principal amount due and payable was as follows: $5.0 million in May 2019 and $2.0 million in December 2019 (see Note 15, Subsequent Event).

These borrowings are further described below:

Facility Financing Obligation (2019 Notes and Tranche B notes) – The Facility Financing Obligation was initially entered into in 2013 between the Company and Deerfield Private Design Fund II, L.P. and Deerfield Private Design International II, L.P. (collectively, "Deerfield") through the issuance of multiple tranches of notes that provided for aggregate borrowings of $120.0 million in 2019 notes and $20.0 million in Tranche B notes. As individual tranches have neared their maturity dates, the Company has repaid such tranches in whole or in part or agreed with Deerfield to exchange all or a portion of the outstanding principal for shares of the Company's common stock as described more fully below.

On April 18, 2017, the Company entered into an Exchange Agreement with Deerfield pursuant to which the Company agreed to, among other things, (i) repay $4.0 million principal amount under the Tranche B notes; (ii) exchange $1.0 million principal amount under the Tranche B notes for 869,565 shares of the Company's common stock (the "Tranche B Exchange Shares"); and (iii) exchange $5.0 million principal amount under the 2019 notes for 4,347,826 shares of the Company's common stock (together with the "Tranche B Exchange Shares," the "April Exchange Shares"). The exchange price for the Exchange Shares was at a discount of $1.15 per share.

The Company determined that, since the principal amount repaid and exchanged under the Tranche B notes and the principal amount exchanged under the 2019 notes represented the principal amount that would have otherwise become due and payable in May and July of 2017 under the Tranche B notes and 2019 notes, respectively, the extinguishment of the May and July 2017 payments was not considered to be a troubled debt restructuring. Accordingly, the Company accounted for the transaction by recording a loss on extinguishment of debt of $0.3 million at April 18, 2017 which was calculated as the difference between the reacquisition price and the net carrying value of the related debt. The reacquisition price was calculated using the $4.0 million cash repayment and the fair value of the April Exchange Shares on April 18, 2017. The fair value of the April Exchange Shares was determined to be $1.22 per share, which represents the closing price of the Company's common stock on April 18, 2017.

On June 29, 2017, the Company entered into the Third Amendment with Deerfield, pursuant to which the Company agreed to, among other things, (i) exchange $5.0 million principal amount under the Company's 2019 notes for 3,584,230 shares of the Company's common stock (the "June Exchange Shares") at an exchange price of $1.395 per share and (ii) amend the Facility Agreement with Deerfield, to (A) defer the payment of $10.0 million in principal amount of the 2019 notes from the original July 18, 2017 due date to August 31, 2017, which was further deferred to October 31, 2017 upon the Company's delivery on August 31, 2017 and October 30, 2017 of a written certification to Deerfield that certain conditions had been met, including that no event of default under the Facility Agreement had occurred, Michael E. Castagna remains the Company's Chief Executive Officer, the Company received the advance from The Mann Group (see Note 6 — Related-Party Arrangements), the Company had at least $10.0 million in cash and cash equivalents on hand, no material adverse effect on the Company had occurred, the engagement letter between the Company and Greenhill & Co., Inc. ("Greenhill") remained in full force and effect and Greenhill had remained actively engaged in exploring capital structure and financial alternatives on behalf of the Company in accordance with such engagement letter (collectively, the "Extension Conditions"), and (B) amend the Company's financial covenant under the Facility Agreement to provide that, if the Extension Conditions remain satisfied, the obligation under the Facility Agreement to maintain at least $25.0 million in cash and cash equivalents as of the end of each quarter was reduced to $10.0 million as of August 31, 2017, September 30, 2017, October 31, 2017 and December 31, 2017 if certain conditions were met. We met the conditions at each of these month-ends.

The Company determined that the principal amount repaid and exchanged under the 2019 notes represented the principal amount that would have otherwise become due and payable under the 2019 notes. As a result, the $5.0 million prepayment was not considered to be a troubled debt restructuring. Accordingly, the Company accounted for the transaction by recording a loss on extinguishment of debt of $0.5 million on June 29, 2017 which was calculated as the difference between the reacquisition price and the net carrying value of the related debt. The net carrying value of the related debt includes the acceleration of the debt discount and issuance costs amounting to approximately $0.3 million as a result of the transaction. The reacquisition price was calculated using the fair value of the June Exchange Shares on June 29, 2017. The fair value of the Exchange Shares was determined to be $1.45 per share which represented the closing price of the Company's common stock on June 29, 2017.

On October 23, 2017, the Company entered into a Fourth Amendment to the Facility Agreement, pursuant to which the parties (i) deferred the payment of $10.0 million in principal amount (the "October Payment") of the Facility Financing Obligation from October 31, 2017 to January 15, 2018, with the Company depositing an amount of cash equal to the October Payment into an escrow account until the October Payment has been satisfied in full (subject to early release to the extent that portions of the October Payment are satisfied through the exchange of principal for shares of the Company's common stock), and (ii) amended and restated the Facility Financing Obligation and the Tranche B notes to provide that Deerfield may convert the principal amount under such notes from time to time into an aggregate of up to 4,000,000 shares of the Company's common stock after the effective date of the Fourth Amendment. The conversion price will be the greater of (i) the average of the volume weighted average price per share of the Company's common stock for the three trading day period immediately preceding the date of any election by Deerfield to convert principal amounts of such notes and (ii) $3.25 per share, subject to adjustment under certain circumstances. Any conversions of principal by Deerfield under such notes will be applied first to reduce the October Payment, and after the October Payment has been satisfied, to reduce other principal payments due.

The Company determined that the Fourth Amendment did not include any concessions and that the addition of the conversion option was not substantive and therefore it was not considered to be a troubled debt restructuring. Accordingly, the Company accounted for the transaction as a modification. On November 6, 2017 Deerfield converted 1,720,846 shares under the conversion feature at a price of $3.25 per share, redeeming $5.6 million of principal amount.

On January 15, 2018, the Company entered into a Fifth Amendment (the "Fifth Deerfield Amendment") with Deerfield to the Facility Agreement, pursuant to which the parties deferred the payment date for the $4.4 million remaining October 2017 Tranche 4 Principal Payment from January 15, 2018 to January 19, 2018. Concurrent with this amendment the Company entered into a First Amendment to Escrow Agreement to extend the escrow period to January 19, 2018 to align with the amended payment date under the Fifth Deerfield Amendment.

On January 18, 2018, the Company entered into an Exchange and Sixth Amendment to Facility Agreement (the "Sixth Deerfield Amendment") with Deerfield, pursuant to which, among other things, the Company agreed to issue to Deerfield an aggregate of 1,267,972 shares of its common stock, par value $0.01 per share (the "Exchange Shares"), in exchange for $3.2 million of the 2019 notes, an exchange rate of $2.49 per share. In addition, the parties deferred the payment date for the $1.3 million remaining principal amount of the 2019 notes (the "Remaining Payment") from January 19, 2018 to May 6, 2018.

The Company and Deerfield also amended the outstanding 2019 notes and Tranche B notes to provide that Deerfield may, subject to the terms of the Sixth Deerfield Amendment, convert principal amounts of the 2019 notes and Tranche B notes from time to time into an aggregate of up to 10,000,000 shares of the Company's common stock (excluding the Exchange Shares). The conversion price will be the greater of (i) the average of the volume weighted average price per share of the Company's common stock for the three trading day period immediately preceding the date of any election by Deerfield to convert principal amounts and (ii) $2.75 per share, subject to adjustment under certain circumstances described in the 2019 notes and Tranche B notes. Any conversions of principal will be applied first to reduce the Remaining Payment, and thereafter to reduce other principal payments.

In connection with the Sixth Deerfield Amendment, the Company also entered into a Second Amendment to Escrow Agreement, dated January 18, 2018, with Deerfield and US Bank, pursuant to which the parties extended the period of the escrow established thereunder to May 6, 2018, corresponding to the extended payment date.

The Company determined that the Fifth and Sixth Deerfield Amendments did not include any concessions and that the change of the conversion option was not substantive and therefore it was not considered to be a troubled debt restructuring. Accordingly, the Company accounted for the transaction as a modification.

On March 6, 2018 Deerfield converted the remaining $1.3 million of principal amount due under the 2019 notes for 441,618 shares of the Company's common stock (the "January Exchange Shares"). The fair value of the January Exchange Shares was determined to be $2.83 per share representing the average of the volume weighted average price per share of the Company's common stock for the three trading day period immediately preceding the date of the election by Deerfield to convert per the Nasdaq Global Market. The Escrow Agreement with Deerfield and US Bank, was terminated as the required payment was satisfied in full as of March 12, 2018.

On March 12, 2018 the Company entered into an Exchange Agreement with Deerfield pursuant to which the Company agreed to, among other things, exchange $5.0 million of principal amount of the Tranche B notes for 1,838,236 shares of the Company's common stock (the "March Exchange Shares"). The fair value of the March Exchange Shares was determined to be $2.72 per share representing the closing price of the Company's common stock on March 9, 2018 per the Nasdaq Global Market. The principal amount being exchanged under the Tranche B notes represents the principal amount that would have otherwise become due and payable in May 2018.

On June 8, 2018, the Company entered into an Exchange and Seventh Amendment to Facility Agreement (the "Seventh Deerfield Amendment") with Deerfield, pursuant to which, among other things, (i) the Company issued to Deerfield 3,061,224 shares of the Company's common stock (the "June Exchange Shares") in exchange for the cancellation of (a) $3.0 million of $5.0 million principal amount of 2019 notes that was due and payable on July 1, 2018 and (b) $3.0 million of $5 million principal amount of Tranche B notes that was due and payable on December 31, 2019, (ii) the Company's obligation under the Facility Agreement to maintain at least $25.0 million in cash as of the end of each quarter was reduced to $20 million through December 31, 2018, (iii) the minimum price at which the 2019 notes or Tranche B notes may be converted into shares of the Company's common stock was reduced from $2.75 to $2.01 per share and (iv) the parties agreed that, on or after June 8, 2018, the 2019 notes and Tranche B notes may be converted into a maximum of 9,558,382 shares of the Company's common stock. The fair value of the June Exchange Shares was

determined to be $1.96 per share, representing the closing price of the Company's common stock on June 8, 2018 per the Nasdaq Global Market.

On July 12, 2018, the Company and MannKind LLC, the Company's wholly owned subsidiary, entered into an Exchange and Eighth Amendment to Facility Agreement (the "Eighth Deerfield Amendment") with Deerfield, pursuant to which the parties amended the Facility Agreement to, among other things, (i) issue to Deerfield 7,367,839 shares of the Company's common stock in exchange for the cancellation of (a) $7.0 million of $10.0 million principal amount under the Company's Amended and Restated 9.75% Senior Convertible notes due 2019 (the "Tranche 4 notes") that was due and payable on July 18, 2018, (b) $3.0 million of $5.0 million principal amount under the Tranche 4 notes due 2019 that was due and payable on December 31, 2019 and (c) $2.0 million of $2.0 million principal amount under the Company's 8.75% Senior Convertible notes due 2019 that was due and payable on December 31, 2019, (ii) defer the payment of $3.0 million in principal amount of the Tranche 4 notes from July 18, 2018 to August 31, 2018, (iii) reduce the minimum price at which the remaining notes issued under the Facility Agreement may be converted into shares of the Company's common stock from $2.01 to $1.80 per share and (iv) provide that, on or after July 12, 2018, such remaining notes may be converted into a maximum of 5,750,000 shares of the Company's common stock.

In connection with the Facility Agreement, on July 1, 2013, the Company entered into a Milestone Rights Purchase Agreement (the "Milestone Agreement") with Deerfield and Horizon Santé FLML SÁRL (collectively, the "Milestone Purchasers"), which requires the Company to make contingent payments to the Milestone Purchasers, totaling up to $90.0 million, of which $75.0 million remain payable, upon the Company achieving specified commercialization milestones (the "Milestone Rights"). During the first quarter of 2015, a milestone triggering event was achieved due to the launch of Afrezza. This resulted in a $5.8 million incremental charge to interest expense due to an increase in the carrying value of the liability to account for the $10.0 million milestone payment made in February 2015.

As of June 30, 2018 and December 31, 2017, the remaining milestone rights liability balance was $8.8 million. The Company currently estimates that it will reach the next milestone in the first quarter of 2019. Accordingly, $1.6 million in value related to the next milestone payment was recorded in accrued expenses and other current liabilities as of June 30, 2018 and December 31, 2017, resulting in $7.2 million being recorded in milestone rights liability, which is non-current, in the accompanying condensed consolidated balance sheets as of June 30, 2018 and December 31, 2017, respectively.

Accretion of debt issuance cost and debt discount during the three and six months ended June 30, 2018 and 2017, are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Accretion expense - debt issuance cost	$10	$24	$17	$32
Accretion expense - debt discount	$385	$686	$698	$1,133

The Facility Agreement includes customary representations, warranties and covenants, including a restriction on the incurrence of additional indebtedness. As discussed in Note 1 – Description of Business and Summary of Significant Accounting Policies, the Company will need to raise additional capital to support its current operating plans. Due to the uncertainties related to maintaining sufficient resources to comply with the aforementioned covenant, the Facility Financing Obligation has been classified as a current liability in the accompanying condensed consolidated balance sheets as of June 30, 2018 and December 31, 2017. In the event of non-compliance, Deerfield may declare all or any portion of the Facility Financing Obligation to be immediately due and payable.

The Milestone Agreement includes customary representations and warranties and covenants by the Company, including restrictions on transfers of intellectual property related to Afrezza. The Milestone Rights are subject to acceleration in the event the Company transfers its intellectual property related to Afrezza in violation of the terms of the Milestone Agreement. The Company has initially recorded the Milestone Rights at their estimated fair value.

In connection with the Facility Agreement and Milestone Agreement, the Company and its subsidiary, MannKind LLC, entered into a Guaranty and Security Agreement (the “Security Agreement”) with Deerfield and Horizon Santé FLML SÁRL (collectively, the “Purchasers”), pursuant to which the Company and MannKind LLC each granted the Purchasers a security interest in substantially all of their respective assets, including respective intellectual property, accounts receivables, equipment, general intangibles, inventory and investment property, and all of the proceeds and products of the foregoing. The Security Agreement includes customary covenants by the Company and MannKind LLC, remedies of the Purchasers and representations and warranties by the Company and MannKind LLC. The security interests granted by the Company and MannKind LLC will terminate upon repayment of the Facility Financing Obligation in full, if applicable.

The Company identified and evaluated a number of embedded features in the notes issued under the Facility Agreement to determine if they represented embedded derivatives that are required to be separated from the notes and accounted for as freestanding instruments. The Company analyzed the Tranche B notes and identified embedded derivatives which required separate accounting. All of the embedded derivatives were determined to have a de minimis value as of June 30, 2018 and December 31, 2017.

Senior Convertible Notes Due 2021 — On October 23, 2017, the Company entered into exchange agreements with the holders of the Company's 5.75% Senior Convertible Notes due 2018 (the "2018 notes"), pursuant to which the Company agreed to exchange all of the outstanding 2018 notes in the aggregate principal amount of $27.7 million for (i) new 5.75% $23.7 million aggregate principal amount of Senior Convertible notes due 2021 (the "2021 notes") and (ii) an aggregate of 973,236 shares of its common stock. In addition, the conversion rate was adjusted from $34 per share to $5.15 per share. The 2021 notes were issued at the closing of the exchange on October 23, 2017. The Company analyzed this exchange and concluded that the exchange represents an extinguishment of the 2018 notes and recorded a $0.8 million loss on extinguishment of debt during the last quarter of fiscal year 2017. In addition, unamortized debt issuance costs of $0.3 million and unamortized debt premium of $0.2 million were also written-off during the last quarter of fiscal year 2017.

On May 25, 2018, the Company entered into a privately-negotiated exchange agreement (the "Exchange Agreement") with certain holders of its outstanding 5.75% Convertible Senior Notes due 2021 (the "2021 notes"), pursuant to which the Company agreed to issue 2,250,000 shares of its common stock (the "Exchange Shares") in exchange for the cancellation of $5.0 million principal amount of the 2021 notes and unpaid accrued interest thereon. The exchange price for the Exchange Shares was approximately $2.2567 per share. The exchange was completed on May 31, 2018. As a result, the Company recognized approximately $0.8 million as extinguishment gain which was calculated based on the difference between the reacquisition price and the net carrying amount of the payment on the debt.

The 2021 notes are the Company's general, unsecured, senior obligations, except that they are subordinated in right of payment to the Facility Financing Obligation. The 2021 notes rank equally in right of payment with the Company's other unsecured senior debt. The 2021 notes bear interest at the rate of 5.75% per year on the principal amount, payable semiannually in arrears in cash or, at the option of the Company if certain conditions are met, in shares of the Company's common stock (the "Interest Shares"), on February 15 and August 15 of each year, beginning February 15, 2018, with interest accruing from August 15, 2017. To date, the interest on the Company's 2021 notes have been paid in cash and not converted. The aggregate number of Interest Shares that the Company may issue may not exceed 13,648,300, unless the Company receives stockholder approval to issue Interest Shares in excess of such a number in accordance with the listing standards of the Nasdaq Global Market. Accrued interest related to these notes is recorded in accrued expenses and other current liabilities on the accompanying condensed consolidated balance sheets.

The 2021 notes are convertible, at the option of the holder, at any time on or prior to the close of business on the business day immediately preceding the stated maturity date, into shares of the Company's common stock at an initial conversion rate of 194.1748 shares per $1,000 principal amount of 2021 notes, which is equal to the initial conversion price of approximately $5.15 per share. The conversion rate is subject to adjustment under certain circumstances described in an indenture governing the 2021 notes.

If the Company undergoes certain fundamental changes, except in certain circumstances, each holder of 2021 notes will have the option to require the Company to repurchase all or any portion of that holder's 2021 notes. The fundamental change repurchase price will be 100% of the principal amount of the 2021 notes to be repurchased plus accrued and unpaid interest, if any.

The Company may elect at its option to cause all or any portion of the 2021 notes to be mandatorily converted in whole or part at any time prior to the close of business on the business day immediately preceding the maturity date, if the last reported sale price of its common stock exceeds 120% of the conversion price then in effect for at least 10 trading days in any 20 consecutive trading day period, ending within five business days prior to the date of the mandatory conversion notice. The redemption price is equal the sum of 100% of the principal amount of the 2021 notes to be redeemed, plus accrued and unpaid interest. Under the terms of the indenture, the conversion option can be net-share settled and the maximum number of shares that could be required to be delivered under the indenture is fixed and less than the number of authorized and unissued shares less the maximum number of shares that could be required to be delivered during the term of the 2021 notes under existing commitments. Applying the Company's sequencing policy, the Company performed an analysis at the time of the offering of the 2021 notes and each reporting date since and has concluded that the number of available authorized shares at the time of the offering and each reporting date since was sufficient to deliver the number of shares that could be required to be delivered during the term of the 2021 notes under existing commitments.

The 2021 notes provide that upon an acceleration of certain indebtedness, including the 2019 notes and the Tranche B notes issued to Deerfield pursuant to the Facility Agreement, the holders may elect to accelerate the Company's repayment obligations under the notes if such acceleration is not cured, waived, rescinded or annulled.

As a result of the exchange of the 2021 notes during the last quarter of 2017, the Company recorded approximately $0.8 million in debt premium, which is recorded with the 2021 notes, in the accompanying condensed consolidated balance sheets. The premium is being accreted to interest expense using the effective interest method over the term of the 2021 notes.

Amortization of the premium and accretion of debt issuance costs related to the 2021 and 2018 notes for the three and six months ended June 30, 2018 and 2017 are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Amortization of debt premium	$40	$ 61	$83	$120
Accretion expense - debt issuance cost	1	$ 68	$1	$134

Refer to Note 6 – Related Party Arrangements for information regarding the Note payable to related party.

8. Collaboration Arrangements

Cipla Distribution Agreement — On May 8, 2018, the Company and Cipla Ltd. (“Cipla”) entered into an exclusive agreement for the marketing and distribution of Afrezza in India and received a $2.2 million nonrefundable license fee. Under the terms of the agreement, Cipla will be responsible for obtaining regulatory approvals to distribute Afrezza in India and for all marketing and sales activities of Afrezza in India. The Company is responsible for supplying Afrezza to Cipla. In addition to the $2.2 million nonrefundable payment, the Company has the potential to receive certain additional regulatory milestone payments, minimum purchase commitment revenue and royalties on Afrezza sales in India once cumulative gross sales have reached a specified threshold.

The nonrefundable licensing fee was recorded in deferred revenue and is being recognized in net revenue – collaboration over fifteen years, representing the estimated period to satisfy the performance obligation. The additional potential milestone payments represent variable consideration for which the Company has not recognized any revenue because of the uncertainly of obtaining market approval. The Company also recognized $0.2 million as income tax expense as payment made to the India tax authority.

Biomm Supply and Distribution Agreement – In May 2017, the Company and Biomm S.A. entered into a supply and distribution agreement for the commercialization of Afrezza in Brazil. Under this agreement, Biomm is responsible for preparing and filing the necessary applications for regulatory approval of Afrezza in Brazil, including from the Agência Nacional de Vigilância Sanitária and, with respect to pricing matters, from the Camara de Regulação de Mercado de Medicamentos. Upon satisfactory approval from these regulatory bodies, the parties will finalize the economic terms of the collaboration; thereafter, MannKind will manufacture and supply Afrezza to Biomm, and Biomm will be responsible for promoting and distributing Afrezza within Brazil.

Receptor Collaboration and License Agreement — In 2016 the Company entered into a Collaboration and License Agreement (the "CLA") with Receptor Life Sciences, Inc. ("Receptor") pursuant to which Receptor obtained the option to acquire an exclusive license to develop, manufacture and commercialize certain products that use the Company's technology to deliver the compounds via oral inhalation.

On December 30, 2016 Receptor exercised its option and paid the Company a $1.0 million nonrefundable option exercise and license fee. Under the CLA, the Company may receive the following additional payments:

- Nonrefundable milestone payments upon the completion of certain technology transfer activities and the achievement of specified sales targets;
- Royalties upon Receptor's and its sublicensees' sale of the product; and
- Milestones upon total worldwide sales reaching certain agreed upon levels.

The $1.0 million license fee received in 2016 was recorded in deferred revenue from collaboration as of December 31, 2016 and is being recognized in net revenue — collaboration over four years, the estimated period over which the Company was required to satisfy the remaining performance obligations. The remaining performance obligations are to provide certain technology transfer activities and to maintain certain patents. Deferred payments from collaboration related to this contract was $0.7 million at June 30, 2018 of which $0.3 million was recorded in current liabilities.

The additional payments referred to above represent variable consideration for which the Company has not recognized any revenue because it is uncertain that Receptor will be able to successfully develop, manufacture or sell product related to this license. Therefore, the receipt of such payments is highly susceptible to factors outside of the Company's

influence, the uncertainty regarding the receipt of these payments is not expected to be resolved for years, and the Company has limited experience with similar contracts. There was no change to the accounting for this contract as a result of the initial application of the new revenue guidance. See Note 1 – Description of Business and Summary of Significant Accounting Policies for additional information on the Company's revenue recognition accounting policy

In 2017, the Company entered into a Manufacturing and Supply Agreement with Receptor pursuant to which the Company will provide certain raw materials to Receptor and agreed to provide certain additional research and formulation consulting services to Receptor. For the three and six months ended June 30, 2018 and 2017 the additional research and formulation services provided to Receptor were de minimis.

Sanofi License Agreement and Sanofi Supply Agreement — In 2014 the Company entered into a license and collaboration and supply agreement (the "Sanofi License Agreement") with Sanofi-Aventis U.S. LLC. ("Sanofi"), pursuant to which Sanofi was responsible for global commercial, regulatory and development activities for Afrezza. In 2016, the agreements were terminated and the Company assumed responsibility for the worldwide development and commercialization of Afrezza from Sanofi.

Also in 2016, the Company entered into a settlement agreement with Sanofi. The settlement was accounted for in 2016, except for a $30.6 million cash payment received under an insulin put option agreement which reduced the receivable from Sanofi in the first quarter of 2017.

9. Sale of Intellectual Property

On April 12, 2017 the Company entered into an agreement to sell certain oncology assets and patents to Fosun. Fosun paid the Company a one-time nonrefundable payment of $0.6 million net of taxes in June 2017 and is required to pay royalties on net sales of products by Fosun and its affiliates and other consideration based on revenues from any licensees. The Company accounted for the transaction as a sale of assets. The Company recorded the $0.6 million in payments received in revenue – other during the second quarter of 2017 as the Company had performed substantially all of its obligations as of June 30, 2017. The royalties and other consideration referred to above represent variable consideration for which the Company has not recognized any revenue because it is uncertain whether and in what period Fosun will be able to sublicense this technology or have the ability to develop, manufacture or sell product utilizing this technology. Therefore receipt of such payments is highly susceptible to factors outside the Company's influence, the uncertainty regarding the receipt of these payments is not expected to be resolved for years, and the Company has limited experience with similar contracts.

See Note 1 — Description of Business and Summary of Significant Accounting Policies for additional information on the Company's revenue recognition policies.

10. Fair Value of Financial Instruments

The availability of observable inputs can vary among the various types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the overall fair value measurement. The Company uses the exit price method for estimating the fair value of loans for disclosure purposes.

Cash Equivalents and restricted cash— Cash equivalents and restricted cash consist of highly liquid investments with original or remaining maturities of 90 days or less at the time of purchase that are readily convertible into cash. As of June 30, 2018 and December 31, 2017, the Company held $15.2 million and $41.0 million, respectively, of cash equivalents. For the period ended June 30, 2018, restricted cash was held in an escrow account as well as used to collateralize a letter of credit. The Company held $0.5 million and $4.4 million in restricted cash as of June 30, 2018 and December 31, 2017, respectively. Both are comprised of money market funds. The fair value of these money market funds was determined by using quoted prices for identical investments in an active market (Level 1 in the fair value hierarchy).

Note Payable to Related Party — As of December 31, 2017, prior to the adoption of ASC 2016-01, the fair value of the note payable to related party could not be reasonably estimated as the Company was not able to obtain a similar credit arrangement in the current economic environment. Therefore the fair value is based upon carrying value as of December 31, 2017. The fair value measurement of the note payable is sensitive to the change in yield. If the yield changes by approximately 1%, from 18% to 19%, the fair value of the note payable with the conversion feature would change from $68.6 million to $67.1 million, or $1.5 million and -2.2%. Similarly, if the yield changes by approximately 3% from 18% to 21%, the fair value of the note payable with the conversion feature would change from $68.6 million to $64.4 million, or $4.2 million and -6.1%. If the yield changes by approximately 4% from 18% to 22%, the fair value of the note payable with the conversion feature would change from $68.6 million to $63.1

million, or $5.5 million and -8%.

Financial Liabilities — The following tables set forth the fair value of the Company's financial instruments (in millions):

	June 30, 2018		
	Carrying Amount	Significant Unobservable Inputs (Level 3)	Fair Value
Financial liabilities:			
Senior convertible notes (2021 notes)	$19.2	$ 15.3	$15.3
Facility financing obligation	38.0	43.2	43.2
Note payable to related party	72.2	65.7	65.7
Milestone rights	8.8	18.4	18.4
Total financial liabilities	$138.2	$ 142.6	$142.6

	December 31, 2017		
	Carrying Value	Significant Unobservable Inputs (Level 3)	Fair Value
Financial liabilities:			
Senior convertible notes (2021 notes)	$24.4	$ 19.8	$19.8
Facility financing obligation	52.7	54.6	54.6
Milestone rights	8.8	19.1	19.1
Total financial liabilities	$85.9	$ 93.5	$93.5

Milestone Rights Liability — The fair value measurement of the milestone rights liability is sensitive to the discount rate and the timing and probability of making milestone payments. If the achievement of each of the milestones which require payments were to be six months later than in the current forecast, the fair value of the liability would decrease by 8%. If the probabilities of meeting the $50 to $200 million milestones were to decrease by 5% or 10%, the fair value of the liability would decrease by 13% and 25%, respectively. Over the long term, these inputs are interrelated because if the Company's performance improves, the timing of meeting the milestones would likely be earlier, the probability of making payments on the milestones would likely be higher and the discount rate would likely decrease, all of which would increase the fair value of the liability. The inverse is also true.

Embedded Derivatives — The Company identified and evaluated a number of embedded features in the notes issued under the Facility Agreement to determine if they represented embedded derivatives that are required to be separated from the notes and accounted for as freestanding instruments. The Company analyzed the Tranche B notes and identified embedded derivatives, which required separate accounting. All of the embedded derivatives were determined to have a de minimis value at June 30, 2018 and December 31, 2017.

11. Stock-Based Compensation Expense

Total stock-based compensation expense recognized in the accompanying condensed consolidated statements of operations for the three and six months ended June 30, 2018 and 2017 are as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Stock-based compensation	$2,209	$1,250	$4,152	$2,516

During the three months ended June 30, 2018, the Company issued 391,200 restricted units to the Company's board of directors which vest immediately. The grant date fair value of the restricted stock units was $747,192 with a weighted average grant date fair value per share of $1.91.

During the three months ended June 30, 2018, the Company granted certain employees stock options to purchase an aggregate of 4,344,758 shares of common stock at a weighted average exercise price of $1.91 per share. The options vest over a four year period. The grant date fair value of these awards is $6.3 million with a weighted average grant date fair value of $1.46 per share, as determined using a Black-Scholes option pricing model.

As of June 30, 2018, there were $2.3 million and $9.0 million of unrecognized compensation expense related to restricted stock units and options, respectively, that vest over the vesting period.

During the three and six months ended June 30, 2018, the Company recognized $0.4 million and $1.4 million, respectively, of compensation costs related to the performance-based stock options. As of June 30, 2018, there was $2.0 million of unrecognized compensation costs related to stock options subject to performance conditions. The Company evaluates stock awards with performance conditions as the probability that the performance conditions will be met and uses that information to estimate the date at which those performance conditions will be met in order to properly recognize stock-based compensation expense over the requisite service period.

12. Commitments and Contingencies

Guarantees and Indemnifications — In the ordinary course of its business, the Company makes certain indemnities, commitments and guarantees under which it may be required to make payments in relation to certain transactions. The Company, as permitted under Delaware law and in accordance with its Bylaws, indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity. The term of the indemnification period is for the officer's or director's lifetime. The maximum amount of potential future indemnification is

unlimited; however, the Company has a director and officer insurance policy that may enable it to recover a portion of any future amounts paid. The Company believes the fair value of these indemnification agreements is minimal. The Company has not recorded any liability for these indemnities in the accompanying condensed consolidated balance sheets. However, the Company accrues for losses for any known contingent liability, including those that may arise from indemnification provisions, when future payment is probable and the amount can be reasonably estimated. No such losses have been recorded to date.

Litigation — The Company is subject to legal proceedings and claims which arise in the ordinary course of its business. As of June 30, 2018, the Company believes that the final disposition of such matters will not have a material adverse effect on the financial position, results of operations or cash flows of the Company and no accrual has been recorded. The Company maintains liability insurance coverage to protect the Company's assets from losses arising out of or involving activities associated with ongoing and normal business operations. The Company records a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The Company's policy is to accrue for legal expenses in connection with legal proceedings and claims as they are incurred.

Following the public announcement of Sanofi's election to terminate the Sanofi License Agreement and the subsequent decline in the Company's stock price, two motions were submitted to the district court at Tel Aviv, Economic Department for the certification of a class action against the Company and certain of its officers and directors. In general, the complaints alleged that the Company and certain of its officers and directors violated Israeli and U.S. securities laws by making materially false and misleading statements regarding the prospects for Afrezza, thereby artificially inflating the price of its common stock. The plaintiffs are seeking monetary damages. In November 2016, the district court dismissed one of the actions without prejudice. In the remaining action, the district court recently ruled that U.S. law will apply to this case. The plaintiff has appealed this ruling to the Supreme Court of Israel, which is expected to hear arguments on the jurisdictional issue later this year. The Company will vigorously defend against the claims advanced.

Contingencies — In connection with the Facility Agreement, on July 1, 2013, the Company also entered into the Milestone Agreement with the Milestone Purchasers, pursuant to which the Company sold the Milestone Purchasers the Milestone Rights to receive payments up to $90.0 million, of which $75.0 million remain payable, upon the achievement of specified net sales figures (see Note 7 – Borrowings).

Commitments — On July 31, 2014, the Company entered into a supply agreement (the "Insulin Supply Agreement") with Amphastar France Pharmaceuticals S.A.S., a French corporation ("Amphastar"), pursuant to which Amphastar manufactures for and supplies to the Company certain quantities of recombinant human insulin for use in Afrezza. Under the terms of the Insulin Supply Agreement, Amphastar is responsible for manufacturing the insulin in accordance with the Company's specifications and agreed-upon quality standards.

On November 9, 2016, the supply agreement with Amphastar was amended to extend the term over which the Company is required to purchase insulin, without reducing the total amount of insulin to be purchased. Under the amendment, annual minimum quantities of insulin to be purchased for calendar years 2018 through 2023 total an aggregate purchase price of €85.8 million at June 30, 2018. The Insulin Supply Agreement specifies that Amphastar will be deemed to have satisfied its obligations with respect to quantity, if the actual quantity supplied is within plus or minus ten percent (+/- 10%) of the quantity set forth in the applicable purchase order. In addition, the aggregate cancellation fees that the Company would incur in the event that certain insulin quantities are not purchased were reduced from $5.3 million for the period October 1, 2016 through 2018 to $3.4 million over the same period. As of June 30, 2018, the remaining annual purchase requirements under the contract are as follows:

2018	$4.4 million
2019	$11.6 million
2020	$15.5 million
2021	$15.5 million
2022	$19.4 million
2023	$19.4 million

The Company took delivery of the required amount of insulin under the contract in 2017 but was only obligated to pay for half prior to December 31, 2017. Accordingly, approximately $1.6 million was included in accounts payable at December 31, 2017 related to the 2017 purchase commitment, which was paid in January 2018. In the second quarter of 2018, the Company took delivery of insulin under the contract in 2018 and approximately $2.6 million was included in accounts payable at June 30, 2018.

Unless terminated earlier, the term of the Insulin Supply Agreement with Amphastar expires on December 31, 2023 and can be renewed for additional, successive two year terms upon 12 months' written notice given prior to the end of the initial term or any additional two year term. The Company and Amphastar each have normal and customary termination rights, including termination for material breach that is not cured within a specific time frame or in the event of liquidation, bankruptcy or insolvency of the other party. In addition, the Company may terminate the Insulin Supply Agreement upon two years' prior written notice to Amphastar without cause or upon 30 days' prior written notice to Amphastar if a controlling regulatory authority withdraws approval for Afrezza, provided, however, in the event of a termination pursuant to either of these two scenarios, the provisions of the Insulin Supply Agreement require the Company to pay the full amount of all unpaid purchase commitments due over the initial term within 60 calendar days of the effective date of such termination. On April 2, 2018, the Company entered into a foreign currency hedging transaction to mitigate its exposure to foreign currency exchange risks. The hedging transaction hedges against short-term currency fluctuations for the current year purchase requirement amount of €6.6 million and is renewable every 90 days. In the second quarter of 2018, the Company realized a currency loss of approximately $0.5 million and recorded this amount in cost of goods sold.

At June 30, 2018, the Company has other firm commitments with suppliers for an aggregate of $0.2 million.

Warrants - On April 5, 2018, the Company entered into securities purchase agreements with certain institutional investors. Pursuant to the terms of the purchase agreements, the Company sold to the purchasers in a registered offering an aggregate of 14,000,000 shares of its common stock and warrants to purchase up to an aggregate of 14,000,000 shares of its common stock at a combined purchase price of $2.00 per share and accompanying warrant. The shares of the common stock and the warrants were immediately separable. The warrants will be exercisable at a price of $2.38 per share beginning six months following the date of issuance and will expire six months thereafter. The net proceeds to the Company from the offering were approximately $26.4 million. The offering closed on April 9, 2018.

Vehicle Leases – The Company entered into a lease agreement with Enterprise for the lease of approximately 100 vehicles. The lease requires monthly payments of approximately $54,000 per month plus the cost of maintaining the vehicles. The leases commenced when the Company took possession of the majority of the vehicles in the second quarter of 2018. The leases expire 48 months after the delivery date.

On March 8, 2018 the Company entered into a standby letter of credit for a total of $0.5 million in connection with the Company's sales force vehicle lease program. The letter of credit is collateralized by a restricted cash account in the amount of $0.5 million. There were no amounts drawn down on this letter of credit as of June 30, 2018.

Office Lease — On May 5, 2017, the Company executed an office lease with Russell Ranch Road II LLC for the Company's corporate headquarters in Westlake Village, California. The office lease commenced in August 2017. The lease requires monthly payments of $40,951, increased by 3% annually, plus the estimated cost of maintaining the property by the landlord with a five month concession from October 2017 through February 2018. The lease expires January 2023 and provides the Company with a five year renewal option.

On November 29, 2017, the Company executed an office lease with Russell Ranch Road II LLC to expand the office space for the Company's corporate headquarters in Westlake Village, California. The office lease will commence in

October 2018. The lease requires monthly payments of $35,969, increased by 3% annually, plus the estimated cost of maintaining the property by the landlord. In addition, the Company will be entitled to reimbursement from the landlord of up to $56,325 for tenant improvements. The lease expires January 2023 and provides the Company with a five year renewal option.

Rental expense under all operating leases including office space and equipment was approximately $0.1 million and $0.2 million for the three and six months ended June 30, 2018, respectively.

Future minimum lease payments are as follows:

2018	$302,000
2019	947,000
2020	976,000
2021	1,005,000
2022	1,035,000
Thereafter	88,000
	$4,353,000

13. Income Taxes

Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets and concluded, in accordance with the applicable accounting standards, that net deferred tax assets should be fully reserved.

The Company has assessed its position with regards to uncertainty in tax positions and believes that its income tax filing positions and deductions will be sustained on audit and does not anticipate any adjustments that will result in a material change to its financial position. Therefore, no reserves for uncertain income tax positions have been recorded pursuant to this guidance. Tax years since 2012 remain subject to examination by the major tax jurisdictions in which the Company is subject to tax.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code of 1986, as amended. The adoption had no impact on its income tax expense upon adoption for the period in which the legislation was enacted. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities is based on the rates at which they are expected to reverse in the future. The impact of this Act was a decrease of deferred tax assets of approximately $301 million, offset by a decrease in valuation allowance of $301 million, resulting in no additional income tax expense or benefit. No provisional amount was recorded related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings.

14. Restructuring Charges

As of December 31, 2017, the Company had a remaining restructuring liability of $0.4 million, which is recorded in accrued expenses and other current liabilities in the condensed consolidated balance sheets. The Company has paid out the remainder of this obligation as of June 30, 2018.

15. Subsequent Event

On July 12, 2018, the Company and MannKind LLC, the Company's wholly owned subsidiary, entered into an Exchange and Eighth Amendment to Facility Agreement (the "Eighth Deerfield Amendment") with Deerfield, pursuant to which the parties amended the Facility Agreement to, among other things, (i) issue to Deerfield 7,367,839 shares of the Company's common stock in exchange for the cancellation of (a) $7.0 million of $10.0 million principal amount under the Company's Amended and Restated 9.75% Senior Convertible Notes due 2019 (the "Tranche 4 notes") that was due and payable on July 18, 2018, (b) $3.0 million of $5.0 million principal amount under the Tranche 4 notes due 2019 that was due and payable on December 31, 2019 and (c) $2.0 million of $2.0 million principal amount under the Company's 8.75% Senior Convertible Notes due 2019 that was due and payable on December 31, 2019, (ii) defer the payment of $3.0 million in principal amount of the Tranche 4 notes from July 18, 2018 to August 31, 2018, (iii) reduce the minimum price at which the remaining notes issued under the Facility Agreement may be converted into shares of the Company's common stock from $2.01 to $1.80 per share and (iv) provide that, on or after July 12, 2018, such remaining notes may be converted into a maximum of 5,750,000 shares of the Company's common stock.

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

Statements in this report that are not strictly historical in nature are "forward-looking statements" within the meaning of the federal securities laws made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "could," "estimate," "expect," "goal," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would," and similar intended to identify forward-looking statements, though not all forward-looking statements contain these identifying words. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth below in Part II, Item 1A Risk Factors and elsewhere in this quarterly report on Form 10-Q. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. The preceding interim condensed consolidated financial statements and this Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the financial statements and related notes for the year ended December 31, 2017 and Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the Annual Report. Readers are cautioned not to place undue reliance on forward-looking statements. The forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they are made.

OVERVIEW

We are a biopharmaceutical company focused on the development and commercialization of inhaled therapeutic products for patients with diseases such as diabetes and pulmonary arterial hypertension. According to the Centers for Disease Control and Prevention, 30 million people in the United States had diabetes in 2015. Globally, the International Diabetes Federation has estimated that approximately 425 million people had diabetes in 2017 and approximately 629 million people will have diabetes by 2045. Our only approved product, Afrezza (insulin human) Inhalation Powder was approved by the U.S. Food and Drug Administration ("FDA") in June of 2014. Afrezza became available by prescription in United States retail pharmacies in February 2015.

Afrezza is a rapid-acting inhaled insulin used to improve glycemic control in adults with diabetes. The product consists of a dry powder formulation of human insulin delivered from a small portable inhaler. Administered at the beginning of a meal, Afrezza dissolves rapidly upon inhalation to the lung and delivers insulin quickly to the bloodstream. The first measurable effects of Afrezza occur approximately 12 minutes after administration.

Pursuant to the Sanofi License Agreement, Sanofi was responsible for global commercial, regulatory and development activities associated with Afrezza from August 2014 to April 2016, after which these responsibilities transitioned back to us. Currently, we promote Afrezza to endocrinologists and certain high-prescribing primary care physicians in the United States through our own specialty sales force. In the future, we may seek to supplement our sales force through a co-promotion arrangement with a third party that has an underutilized primary care sales force, which can be used to promote Afrezza to greater number of primary care physicians.

Our current strategy for future commercialization of Afrezza outside of the United States, subject to receipt of the necessary foreign regulatory approvals, is to seek and establish regional partnerships in foreign jurisdictions where there are commercial opportunities. In May 2017, we entered into a supply and distribution agreement with Biomm S.A. to pursue regulatory approval and commercialization of Afrezza in Brazil. In May 2018, we entered into an exclusive marketing and distribution agreement with Cipla Ltd. to pursue regulatory approval and commercialization

of Afrezza in India.

W also believe our Technosphere formulations of active pharmaceutical ingredients have the potential to demonstrate clinical advantages over existing therapeutic options in a variety of therapeutic areas. We completed a Phase 1 clinical study of Treprostinil Technosphere (TreT) which is a drug-device combination product for the treatment of patients with pulmonary arterial hypertension. We expect to move next to a Phase 3 pivotal safety and efficacy trial and a pivotal bio equivalency trial.

As of June 30, 2018, we had an accumulated deficit of $2.9 billion and a stockholders' deficit of $206.6 million. We had a net loss of $22.7 million and $53.1 million for the three and six months ended June 30, 2018, respectively. We have funded our operations primarily through the sale of equity securities and convertible debt securities, borrowings under the Facility Agreement with Deerfield, borrowings under the Mann Group Loan Arrangement, receipt of upfront and milestone payments under the Sanofi License Agreement, and borrowings under senior secured promissory note and a guaranty and security agreement with an affiliate of Sanofi, which was terminated in 2016. As discussed below in "Liquidity and Capital Resources," if we are unable to obtain additional funding, there is substantial doubt about our ability to continue as a going concern.

Our business is subject to significant risks, including but not limited to our need to raise additional capital to fund our operations, our ability to successfully commercialize Afrezza and manufacture sufficient quantities of Afrezza and the risks inherent in our ongoing clinical trials and the regulatory approval process for our product candidates. Additional significant risks also include the results of our research and development efforts, competition from other products and technologies and uncertainties associated with obtaining and enforcing patent rights.

CRITICAL ACCOUNTING POLICES

Our critical accounting policies can be found in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our Form 10-K for the year ended December 31, 2017. Material changes were made to the accounting policies for revenue recognition due to the adoption of ASC Topic 606 Revenue from Contracts with Customers on January 1, 2018. See Note 1 – Description of Business and Significant Accounting Policies in the condensed consolidated financial statements included in Part I – Financial Statements (Unaudited) for descriptions of the new accounting policies and impact of adoption.

RESULTS OF OPERATIONS

Three and six months ended June 30, 2018 and 2017

Revenues

The following tables provides a comparison of the revenue categories for the three and six months ended June 30, 2018 and 2017 (dollars in thousands):

	Three Months Ended June 30,			
	2018	2017	$ Change	% Change
Revenues:				
Net revenue - commercial product sales:				
Gross revenue from product sales	$6,702	$2,625	$4,077	155 %
Gross-to-Net Adjustments:				
Wholesaler distribution fees and prompt pay discounts	(1,053)	(645)	(408)	(63 %)
Patient discount and co-pay assistance programs	(249)	(207)	(42)	(20 %)
Rebates and chargebacks	(1,333)	(225)	(1,108)	(492 %)
Product returns	(314)	—	(314)	100 %
Net revenue - commercial product sales	3,753	1,548	2,205	142 %
Net revenue - collaboration	87	63	24	38 %
Revenue - other	53	552	(499)	(90 %)
Total revenues	$3,893	$2,163	$1,730	80 %

	Six Months Ended June 30,

2018