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: 001-37923

CRISPR THERAPEUTICS AG

(Exact name of Registrant as specified in its charter)

Switzerland **(State or other jurisdiction of incorporation or organization)**	**Not Applicable** **(I.R.S. Employer Identification No.)**
Baarerstrasse 14 **6300 Zug, Switzerland** **(Address of principal executive offices)**	**Not Applicable** **(zip code)**

+41 (0)41 561 32 77
(Registrant's telephone number, including area code)

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See definition 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 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 registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

As of August 1, 2018, there were 47,586,861 shares of registrant's common shares outstanding.

Index

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

CRISPR Therapeutics AG
Condensed Consolidated Balance Sheets
(unaudited, in thousands, except share and per share data)

	As of	
	June 30, 2018	**December 31, 2017**
Assets		
Current assets:		
Cash	$ 319,737	$ 239,758
Accounts receivable, including related party amounts of $881 and $821 as of June 30, 2018 and December 31, 2017, respectively	944	2,626
Prepaid expenses and other current assets, including related party amounts of $559 and $1,871 as of June 30, 2018 and December 31, 2017, respectively	9,868	6,001
Total current assets	330,549	248,385
Property and equipment, net	18,395	18,857
Intangible assets, net	317	344
Restricted cash	3,165	3,154
Other non-current assets	704	606
Total assets	$ 353,130	$ 271,346
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 4,479	$ 1,639
Accrued expenses, including related party amounts of $78 and $0 as of June 30, 2018 and December 31, 2017, respectively	12,702	11,361
Accrued tax liabilities	47	347
Deferred rent	1,027	1,027
Other current liabilities	226	137
Total current liabilities	18,481	14,511
Deferred revenue non-current, including related party amounts of $0 and $91 as of June 30, 2018 and December 31, 2017, respectively	57,832	56,928
Deferred rent non-current	11,380	11,761
Other non-current liabilities	283	314
Total liabilities	87,976	83,514
Commitments and contingencies, see Note 5		
Shareholders' equity:		
Common shares, CHF 0.03 par value, 47,520,292 and 41,092,969 shares authorized at June 30, 2018 and December 31, 2017, respectively, 47,481,196 and 41,037,121 shares issued at June 30, 2018 and December 31, 2017, respectively, 47,071,835 and 40,592,248 shares outstanding at June 30, 2018 and December 31, 2017, respectively, 19,699,821 and 16,419,632 shares in conditional capital at June 30, 2018 and December 31, 2017, respectively.	1,435	1,240
Treasury shares, at cost, 409,361 and 444,873 shares at June 30, 2018 and December 31, 2017, respectively	(50)	-
Additional paid-in capital	457,032	312,018
Accumulated deficit	(193,268)	(125,440)
Accumulated other comprehensive income	5	14
Total shareholders' equity	265,154	187,832
Total liabilities and shareholders' equity	$ 353,130	$ 271,346

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

CRISPR Therapeutics AG
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited, in thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Collaboration revenue (1)	$ 1,088	$ 3,582	$ 2,446	$ 6,285
Operating expenses:				
Research and development (2)	25,633	17,120	$ 45,152	31,925
General and administrative	12,741	7,768	$ 21,577	16,410
Total operating expenses	38,374	24,888	66,729	48,335
Loss from operations	(37,286)	(21,306)	(64,283)	(42,050)
Other (expense):				
Loss from equity method investment	(1,153)	(505)	$ (2,244)	(951)
Other income (expense), net	155	(161)	$ 29	(167)
Total other (expense), net	(998)	(666)	(2,215)	(1,118)
Net loss before income taxes	(38,284)	(21,972)	(66,498)	(43,168)
Provision for income taxes	(96)	(343)	$ (182)	(622)
Net loss	(38,380)	(22,315)	(66,680)	(43,790)
Foreign currency translation adjustment	(21)	6	(9)	30
Comprehensive loss	$ (38,401)	$ (22,309)	$ (66,689)	$ (43,760)
Reconciliation of net loss to net loss attributable to common shareholders:				
Net loss	$ (38,380)	$ (22,315)	$ (66,680)	$ (43,790)
Net loss per share attributable to common shareholders—basic and diluted	$ (0.82)	$ (0.56)	$ (1.44)	$ (1.10)
Weighted-average common shares outstanding used in net loss per share attributable to common shareholders—basic and diluted	46,842,316	39,895,938	46,362,538	39,811,412
(1) Including the following revenue from a related party, see Note 10:	$ 881	$ 1,475	$ 1,963	$ 2,639
(2) Including the following research and development expense with a related party, see Note 10:	$ 1,246	$ 1,355	$ 2,352	$ 2,491

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

CRISPR Therapeutics AG
Condensed Consolidated Statements of Cash Flows
(unaudited, in thousands)

	Six Months Ended June 30,	
	2018	**2017**
Operating activities:		
Net loss	$ (66,680)	$ (43,790)
Reconciliation of net loss to net cash and restricted cash used in operating activities:		
Depreciation and amortization	1,691	1,426
Equity-based compensation	13,906	7,026
Unrealized foreign currency remeasurement loss	-	(9)
Loss from equity method investment	2,244	951
Other income, non-cash	(169)	-
Changes in:	-	
Accounts receivable	1,682	(3,657)
Prepaid expenses and other assets	(3,804)	(736)
Accounts payable and accrued expenses	3,764	(2,103)
Deferred revenue	(244)	1,586
Deferred rent	(381)	(355)
Other liabilities, net	88	278
Net cash and restricted cash (used in) operating activities	(47,903)	(39,383)
Investing activities:		
Purchase of property and equipment	(1,078)	(4,615)
Net cash and restricted cash (used in) investing activities	(1,078)	(4,615)
Financing activities:		
Proceeds from issuance of common shares in secondary offering, net of issuance	122,597	-
Proceeds from exercise of options	6,433	715
Repurchase of treasury shares	(50)	-
Net cash provided by financing activities	128,980	715
Effect of exchange rate changes on cash	(9)	31
Increase (decrease) in cash and restricted cash	79,990	(43,252)
Cash and restricted cash, beginning of period	242,912	318,670
Cash and restricted cash, end of period	$ 322,902	$ 275,418
Supplemental disclosure of non-cash investing and financing activities		
Property and equipment purchases in accounts payable and accrued expenses	$ 125	$ 2,697

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

1. Organization and Operations

The Company

CRISPR Therapeutics AG ("CRISPR" or the "Company") was formed on October 28, 2013 in Basel, Switzerland. The Company was established to translate CRISPR/Cas9, a genome editing technology, into transformative gene-based medicines for the treatment of serious human diseases. The foundational intellectual property underlying the Company's operations was licensed to the Company and its subsidiaries in April 2014. The Company devotes substantially all of its efforts to product research and development activities, initial market development and raising capital. The Company's principal offices are in Zug, Switzerland and operations are in Cambridge, Massachusetts.

The Company is subject to risks common to companies in the biotechnology industry, including but not limited to, risks of failure of preclinical studies and clinical trials, the need to obtain marketing approval for any drug product candidate that it may identify and develop, the need to successfully commercialize and gain market acceptance of its product candidates, dependence on key personnel, protection of proprietary technology, compliance with government regulations, development by competitors of technological innovations and ability to transition from pilot-scale manufacturing to large-scale production of products.

The Company had an accumulated deficit of $193.3 million as of June 30, 2018 and has financed its operations to date from proceeds obtained from its IPO, a subsequent offering of its common shares in January 2018, a series of preferred shares and convertible loan issuances, and upfront fees received under its collaboration and joint venture arrangements. The Company will require substantial additional capital to fund its research and development and ongoing operating expenses.

Liquidity

In January 2018, the Company completed an offering of 5,750,000 common shares, which were sold at a price to the public of $22.75 per share. This offering resulted in $122.6 million of net proceeds to the Company. The Company expects its cash of $319.7 million at June 30, 2018 to be sufficient to fund its current operating plan through at least the next 24 months. Thereafter, the Company will be required to obtain additional funding. There can be no assurances, however, that the current operating plan will be achieved or that additional funding will be available on terms acceptable to the Company, or at all.

Unaudited Interim Financial Information

The condensed consolidated financial statements of the Company included herein have been prepared, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States ("GAAP") have been condensed or omitted from this report, as is permitted by such rules and regulations. Accordingly, these condensed consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (the "Annual Report")..

2. Summary of Significant Accounting Policies

The Company's significant accounting policies are described in Note 2, "Summary of Significant Accounting Policies", in the Annual Report. Significant changes to the Company's accounting policies as a result of adopting ASC 606 are discussed below:

Revenue Recognition

In May 2014, the Financing Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers, which supersedes existing revenue recognition guidance. The Company adopted ASU 2014-09 and its related amendments (collectively known as "ASC 606") on January 1, 2018 using the modified retrospective method, by recognizing the cumulative effect of initially applying ASC 606 as an adjustment to the opening balance of equity at January 1, 2018. The reported results for 2018 reflect the application of ASC 606 guidance while the reported results for 2017 were prepared under the guidance of ASC 605, Revenue Recognition ("ASC 605"). The Company has elected a practical expedient and applied ASC 606 only to contracts that are not completed at the date of initial application.

ASC 606 applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. The Company's revenue is from collaboration agreements. Within collaboration agreements, a counterparty may be a collaborator or partner that shares in the risks and benefits of developing a product to be marketed. These arrangements generally are in the scope of ASC 808, Collaborative Arrangements ("ASC 808") yet may also

contain vendor-customer aspects. Therefore, the Company considers all of the facts and circumstances to determine which transactions have a vendor-customer relationship that is subject to ASC 606. At the inception of each agreement the Company must determine which promised goods and services are under the scope of ASC 606 versus ASC 808 (discussed in the Collaborative Arrangements note below).

In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these goods and services. To achieve this core principle, the Company applies the following five steps:

1) Identify the contract with the customer

A contract with a customer exists when (i) the Company enters into an enforceable contract with a customer that defines each party's rights regarding the goods or services to be transferred and identifies the related payment terms, (ii) the contract has commercial substance, and (iii) the Company determines that collection of substantially all consideration for goods and services that are transferred is probable based on the customer's intent and ability to pay the promised consideration.

2) Identify the performance obligations in the contract

Performance obligations promised in a contract are identified based on the goods and services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the good or service either on its own or together with other available resources, and are distinct in the context of the contract, whereby the transfer of the good or service is separately identifiable from other promises in the contract. To the extent a contract includes multiple promised goods and services, the Company must apply judgment to determine whether promised goods and services are capable of being distinct and distinct in the context of the contract. If these criteria are not met, the promised goods and services are accounted for as a combined performance obligation.

3) Determine the transaction price

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring goods and services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing either the expected value method or the most likely amount method depending on the nature of the variable consideration. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Any estimates, including the effect of the constraint on variable consideration, are evaluated at each reporting period for any changes. Determining the transaction price requires significant judgment, which is discussed in further detail for each of the Company's contracts with customers in Note 6.

4) Allocate the transaction price to performance obligations in the contract

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation on a relative standalone selling price basis unless the transaction price is variable and meets the criteria to be allocated entirely to a performance obligation or to a distinct service that forms part of a single performance obligation. The consideration to be received is allocated among the separate performance obligations based on relative standalone selling prices.

5) Recognize revenue when or as the Company satisfies a performance obligation

The Company satisfies performance obligations either over time or at a point in time. Revenue is recognized over time if either 1) the customer simultaneously receives and consumes the benefits provided by the entity's performance, 2) the entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced, or 3) the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date. If the entity does not satisfy a performance obligation over time, the related performance obligation is satisfied at a point in time by transferring the control of a promised good or service to a customer. Examples of control are using the asset to produce goods or services, enhance the value of other assets, settle liabilities, and holding or selling the asset. ASC 606 requires the Company to select a single revenue recognition method for the performance obligation that faithfully depicts the Company's performance in transferring control of the goods and services. The guidance allows entities to choose between two methods to measure progress toward complete satisfaction of a performance obligation:

1. Output methods - recognize revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract (e.g. surveys of performance completed to date, appraisals of results achieved, milestones reached, time elapsed, and units of produced or units delivered); and

2. Input methods - recognize revenue on the basis of the entity's efforts or inputs to the satisfaction of a performance obligation (e.g., resources consumed, labor hours expended, costs incurred, or time elapsed) relative to the total expected inputs to the satisfaction of that performance obligation.

The Company has the right to consideration from a customer in an amount that corresponds directly with the value to the customer of the entity's performance completed to date (i.e. R&D services), as such the Company has elected a practical expedient to recognize revenue in the amount to which the entity has a right to invoice for such services.

The terms of the Company's collaboration and license agreements contain multiple promised goods and services, which include options to license CRISPR/Cas9-based therapeutic products directed to specific targets, referred to as co-exclusive or exclusive licenses, joint steering committee participation, as well as research and development activities to be performed by the Company on behalf of the collaboration partner related to the licensed targets. Payments that the Company may receive under these agreements include nonrefundable upfront fees, payments for research activities, payments based upon the achievement of specified milestones and royalties on any resulting net product sales.

To date, the Company's only source of revenue has been the collaboration and license and joint development and commercialization agreement with Vertex Pharmaceuticals, Incorporated ("Vertex") as well as research and development services provided to Casebia Therapeutics LLP ("Casebia") under the joint venture with Bayer HealthCare LLC ("Bayer"). Please refer to Note 6 for the specific accounting treatment and revenue recognized during the period for each of these arrangements.

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 must consider the nature of the intellectual property to which the customer will have rights (i.e. access at a point in time or benefit of intellectual property enhancements over time). The Company recognizes revenue from non-refundable, up-front fees allocated to the license at a point in time/over the period 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 evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

Milestone payments: At the inception of each arrangement that includes development, regulatory or commercial milestone payments for promised goods and services, the Company evaluates the circumstances of whether the milestones will be reached and estimates the amount to be included in the transaction price that will not cause a significant revenue reversal. The Company will evaluate these types of payments for customer options once those options have been exercised. ASC 606 suggests two alternatives to use when estimating the amount of variable consideration: the expected value method and the most likely amount method. Under the expected value method, an entity considers the sum of probability-weighted amounts in a range of possible consideration amounts. Under the most likely amount method, an entity considers the single most likely amount in a range of possible consideration amounts. The Company will use the most likely amount method for development and regulatory milestone payments. Management believes the most likely amount method is the better predictor as the Company expects to be entitled to only one of two possible amounts. Additionally, management believes that the most likely amount of milestone consideration is its stated amount. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. The transaction price is then allocated to performance obligations on a specific basis or on a relative stand-alone selling price basis. 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 re-evaluates whether it is probable that a significant revenue reversal will not occur in future periods, and if necessary, adjusts its estimates of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Royalties: For 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 of the royalty has been allocated has been satisfied (or partially satisfied).

Up-front payments and fees are recorded as deferred revenue upon receipt or when due and may require deferral of revenue recognition to a future period until the Company performs its obligations under these arrangements. Amounts payable to the Company are recorded as accounts receivable when the Company's right to consideration is unconditional. The Company does not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between payment by the customer and the transfer of the promised goods or services to the customer will be one year or less.

Contract Balances

The Company recognizes a contract asset when the Company transfers goods or services to a customer before the customer pays consideration or before payment is due, excluding any amounts presented as a receivable (i.e. accounts receivable). A contract asset is an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer. The contract liabilities (i.e. deferred revenue) primarily relate to contracts where we have received payment but we have not yet satisfied the related

performance obligations. The advance consideration received from customers for R&D services or licenses bundled with other promises is a contract liability, recorded as deferred revenue, until the underlying performance obligations are transferred to the customer. The change in deferred revenue from December 31, 2017 to June 30, 2018 is primarily related to the transition adjustment upon the adoption of ASC 606.

Costs to Obtain and Fulfill a Contract with Customer

The Company recognizes an asset related to incremental costs of obtaining a contract with a customer if the Company expects to recover those costs. The Company will recognize an asset from costs incurred to fulfill a contract only if such costs relate directly to a contract that the entity can specifically identify, the costs generate or enhance resources of the Company that will be used in satisfying performance obligations in the future, and the costs are expected to be recovered. Any assets recognized related to costs to obtain or fulfill a contract are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates.

Income Taxes

The adoption of ASC 606 resulted in a reduction of revenue as of January 1, 2018, which in turn generated additional deferred tax assets. As the Company fully reserves its net deferred tax assets in the jurisdictions impacted by the adoption of ASC 606, this impact was offset by a corresponding change to the valuation allowance.

Impact of Adopting ASC 606 on the Financial Statements

The Company adopted ASC 606 using the modified retrospective method. The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an adjustment to accumulated deficit as of the adoption date. The Company elected to apply a practical expedient to reflect the aggregate effect of all modifications that occur before the beginning of the earliest period presented when identifying the satisfied and unsatisfied performance obligations, determining the transaction price, and allocating the transaction price to the satisfied and unsatisfied performance obligations. As a result of applying the modified retrospective method to adopt the new revenue guidance, the following adjustments were made to the consolidated balance sheet as of January 1, 2018:

	As Reported December 31, 2017	ASC 606 Adjustment	Adjusted January 1, 2018
Consolidated Balance Sheet Data (in thousands):			
Other current liabilities	$ 137	$ 102	$ 239
Total current liabilities	$ 14,511	$ 102	$ 14,613
Deferred revenue	$ 56,928	$ 1,046	$ 57,974
Total liabilities	$ 83,514	$ 1,148	$ 84,662
Accumulated deficit	$ (125,440)	$ (1,148)	$ (126,588)
Total shareholders' equity	$ 187,832	$ (1,148)	$ 186,684
Total liabilities and shareholders' equity	$ 271,346	$ -	$ 271,346

Impact of New Revenue Guidance on Financial Statement Line Items

The following table compares the reported condensed consolidated balance sheet, statement of operations and cash flows, as of and for the three and six months ended June 30, 2018, to the pro-forma amounts had the previous guidance been in effect:

	As of June 30, 2018			
	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Consolidated Balance Sheet Data (in thousands):				
Other current liabilities	$ 226	$ (102)	(5)	$ 124
Total current liabilities	$ 18,481	$ (102)	(5)	$ 18,379
Deferred revenue	$ 57,832	$ (851)	(1)(2)(3)(5)	$ 56,981
Total liabilities	$ 87,976	$ (953)	(1)(2)(3)(5)	$ 87,023
Accumulated deficit	$ (193,268)	$ 953	(1)(2)(3)	$ (192,315)
Total shareholders' equity	$ 265,154	$ 953	(1)(2)(3)	$ 266,107
Total liabilities and shareholders' equity	$ 353,130	$ —	(1)(2)(3)	$ 353,130

	Three Months Ended June 30, 2018			
Consolidated Statement of Operations Data (in thousands):	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Collaboration revenue	$ 1,088	$ (94)	(2)(3)	$ 994
Loss from operations	$ (37,286)	$ (94)	(2)(3)	$ (37,380)
Net loss before income taxes	$ (38,284)	$ (94)	(2)(3)	$ (38,378)
Net loss	$ (38,380)	$ (94)	(2)(3)	$ (38,474)
Comprehensive loss	$ (38,401)	$ (94)	(2)(3)	$ (38,495)

	Six Months Ended June 30, 2018			
Consolidated Statement of Operations Data (in thousands):	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Collaboration revenue	$ 2,446	$ (195)	(2)(3)	$ 2,251
Loss from operations	$ (64,283)	$ (195)	(2)(3)	$ (64,478)
Net loss before income taxes	$ (66,498)	$ (195)	(2)(3)	$ (66,693)
Net loss	$ (66,680)	$ (195)	(2)(3)	$ (66,875)
Comprehensive loss	$ (66,689)	$ (195)	(2)(3)	$ (66,884)
Consolidated Statement of Cash Flows (in thousands):				
Operating activities:				
Net loss	$ (66,680)	$ (195)	(2)(3)	$ (66,875)
Reconciliation of net loss to net cash and restricted cash used in operating activities:				
Changes in:				
Deferred revenue	$ (244)	$ 297	(1)(2)(3)(4)(5)	$ 53
Other liabilities, net	$ 88	$ (102)	(1)(2)(3)(4)(5)	$ (14)
Net cash and restricted cash used in operating activities	#N/A	$ —	(1)(2)(3)(4)(5)	#N/A
Increase (decrease) in cash and restricted cash	$ 79,990	$ —	(1)(2)(3)(4)(5)	$ 79,990
Cash and restricted cash, end of period	$ 322,902	$ —	(1)(2)(3)(4)(5)	$ 322,902

(1) Adjustment of $1,148 to reverse the ASC 606 transition adjustment from retained earnings and deferred revenue.
(2) Adjustment of $68 and $144 for the three and six months ended June 30, 2018, related to R&D services that would be deferred under ASC 605 versus recognized as invoiced under ASC 606.
(3) Adjustment of $26 and $51 for the three and six months ended June 30, 2018, related to non-exclusive research license revenue that would be recognized upon option exercise under ASC 605 versus recognized overtime under ASC 606.
(4) Adjustment to reverse the ASC 606 transition adjustment to retained earnings and deferred revenue netted to zero as the transaction did not impact cash.
(5) Adjustment to reclass $102 from deferred revenue to other current liabilities (current deferred revenue) related to the change in revenue allocated to the non-exclusive research license recognized upon option exercise under ASC 605 versus ratably over time under ASC 606.

Collaboration Arrangements

The Company records the elements of its collaboration agreements that represent joint operating activities in accordance with ASC 808. Accordingly, the elements of the collaboration agreements that represent activities in which both parties are active participants and to which both parties are exposed to the significant risks and rewards that are dependent on the commercial success of the activities, are recorded as collaborative arrangements. The Company considers the guidance in ASC 606 in determining the appropriate treatment for the transactions between the Company and its collaborative partner and the transactions between the Company and third parties. Generally, the classification of transactions under the collaborative arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants.

The Company evaluates the proper presentation of the commercial activities and the profit and loss sharing associated with the collaboration agreements. ASC 808 states that when payments between parties in a collaborative arrangement are not within the scope of other authoritative accounting literature, the income statement classification should be based on the nature of the arrangement, the nature of its business operations and the contractual terms of the arrangement. To the extent that these payments are not within the scope of other authoritative accounting literature, the income statement classification for the payments shall be based on an analogy to authoritative accounting literature or if there is no appropriate analogy, a reasonable, rational, and consistently applied accounting policy election.

New Accounting Pronouncements - Recently Adopted

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies that the Company adopts as of the specified effective date.

Financial Instrument Accounting

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The new standard amends certain aspects of accounting and disclosure requirements of financial instruments, including the requirement that equity investments with readily determinable fair values be measured at fair value with changes in fair value recognized in the results of operations. The new standard was effective January 1, 2018. The Company adopted ASU No. 2016-01 in the first quarter of 2018. The adoption of this guidance did not have a material impact on the Company's financial position and results of operations.

Income Taxes

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes* ("ASU 2016-16"): *Intra-Entity Transfers of Assets Other Than Inventory* ("ASU 2016-16"), to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Current guidance prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party, which is an exception to the principle of comprehensive recognition of current and deferred income taxes. The amendments in this update eliminate the exception for an intra-entity transfer of an asset other than inventory. The Company adopted ASU No. 2016-16 in the first quarter of 2018. The adoption of this guidance did not have a material impact on the Company's financial position and results of operations.

Statement of Cash Flows

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows* (Topic 230): *Restricted Cash* ("ASU 2016-18"). ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning and ending balances shown on the statement of cash flows. The Company adopted ASU No. 2016-18 retrospectively in the first quarter of 2018 and the

change in accounting principle is reflected in the statements of cash flows for the six months ended June 30, 2018 and 2017 accordingly. The adoption of this guidance did not have a material impact on the Company's financial position and results of operations.

Business Combinations

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations* (Topic 805) ("ASU 2017-01"). ASU 2017-01 clarifies whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The purpose of the guidance is to narrow the definition of a business at it relates to recording transactions as business acquisitions or asset acquisitions. The Company adopted ASU No. 2017-01 in the first quarter of 2018. The adoption of this guidance did not have a material impact on the Company's financial position and results of operations.

Stock Compensation

In May 2017, the FASB issued ASU 2017-09, *Compensation – Stock Compensation* ("ASU 2017-09"): Scope Modification Accounting. The new standard is intended to reduce the diversity in practice and cost and complexity when applying the guidance in Topic 718 to a change to the terms or conditions of a share-based payment award. The Company adopted ASU No. 2017-09 in the first quarter of 2018. The adoption of this guidance did not have a material impact on the Company's financial position and results of operations.

New Accounting Pronouncements - to be adopted in future periods

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASU 2016-02"), which applies to all leases and will require lessees to record most leases on the balance sheet but recognize expense in a manner similar to the current standard. In July 2018, the FASB also issued ASU No. 2018-11, *Codification Improvements to Topic 842, Leases* ("ASU 2018-11"), which clarifies and corrects narrow aspects of the guidance issued in ASU 2016-02. ASU 2016-02 and 2018-11 are effective for fiscal years beginning after December 15, 2018 and interim periods within those years, first of which is the year ending December 31, 2019 for the Company. Entities are required to use a modified retrospective approach of adoption for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. Full retrospective application is prohibited. The Company is evaluating the new guidance and the expected impact on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Stock Compensation* ("ASU 2018-07") which provides improvements to nonemployee share-based payment accounting. ASU 2018-07 is intended to reduce the cost and complexity and to improve financial reporting for nonemployee share-based payments. The scope of Topic 718, Compensation-Stock Compensation (which currently only includes share-based payments to employees) is expanded to include share-based payments issued to nonemployees for goods or services. Subtopic 505-50, Equity-Equity-Based payments to Non-Employees is superseded and consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. The update is effective for the Company for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted. The Company intends to early adopt this standard for the three- month period ending September 30, 2018. The adoption of this guidance is could have a material impact on the Company's consolidated financial statements. As a result of adopting this standard, the fair value of outstanding nonemployee awards as of June 30, 2018 will no longer be remeasured each reporting period. All future expense related to these awards will be recorded based on the fair value measured as of June 30, 2018, the last period prior to the adoption of ASU 2018-07.

Net Loss Per Share Attributable to Common Shareholders

Basic net loss per share is calculated by dividing net loss attributable to common shareholders by the weighted-average number of common shares outstanding during the period. Diluted net income per share is calculated by dividing the net income attributable to common shareholders by the weighted-average number of common equivalent shares outstanding for the period, including any dilutive effect from outstanding stock options and warrants using the treasury stock method.

The following common share equivalents, presented on an as converted basis, were excluded from the calculation of net loss per share for the periods presented, due to their anti-dilutive effect (in common stock equivalent shares):

	As of	
	June 30, 2018	**June 30, 2017**
Outstanding options	6,617,181	5,636,786
Unvested unissued restricted common shares	169,930	72,603
Total	6,787,111	5,709,389

Basis of Presentation and Use of Estimates

The accompanying condensed consolidated financial statements have been prepared in conformity with GAAP, and include the accounts of (i) the Company, and (ii) its wholly-owned subsidiaries, CRISPR Therapeutics Ltd., CRISPR Therapeutics Inc., and TRACR Hematology Inc. All intercompany accounts and transactions have been eliminated. The Company considers events or transactions that occur after the balance sheet date but before the financial statements are issued to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure. Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and ASUs of the FASB. The Company accounts for its 50% interest in Casebia under the equity method of accounting. See Note 6 for further details.

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. On an ongoing basis, the Company's management evaluates its estimates, which include, but are not limited to, equity-based compensation expense, revenue recognition, equity method investments, fair value of intangible assets, the provision for or benefit from income taxes and reported amounts of research and development expenses during the period. The Company bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. The consolidated statements reflect all adjustments which are of a normal recurring nature necessary for presentation. Actual results may differ from those estimates or assumptions.

3. Property and Equipment, net

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

	As of	
	June 30, 2018	December 31, 2017
Computer equipment	$ 403	$ 285
Furniture, fixtures, and other	2,214	2,104
Laboratory equipment	7,475	6,603
Leasehold improvements	13,776	13,776
Construction work in process	102	-
	23,970	22,768
Accumulated Depreciation	(5,575)	(3,911)
Property and equipment, net	$ 18,395	$ 18,857

Depreciation expense for the three and six months ended June 30, 2018 was $0.9 million and $1.7 million, respectively. Depreciation expense for the three and six months ended June 30, 2017 was $0.7 million and $1.4 million, respectively.

4. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	As of	
	June 30, 2018	December 31, 2017
Payroll and employee-related costs	$ 4,696	$ 5,550
Research costs	4,921	2,285
Licensing fees	216	609
Professional fees	1,487	2,176
Intellectual property costs	1,352	500
Other	30	241
Total	$ 12,702	$ 11,361

5. Commitments and Contingencies

Research Agreements and Manufacturing Agreements

The Company has engaged several research institutions and companies to identify new delivery strategies and applications of the CRISPR/Cas9 technology and has sponsored research programs. In association with these arrangements, the Company has remaining commitments for related research and development services of $0.8 million through 2020.

The Company is also a party to a number of research license agreements which require significant upfront payments, future royalty payments and potential milestone payments from time to time. In association with these agreements, the Company has committed to making payments for related research and development services of $1.2 million through 2020. In connection with these agreements, during the three and six months ended June 30, 2018, the Company has made payments of $0.8 million and of $1.2 million, respectively. In connection with these agreements, during the three and six months ended June 30, 2017, the Company has made payments of $0.8 million and of $1.7 million, respectively.

The Company is a party to a number of manufacturing agreements that require upfront payments for the future performance of services. In connection with these agreements, the Company has made upfront payments and recorded $3.3 million as prepaid expenses on the condensed consolidated balance sheet as of June 30, 2018. The Company will amortize the prepaid balance as services are performed.

Litigation

The Company licenses a U.S. patent application from Emmanuelle Charpentier (as described in more detail in this Report) that is currently subject to interference proceedings declared by the Patent Trial and Appeal Board ("PTAB") of the U.S. Patent and Trademark Office. Following motions by the parties and other procedural matters, the PTAB concluded in February 2017 that the declared interference should be dismissed because the claim sets of the two parties were not directed to the same patentable invention in accordance with the PTAB's two-way test for patent interferences. In April 2017, Dr. Charpentier, the regents of the University of California ("UC"), and the University of Vienna appealed the PTAB decision to the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit"). In the appeal, California is seeking review and reversal of the PTAB's February 2017 decision, which terminated the interference without determining which inventors actually invented the use of the CRISPR/Cas9 genome editing technology in eukaryotic cells. The Federal Circuit conducted a hearing on the appeal on April 30, 2018.

In February 2018, several parties filed oppositions in the European Patent Office to the grant of the Company's in-licensed European patent. Opposition proceedings can lead to the revocation of a patent in its entirety; the maintenance of the patent as granted, or the maintenance of a patent in amended form. Opposition proceedings typically take years to resolve, including the time taken by appeals that can be filed by any of the parties. The Company cannot guarantee the outcome of the oppositions to its in-licensed European patent, and an adverse result could preclude the Company from enforcing its rights in Europe against third parties.

On December 15, 2016, the Company entered into a Consent to Assignments, Licensing and Common Ownership and Invention Management Agreement (the "Invention Management Agreement") with the University of California, University of Vienna, Dr. Emmanuelle Charpentier, Intellia Therapeutics, Inc. Caribou Biosciences, Inc., ERS Genomics Ltd. and TRACR Hematology Ltd. Under the Invention Management Agreement, the Company is obligated to share costs related to patent maintenance, defense and prosecution. During the three and six months ended June 30, 2018, the Company incurred $0.6 million and $1.1 million, respectively, in shared costs. During the three and six months ended June 30, 2017, the Company incurred $0.5 million, and $1.0 million, respectively, in shared costs. The Company recorded accrued legal costs from the cost sharing of $1.2 million and $0.4 million as of June 30, 2018 and December 31, 2017, respectively. The Company is unable to predict the outcome of these matters and is unable to make a meaningful estimate of the amount or range of loss, if any, that could result from an unfavorable outcome.

6. Significant Contracts

Collaboration Agreement with and Joint Development Agreement with Vertex Pharmaceuticals, Incorporated

Summary of Agreement

On October 26, 2015, the Company entered into a strategic collaboration, option, and license agreement (as may be amended from time to time, "Collaboration Agreement") with Vertex, focused on the use of CRISPR's gene editing technology, known as CRISPR/Cas9, to discover and develop potential new treatments aimed at the underlying genetic causes of human disease. On December 12, 2017, the Company and Vertex entered into Amendment No. 1 to the Collaboration Agreement (the "Amendment") and the Joint Development Agreement (the "JDA"). The Amendment, among other things, modified certain definitions and provisions of the Collaboration Agreement to make them consistent with the JDA and clarified how many options are exercised (or deemed

exercised) in connection with certain targets specified under the Collaboration Agreement. The Amendment also amended other provisions of the Collaboration Agreement, including the expiration terms of the Collaboration Agreement.

In connection with the Collaboration Agreement, Vertex made a nonrefundable upfront payment of $75.0 million. Under the Collaboration Agreement, Vertex will fund all of the discovery activities conducted pursuant to the agreement while retaining options to co-exclusive and exclusive licenses. In December 2017, upon execution of the JDA and Amendment, Vertex exercised its option to obtain a co-exclusive license to develop and commercialize hemoglobinopathy and beta-globin targets. As such, for potential hemoglobinopathy treatments, including treatments for sickle cell disease, the Company and Vertex will share equally all research and development costs and worldwide revenues. For other targets that Vertex elects to license, Vertex will lead all development and global commercialization activities. For each of up to four remaining targets that Vertex elects to license, the Company has the potential to receive up to $420.0 million in development, regulatory and commercial milestones and royalties on net product sale.

In connection with entering into the JDA, the Company received a $7.0 million up-front payment from Vertex and is eligible for a one-time low seven-digit milestone payment upon the dosing of the second patient in a clinical trial with the initial product candidate. The net profits and net losses, as applicable, incurred under the JDA will be shared equally between the Company and Vertex.

Accounting for the Collaboration Agreement, Amendment and JDA

As the overall arrangement was modified in December 2017, the Company applied the practical expedient in ASC 606-10-65-1 in identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price under the practical expedient in ASC 606.

The arrangement includes components of a customer-vendor relationship and a collaborative arrangement as defined under ASC 808. The Company will apply the guidance of ASC 606 by analogy to the vendor-customer performance obligations of the Collaboration Agreement and the performance obligations of the JDA subject to ASC 606 as outlined below. The Company will apply the guidance of ASC 808 to those elements in which there is a collaboration relationship in which both parties share equally in the risks and rewards of the research and development which include (i) development and commercialization services for currently identified shared products; (ii) R&D services for any follow-on products subject to the JDA; and (iii) committee participation.

The Company evaluated the Collaboration Agreement, Amendment and JDA in accordance with the provisions of ASC 606. The Company identified the following performance obligations: (i) the non-exclusive research license; (ii) four material rights representing the option for up to four exclusive licenses to develop and commercialize the collaboration targets; (iii) a combined performance obligation representing the co-exclusive research license, and a development and commercialization license to develop and commercialize hemoglobinopathies and beta-globin targets; and (iv) the performance of R&D Services.

The selling price of each performance obligation was determined based on the Company's estimated standalone selling price (the "ESSP"). The Company developed the ESSP for all the performance obligations included in the Collaboration Agreement and JDA with the objective of determining the price at which it would sell such an item if it were to be sold regularly on a standalone basis. The ESSP for material rights was determined based on the incremental discount given to Vertex based on the ESSP of the four remaining exclusive licenses and the exercise price paid at the time of exercise.

The Company developed the ESSP for the R&D Services primarily based on the nature of the services to be performed and estimates of the associated effort and cost of the services, adjusted for a reasonable profit margin that would be expected to be realized under similar contracts. The Company's ESSP for the satisfied and unsatisfied R&D Services was $19.3 million.

The Company's ESSP for each of the remaining material rights to obtain an exclusive license to develop and commercialize a single collaboration target are $45.6 million, $38.4 million, $17.3 million and $17.3 million for a total of $118.6 million. ESSPs for these items were determined based on probability and present value adjusted cash flows from the milestones payments owed for exclusive licenses outlined in the Collaboration Agreement less the price paid to exercise the material right option. ESSP reflects the level of risk and expected probability of success inherent in the nature of the associated research area.

The Company's ESSP for the co-exclusive research license and the development and commercialization licenses for of the hemoglobinopathy and beta-globin targets is $48.9 million. ESSP for this item was determined based on probability and present value adjusted cash flows from the equal sharing of projected worldwide net profit or net loss. ESSP reflects the level of risk and expected probability of success inherent in the nature of the associated research area.

The Company used a market-based approach to determine the ESSP of the non-exclusive research license of $1.0 million. The Company determined ESSP by use of comparative data, including in-licensed research agreements negotiated and executed within the Company.

As the Company has a right to consideration from Vertex in an amount that corresponds directly with the value of the Company's performance completed to date for the R&D services, thus the Company will recognize revenue related to the R&D services as invoiced, in line with the practical expedient in ASC 606-10-55-18.

The transaction price is comprised of: (i) original upfront payment of $75.0 million, (ii) an upfront payment of $7.0 million under the JDA, and (iii) $19.3 million of variable consideration associated with the R&D services. The R&D services revenue will be recognized as invoiced and specifically allocated to the R&D services performance obligation. The remaining transaction price of $82.0 million was allocated among the performance obligations using the relative selling price method as follows: (i) a non-exclusive research license: $0.5 million; (ii) a material right to discounts for exclusive licenses for up to four Collaboration Targets: $22.2 million, $18.7 million, $8.4 million and $8.4 million for a total of $57.7 million; and (iii) co-exclusive development and commercialization licenses for hemoglobinopathy and beta-globin targets identified in the JDA and co-exclusive research license for the follow-on products: $23.8 million.

The Company determined that the non-exclusive research license is symbolic intellectual property as Vertex receives value from the license through the Company's ongoing activities, as such, the revenue related to the non-exclusive research license is recognized ratably over the term of the arrangement. Upon the execution of the JDA, a co-exclusive research, development and commercialization license was granted for hemoglobinopathy and beta-globin targets. The Company determined that the revenue related to these licenses was recognized at a point in time, in which they were delivered at inception of the JDA in December 2017. As Vertex has material right in its option to obtain four additional exclusive licenses to develop and commercialize four additional collaboration targets, the Company determined that consideration allocated to these material rights would be included in the transaction price of the exclusive license and recognized at a point in time, upon the exercise of the option by Vertex or expiration.

Milestones under the Collaboration Agreement

The Company has evaluated all of the milestones that may be received in connection with the Collaboration Agreement and JDA. The first potential milestone the Company will be entitled to receive is the milestone in the JDA to receive a one-time low seven-digit milestone payment in any clinical trial in the initial shared product and is currently fully constrained. The remaining milestones are predominately related to the development and commercialization of a product resulting from the arrangement and are payable with respect to each selected exclusive license which have yet to be exercised and are not currently included in the determination of the transaction price. Each milestone is payable only once per collaboration target, regardless of the number of products directed to such collaboration target that achieve the relevant milestone event. There are nine remaining clinical development and regulatory approval milestones which may trigger proceeds of up to $90.0 million and $235.0 million, respectively, for each selected exclusive license, and two commercial milestones which may trigger proceeds of up to $75.0 million for each selected exclusive license (which, when combined with the $10.0 million due upon exercise of the exclusive option and the $10.0 million development milestone associated with an Investigational New Drug- enabling application, total $420.0 million for each selected Exclusive License), as follows:

Developmental Milestone Events

1. Initiation of the first Clinical Trial of a Product
2. Establishment of Proof of Concept for a Product
3. Initiation of the first Phase 3 Clinical Trial of a Product
4. Acceptance of Approval Application by the U.S. Food and Drug Administration for a Product
5. Acceptance of Approval Application by the European Medicines Agency for a Product
6. Acceptance of Approval Application by a Regulatory Authority in Japan for a Product
7. Marketing Approval in the U.S. for a Product
8. Marketing Approval in the EU for a Product
9. Marketing Approval in Japan for a Product

Commercial Milestone Events

1. Annual Net Sales for Products with respect to a Collaboration Target exceed $500 million; and
2. Annual Net Sales for Products with respect to a Collaboration Target exceed $1.0 billion

There is uncertainty that the events to obtain the developmental milestones will be achieved given the nature of clinical development and the stage of the CRISPR/Cas9 technology. Upon exercise of the exclusive license options, developmental milestones will be constrained until the Company is sure that a significant revenue reversal will not occur. Commercial milestones and royalties relate predominantly to a license of intellectual property and are determined by sales or usage-based thresholds. The commercial milestones and royalties will be accounted for under the royalty recognition constraint and will be accounted for as constrained variable consideration. The Company will apply the royalty recognition constraint for each commercial milestone and will not recognize revenue for each until the subsequent sale of a licensed product (achievement of each) occurs.

Collaborative elements

The Company evaluated the Collaboration Agreement, Amendment and JDA in accordance with the provisions of ASC 808. The Company identified the following elements of ASC 808: (i) development and commercialization services for shared products; (ii) R&D services for follow-on products; and (iii) committee participation.

The Company evaluated that the nature of the arrangement and determined the arrangement is a cost/profit sharing arrangement and not a revenue arrangement. Therefore, the related impact of the cost sharing associated with research and development will be included in R&D expense. Expenses related to services performed by the Company will be classified as R&D expense. Payments received from Vertex for partial reimbursement of expenses are recorded as a reduction of R&D expense.

During the three and six months ended June 30, 2018, the Company recognized $0.2 million and $0.4 million of revenue related to the collaboration with Vertex, respectively. During the three and six months ended June 30, 2017, the Company recognized $2.1 million and $3.6 million of revenue related to the collaboration with Vertex, respectively. Research and development expense incurred by the Company in relation to its performance under the Collaboration Agreement for the three and six months ended June 30, 2018 was $0.2 million and $0.4 million, respectively. Research and development expense incurred by the Company in relation to its performance under the Collaboration Agreement for the three and six months ended June 30, 2017 was $3.3 million and $5.9 million, respectively. Research and development expense incurred by the Company in relation to its performance under the JDA for the three and six months ended June 30, 2018 was $8.9 million and $16.3 million, respectively. Reimbursements from Vertex under the JDA for the three and six months ended June 30, 2018 was $3.7 million and $6.9 million, respectively. As of June 30, 2018, and December 31, 2017, there was $57.8 million and $56.8 million of non-current deferred revenue related to the Collaboration Agreement, respectively. The transaction price allocated to the remaining performance obligations is $57.9 million. The remaining performance obligations will be recognized as follows: four material rights to obtain an exclusive commercialization and development license at a point in time, upon exercise; and the non-exclusive research license ratably over/within the remaining two-and-a-half-year research term. As of June 30, 2018, the remaining amount to be recognized for the non-exclusive research license is not significant. R&D services will be recognized as invoiced under the practical expedient and are not disclosed within the remaining performance obligation balance. Reported amounts for 2018 are reflective of accounting under ASC 606 and amounts for 2017 are reflective of accounting under ASC 605 and therefore may not be comparable.

Joint Venture with Bayer Healthcare LLC

On December 19, 2015, the Company entered into an agreement with Bayer, to establish a joint venture ("Bayer Joint Venture") to focus on the research the development of new therapeutics to cure blood disorders, blindness, and congenital heart disease. On February 12, 2016, the Company and Bayer completed the formation of the joint venture entity, Casebia, a limited liability partnership formed in the United Kingdom. Bayer and the Company each received a 50% equity interest in the entity in exchange for their respective contributions to the entity. The Company contributed $0.1 million in cash and licensed its proprietary CRISPR/Cas9 gene editing technology and intellectual property for selected disease indications. Bayer contributed its protein engineering expertise and relevant disease know-how.

Under the agreement, Casebia has paid the Company $35.0 million in exchange for a worldwide, exclusive license to commercialize the Company's CRISPR/Cas9 technology specifically for the indications covered by the license. There are no milestone, royalties or other payments due to the Company under this aspect of the agreement. The Company determined that the contribution of the CRISRP/Cas9 technology by license to Casebia did not meet the definition of a business under ASC 805.

The Company also entered into a separate services agreement with Casebia, under which the Company agreed to provide compensated research and development services.

Concurrent with the execution of the Bayer Joint Venture agreement, the Company also issued a convertible note to Bayer BV (the "Bayer Convertible Loan") for gross proceeds of $35.0 million which was immediately converted to the Company's Series B Preferred Shares at a conversion price of $13.43 per share. Concurrent with the Company's initial public offering in October 2016, the Company issued and sold 2,500,000 common shares to Bayer BV, at the public offering price of $14.00 per share, resulting in aggregate net proceeds of $35.0 million.

As the agreements relating to the Bayer Joint Venture (including the CRISPR/Cas9 technology license and the research and development services) and the Bayer Convertible Loan were executed at the same time, the Company determined that the contracts should be combined and evaluated as a single arrangement. Additionally, the Company also determined that ASC 845, Nonmonetary Transactions ("ASC 845") did not apply to this arrangement given the Company's significant continuing involvement with Casebia and the amount of cash involved in the arrangement. As a result, the Company analogized to the guidance within ASC 606 regarding the allocation of arrangement consideration, however elements under transaction that were not in the scope of ASC 606 were accounted for under accounting literature based on the allocated arrangement consideration.

The Company determined the total consideration to be allocated to various elements of the transaction includes (i) the total cash payment by Casebia for the technology access fee, net of the Company's $0.1 million contribution, of $34.9 million, (ii) the fair value of the equity interest in the Joint Venture of $36.4 million, (iii) the $35.0 million received from the issuance of the Bayer Convertible Loan, and (iv) $6.3 million of estimated cash consideration to be received under the research and development service arrangement, accumulating to $112.6 million.

The Company identified the following performance obligations in the combined transaction:

(i) Combined element of an exclusive, worldwide, royalty free, license to the CRISPR/Cas9 technology specifically for the indications designated by Casebia, and delivery of the consents of the assignors of the underlying patents to the technology to develop, manufacture, and commercialize licensed products under that license

(ii) Research and development services, and

The Company also identified the issuance of the Bayer Convertible Loan as another element to be accounted for under ASC 470, "Debt."

The Company allocated consideration to the performance obligations and other elements based on the relative proportion of their standalone selling prices. The Company determined the standalone selling price of the license was $71.4 million based on the consideration paid and the fair value of the 50% interest in Casebia, which was determined utilizing discounted cash flows based on reasonable estimates and assumptions of cash flows expected from Casebia. The standalone selling prices of the separate research and development services was determined to be $6.3 million and of the fair value of the Bayer Convertible Loan was determined to be $24.5 million, based on the fair value of the underlying preferred shares that were exchanged as part of the immediate conversion. Using a relative standalone selling price allocation, the Company allocated the aggregate arrangement consideration paid as follows:

(i) $79.1 million was allocated to the license and patent holder consent combined element;

(ii) $27.2 million was allocated to the Bayer Convertible Loan.

The difference between combined above amounts of $106.3 million and the total transaction price of $112.6 million is due to variable consideration of $6.3 million associated with the research and development service arrangement. The amount of the transaction price related to the research and development services ($6.3 million) will be allocated specifically to the research and development performance obligation under the right to invoice practical expedient in ASC 606-10-55-18.

The combined amount attributed to the license and patent holder consent element of $79.1 million was recognized as other income for the year ended December 31, 2016.

During 2016, the Company recorded an equity method investment of $36.5 million equal to the fair value of the Company's interest in Casebia (which was included in the allocable arrangement consideration described above). During 2016, the Company recorded unrealized equity method losses of up to the remaining amount of the $36.5 million investment.

The R&D services are the only remaining performance obligations as of June 30, 2018.

At June 30, 2018 and December 31, 2017, the value of the Company's equity method investment in Casebia was zero.

Collaborative elements

The Company also participates in cost sharing activities with Casebia with respect to shared research and technology licenses with other vendors. The Company evaluated that the nature of the activity and determined the arrangement is a cost/profit sharing arrangement and not a revenue arrangement. Therefore, the related impact of the cost sharing is included in R&D expense. The Company received reimbursements of $0.6 million and $0.9 million for both research and license agreements during the three and six months ended June 30, 2018, respectively, which was recorded as a reduction of R&D expense in the income statement. The Company received reimbursements of $0.9 million and $1.5 million for both research and license agreements during the three and six months ended June 30, 2017, respectively.

Collaboration Revenue

During the three and six months ended June 30, 2018, the Company recognized $0.9 million and $2.0 million of revenue, respectively, related to the collaboration with Casebia. During the three and six months ended June 30, 2017, the Company recognized $1.5 million and $2.6 million of revenue, respectively, related to the collaboration with Casebia. Amounts for 2018 are reflective of accounting under ASC 606 and amounts for 2017 are reflective of accounting under ASC 605 and therefore may not be comparable. During the three and six months ended June 30, 2018, the Company recognized $1.2 million and $2.4 million of research and development expense, respectively, in relation to its performance under the agreement. During the three and six months ended June 30, 2017, the Company recognized $1.4 million and $2.5 million of research and development expense, respectively, in relation to its performance under the agreement. During the three and six months ended June 30, 2018, the Company recognized $1.2 million and $2.2 million, respectively, of stock-based compensation expense related to Casebia employees. During the three and six months ended June 30, 2017, the Company recognized $0.5 million and $1.0 million, respectively, of stock-based compensation expense related to Casebia employees. Deferred revenue related to the Company's collaboration with Casebia was zero and $0.1 million as of June 30, 2018 and December 31, 2017, respectively. Unrecognized equity method losses in excess of the Company's equity investment in Casebia was $33.0 million and $21.2 million as of June 30, 2018 and December 31, 2017, respectively.

Total operating expenses and net loss of Casebia for the three and six months ended June 30, 2018 was $13.5 million and $25.8 million, respectively. Total operating expenses, and net loss of Casebia for the three and six months ended June 30, 2017 was $9.0 million and $14.6 million, respectively.

7. Share Capital

The Company had 47,520,292 registered common shares as of June 30, 2018, with a par value of CHF 0.03 per share, which includes 39,096 shares of unvested unissued restricted common shares and 409,361 treasury shares which are legally outstanding but not considered outstanding for accounting purposes.

Conditional Capital Reserved for Future Issuance

The Company had the following conditional capital reserved for future issuance:

	As of	
Conditional Capital	**June 30, 2018**	**December 31, 2017**
Unvested unissued restricted stock	—	166,667
Outstanding stock options	6,617,181	6,262,339
Reserved for future issuance under stock option plans (1)	7,749,714	4,657,700
Shares available for bonds and similar debt instruments	4,919,700	4,919,700
Shares available for employee purchase plans	413,226	413,226
Total	19,699,821	16,419,632

(1) The Company's Board of Directors and shareholders approved an increase to the option pool of 2,012,684 options in May 2017 and an additional increase to the option pool of an additional 4,000,000 options in May 2018.

8. Equity-based Compensation

The Company uses the straight-line attribution method to recognize stock-based compensation expense for stock options and restricted stock awards. Stock options and restricted stock awards generally vest over four years with 25% vesting on the first anniversary of service commencement and the remaining 75% vesting monthly thereafter. The following table presents stock-based compensation expense included in the Company's Condensed Consolidated Statements of Operations and Comprehensive Loss:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Research and development	$ 5,167	$ 1,946	$ 8,083	$ 3,676
General and administrative	3,157	1,780	5,823	3,350
Loss from equity method investment	1,153	505	2,244	951
Total	$ 9,477	$ 4,231	$ 16,150	$ 7,977

Grant-Date Fair Value

The Company estimated the fair value of each employee and non-employee stock option award using the Black-Scholes option-pricing model based on the following assumptions:

	Six Months Ended June 30,	
	2018	2017
Employees:		
Weighted average expected volatility	72.2%	72.7%
Expected term (in years)	6.0	6.0
Risk free interest rate	2.4%-2.9%	1.8-2.3%
Expected dividend yield	0.0%	0.0%

The fair value of the restricted stock awards was determined based on the fair value of the common shares on the grant date. Non-employee stock options and restricted stock awards, including those granted to employees of Casebia, are marked-to-market at each reporting period.

Share Based Payment Activity

Stock Option Awards

The following table summarizes stock option activity for employees and non-employees (intrinsic value in thousands):

	Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2017	6,262,339	$ 13.24	8.8	$ 64,120
Granted	1,735,997	$ 52.47		
Exercised	(747,007)	$ 10.47		
Cancelled or forfeited	(634,148)	$ 18.43		
Outstanding at June 30, 2018	6,617,181	$ 23.35	8.8	$ 235,281
Exercisable at June 30, 2018	1,757,151	$ 12.38	8.1	$ 81,507
Vested or expected to vest at June 30, 2018 (1)	6,617,181	$ 23.35	8.8	$ 235,281

(1) Represents the number of vested options at June 30, 2018 plus the number of unvested options expected to vest in the future.

As of June 30, 2018, total unrecognized compensation expense related to stock options was $90.4 million which the Company expects to recognize over a remaining weighted-average period of 3.3 years.

During the six months ended June 30, 2018 and 2017, the Company granted options to purchase 0 and 60,000 common shares, respectively, subject to performance-based vesting conditions.

During 2017, the Company also granted 150,000 stock options with market-based vesting conditions in which the recipient is eligible to receive between zero and 150,000 options to purchase common shares at the end of a four-year service period based upon achieving

a specified average stock price. As of June 30, 2018, no options to purchase common shares subject to market-based vesting conditions were vested; however 150,000 options were earned as the specified average stock price limits were achieved.

In May 2018, the Company modified the terms of certain options held by a departing employee. The modification resulted in $2.2 million in stock-based compensation expense recorded during the period.

Restricted Stock Awards

The following table summarizes restricted stock activity for employees and non-employees during the six months ended June 30, 2018:

	Reflected as outstanding upon vesting	Reflected as outstanding upon grant date	Total	Weighted-Average Grant Date Fair Value
Unvested restricted common shares as of December 31, 2017	157,515	208,886	366,401	$ 8.49
Granted	32,500	—	32,500	55.03
Vested	(20,085)	(158,891)	(178,976)	6.15
Cancelled or forfeited	—	—	—	—
Unvested restricted common shares as of June 30, 2018	169,930	49,995	219,925	$ 17.08

During the six months ended June 30, 2018, the total fair value of vested restricted common shares was $8.1 million. As of June 30, 2018, total unrecognized compensation expense related to unvested restricted common shares was $2.9 million which the Company expects to recognize over a remaining weighted-average period of 1.9 years.

9. Income Taxes

During the three and six months ended June 30, 2018, the Company recorded an income tax provision of $0.1 million and $0.2 million, respectively, representing an effective tax rate of -0.3% and -0.3%, respectively. During the three and six months ended June 30, 2017, the Company recorded an income tax provision of $0.3 million and $0.6 million, respectively, representing an effective tax rate of -1.6%, and -1.4%, respectively. The income tax provision is primarily attributable to the year-to-date pre-tax income earned by the Company's U.S. subsidiary. The difference in the statutory tax rate and effective tax rate is primarily a result of the jurisdictional mix of earnings and losses that are not benefited. The Company maintains a valuation allowance against certain deferred tax assets that are not more-likely-than-not realizable. As a result, the Company has not recognized a tax benefit related to losses generated in Switzerland in the current periods.

As disclosed in the Company's Annual Report, the Company recorded provisional amounts in its 2017 financial statements to reflect the federal, state and foreign impacts of the Tax Cuts and Jobs Act of 2017 (the "Act"). These amounts remain provisional and subject to Staff Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cuts and Jobs Act," ("SAB 118") as of June 30, 2018. There have been no changes to the provisional amounts recorded in the 2017 financial statements during the three and six months ended June 30, 2018.

10. Related Party Transactions

The Company is a party to intellectual property license agreements with Dr. Charpentier. During the three and six months ended June 30, 2018 and 2017, the Company did not record any sublicensing fees due to Dr. Charpentier in research and development expense related to the Bayer Joint Venture Agreement.

Refer to Note 6, "*Joint Venture with Bayer Healthcare LLC"*, for discussion of transactions with Casebia, a related party.

11. Subsequent Events

As of August 7, 2018, the Company is not aware of any events that have occurred that have a material effect on the financial statements.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (i) our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and (ii) our audited consolidated financial statements and related notes and management's discussion and analysis of financial condition and results of operations included in our annual report on Form 10-K for the year ended December 31, 2017 filed with SEC on March 8, 2018. This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, (the "Exchange Act"). These statements are often identified by the use of words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "project," "will," "would" or the negative or plural of these words or similar expressions or variations. Such forward-looking statements are subject to a number of risks, uncertainties, assumptions and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein, and those discussed in the section titled "Risk Factors", set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q, if any, and in our other SEC filings. You should not rely upon forward-looking statements as predictions of future events. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are a leading gene editing company focused on the development of CRISPR/Cas9-based therapeutics. CRISPR/Cas9 stands for Clustered, Regularly Interspaced Short Palindromic Repeats (CRISPR) Associated Protein 9 and is a revolutionary gene editing technology that allows for precise, directed changes to genomic DNA. The application of CRISPR/Cas9 for gene editing was co-invented by one of our scientific founders, Dr. Charpentier, who, along with her collaborators, published work elucidating how CRISPR/Cas9, a naturally occurring viral defense mechanism found in bacteria, can be adapted for use in gene editing. We are applying this technology to potentially treat a broad set of rare and common diseases by disrupting, correcting or regulating the genes related to the disease. We believe that our scientific expertise, together with our approach, may enable an entirely new class of highly active and potentially curative treatments for patients for whom current biopharmaceutical approaches have had limited success.

Since our inception in October 2013, we have devoted substantially all of our resources to our research and development efforts, identifying potential product candidates, undertaking drug discovery and preclinical development activities, building and protecting our intellectual property portfolio, organizing and staffing our company, business planning, raising capital, and providing general and administrative support for these operations. To date, we have primarily financed our operations through public offering of our equity securities, private placements of our preferred shares, convertible loans and collaboration agreements with strategic partners.

In January 2018, we completed an offering of 5,750,000 common shares, which were sold at a price to the public of $22.75 per share. This offering resulted in $122.6 million of net proceeds to us. The underwriting discount of $7.8 million and other expenses of $0.4 million related to the equity offering were recorded as an offset to additional paid-in capital.

All of our revenue to date has been collaboration revenue. We have incurred significant net operating losses in every year since our inception and expect to continue to incur net operating losses for the foreseeable future. As of June 30, 2018, we had $319.7 million in cash and an accumulated deficit of $193.3 million. We expect to continue to incur significant expenses and increasing operating losses for the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase significantly as we continue our current research programs and development activities; seek to identify additional research programs and additional product candidates; conduct preclinical studies enabling clinical trial applications and initiate clinical trials for our most advanced product candidates which are from our hemoglobinopathy program targeting both beta thalassemia and sickle cell disease; initiate preclinical testing and clinical trials for any other product candidates we identify and develop; maintain, expand and protect our intellectual property portfolio, further develop our gene editing platform; hire additional research, clinical and scientific personnel; acquire or in license other technologies; and incur additional costs associated with operating as a public company.

Collaboration Agreement, Joint Development and Commercialization Agreement- Vertex

In October 2015, we entered into a strategic research collaboration agreement with Vertex focused on the development of CRISPR/Cas9-based therapies. Under the terms of our agreement, we received an upfront, nonrefundable payment of $75.0 million and $30.0 million in convertible loan proceeds.

In December 2017, we and Vertex entered into Amendment No. 1 to the Collaboration Agreement. The Amendment, among other things, modified certain definitions and provisions of the Collaboration Agreement to make them consistent with the JDA and

clarified how many options are exercised (or deemed exercised) in connection with certain targets specified under the Collaboration Agreement. The Amendment also amended other provisions of the Collaboration Agreement, including the expiration terms of the Collaboration Agreement.

In December 2017, we entered into the JDA with Vertex for the development and commercialization of CTX001. The initial focus of the JDA centers on developing CTX001 for beta-thalassemia and SCD. The net profits and net losses, as applicable, incurred under the JDA will be shared equally between us and Vertex.

We obtained Clinical Trial Application, or CTA, approvals in multiple countries for both beta-thalassemia and sickle cell disease (SCD) trials and we and Vertex continue to work closely with various global regulatory authorities in these and other countries. In April 2018, we and Vertex submitted an Investigational New Drug application ("IND") for CTX001 to the U.S. Food and Drug Administration (the "FDA") to support the planned initiation of a Phase 1/2 trial in the U.S. in adult patients with SCD. In May 2018, the FDA placed a clinical hold on the IND for CTX001 for the treatment of SCD pending the resolution of certain questions as part of its review of the IND. We and Vertex are working diligently with the FDA and have a clear path to resolve the current clinical hold of this IND in the U.S. We and Vertex expect to initiate a Phase 1/2 trial to assess the safety and efficacy of CTX001 in patients with transfusion dependent beta-thalassemia later this year. CTX001 is an investigational autologous gene-edited hematopoietic stem cell therapy for patients suffering from severe hemoglobinopathies.

Joint Venture Agreement- Casebia

In December 2015, we entered into an agreement, (the "JV Agreement"), with Bayer to create a joint venture, Casebia Therapeutics LLP, ("Casebia" or the "JV"), to discover, develop and commercialize CRISPR/Cas9 gene-editing therapeutics to treat the genetic causes of bleeding disorders, autoimmune disease, blindness, hearing loss and heart disease. We and Bayer each have a 50% interest in the JV. Under the JV Agreement, Bayer is making available its protein engineering expertise and relevant disease know-how and we are contributing our proprietary CRISPR/Cas9 gene editing technology and intellectual property. Bayer will also provide up to $300.0 million in research and development investments to the JV over the first five years, subject to specified conditions.

In connection with the JV Agreement, the JV was required to pay us an aggregate amount of $35.0 million technology access fee, consisting of an upfront payment of $20.0 million, which was paid at the closing of the JV Agreement in March 2016, and another payment of $15.0 million for specified intellectual property rights relating to our CRISPR/Cas9 technology outside of the United States, which was paid in December 2016. In January 2016, we also issued the Bayer Convertible Loan to Bayer BV for gross proceeds of $35.0 million which was immediately converted to Series B Preferred Shares at a conversion price of $13.43 per share. Concurrent with our initial public offering in October 2016, we issued and sold 2,500,000 common shares to Bayer BV, at the public offering price of $14.00 per share resulting in aggregate net proceeds of $35.0 million.

Financial Overview

Revenue

We have not generated any revenue to date from product sales and do not expect to do so in the near future. During the three and six months ended June 30, 2018, we recognized $1.1 million and $2.4 million, respectively, of revenue related to our collaboration arrangement with Vertex and Casebia. During the three and six months ended June 30, 2017, we recognized $3.6 million and $6.3 million, respectively, of revenue related to our collaboration agreements with Vertex and Casebia. As of June 30, 2018, we had not received any milestone or royalty payments under the Vertex collaboration agreement. For additional information about our revenue recognition policy, see Note 2 "Summary of Significant Accounting Policies".

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our product discovery efforts and the development of our product candidates, which include:

- employee-related expenses, including salaries, benefits and equity-based compensation expense;
- costs of services performed by third parties that conduct research and development and preclinical activities on our behalf;
- costs of purchasing lab supplies and non-capital equipment used in our preclinical activities and in manufacturing preclinical study materials;
- consultant fees;

- facility costs, including rent, depreciation and maintenance expenses; and
- fees and other payments related to acquiring and maintaining licenses under our third-party licensing agreements.

Research and development costs are expensed as incurred. Research and development expenses include amounts incurred under the cost sharing agreement with Vertex, net of reimbursements from Vertex for such costs. Nonrefundable advance payments for research and development goods or services to be received in the future are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. At this time, we cannot reasonably estimate or know the nature, timing or estimated costs of the efforts that will be necessary to complete the development of any product candidates we may develop. This is due to the numerous risks and uncertainties associated with developing such product candidates, including the uncertainty of:

- successful completion of preclinical studies and Investigational New Drug-enabling studies;
- successful enrollment in, and completion of, clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and non-patent exclusivity;
- launching commercial sales of the product, if and when approved, whether alone or in collaboration with others;
- acceptance of the product, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies and treatment options;
- a continued acceptable safety profile following approval;
- enforcing and defending intellectual property and proprietary rights and claims; and
- achieving desirable medicinal properties for the intended indications.

A change in the outcome of any of these variables with respect to the development of any product candidates or the subsequent commercialization of any product candidates we may successfully develop could significantly change the costs, timing and viability associated with the development of that product candidate.

Except for activities we perform in connection with our collaborations with Vertex and Casebia, we do not track research and development costs on a program-by-program basis. We plan to track research and development costs for individual development programs when we identify a product candidate from the program that we believe we can advance into clinical trials.

Research and development activities are central to our business model. We expect research and development costs to increase significantly for the foreseeable future as our current development programs progress and new programs are added.

General and Administrative Expenses

General and administrative expenses consist primarily of employee related expenses, including salaries, benefits, and equity-based compensation for personnel in executive, finance, accounting, business development and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to patent and corporate matters, and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities, potential commercialization of our product candidates and increased costs of operating as a public company. We anticipate increased costs associated with being a public company, including expenses related to services associated with maintaining compliance with exchange listing and SEC requirements, insurance costs and investor relations costs, the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. We also anticipate increased expenses related to the reimbursements of third-party patent related expenses with respect to certain of our in-licensed intellectual property.

Results of Operations

Comparison of three Months Ended June 30, 2018 and 2017

The following table summarizes our results of operations for the three months ended June 30, 2018 and 2017, together with the dollar change in those items:

	Three Months Ended June 30,		Period to Period
	2018	2017	Change
	(in thousands)		
Collaboration revenue	$ 1,088	$ 3,582	$ (2,494)
Operating expenses:			
Research and development	25,633	17,120	8,513
General and administrative	12,741	7,768	4,973
Total operating expenses	38,374	24,888	13,486
Loss from operations	(37,286)	(21,306)	(15,980)
Other expense, net	(998)	(666)	(332)
Net loss before income taxes	(38,284)	(21,972)	(16,312)
Provision for income taxes	(96)	(343)	247
Net loss	$ (38,380)	$ (22,315)	$ (16,065)

Collaboration Revenue

Collaboration revenue for the three months ended June 30, 2018, was $1.1 million, compared to $3.6 million for the three months ended June 30, 2017. The decrease of approximately $2.5 million was due to us entering into the JDA with Vertex in December 2017. This resulted in more research being conducted under the cost sharing arrangement included within the JDA. Please refer to Note 2 for further information.

Research and Development Expenses

Research and development expenses were $25.6 million for the three months ended June 30, 2018, compared to $17.1 million for the three months ended June 30, 2017. The increase of approximately $8.5 million was primarily attributable to the following increases: $3.3 million of variable research and development costs and license fees, $3.2 million of employee stock based compensation costs and $2.0 million of employee-related costs. Total research and development expenses include $0.2 million related to the Collaboration Agreement with Vertex and $5.2 million associated with the JDA, which is net of $3.7 million for costs reimbursed by Vertex, for the three months ended June 30, 2018.

General and Administrative Expenses

General and administrative expenses were $12.7 million for the three months ended June 30, 2018, compared to $7.8 million for the three months ended June 30, 2017. The increase of approximately $5.0 million was primarily attributable to the following increases: $1.4 million of employee stock based compensation costs, $1.2 million in capital and franchise taxes related to financing rounds, $1.0 million in intellectual property costs, $0.6 million of employee-related costs to support our overall growth, $0.3 million of professional and consulting expenses and $0.3 million of facility-related costs.

Other Expense, Net

Other expense, net, was $1.0 million of expense for the three months ended June 30, 2018, compared to $0.7 million of expense for the three months ended June 30, 2017. The increase was primarily due to an increase in the loss from equity method investment from stock based compensation awards granted to employees of Casebia.

Comparison of six Months Ended June 30, 2018 and 2017

The following table summarizes our results of operations for the six months ended June 30, 2018 and 2017, together with the dollar change in those items:

	Six Months Ended June 30,		Period to Period
	2018	2017	Change
	(in thousands)		
Collaboration revenue	$ 2,446	$ 6,285	$ (3,839)
Operating expenses:			
Research and development	45,152	31,925	13,227
General and administrative	21,577	16,410	5,167
Total operating expenses	66,729	48,335	18,394
Loss from operations	(64,283)	(42,050)	(22,233)
Other (expense) income, net	(2,215)	(1,118)	(1,097)
Net loss before income taxes	(66,498)	(43,168)	(23,330)
Provision for income taxes	(182)	(622)	440
Net loss	$ (66,680)	$ (43,790)	$ (22,890)

Collaboration Revenue

Collaboration revenue for the six months ended June 30, 2018 was $2.4 million, compared to $6.3 million for the six months ended June 30, 2017. The decrease of $3.8 million was due to us entering into the JDA with Vertex in December 2017. This resulted in more research being conducted under the cost sharing arrangement included within the JDA. Please refer to Note 2 for further information.

Research and Development Expenses

Research and development expenses were $45.2 million for the six months ended June 30, 2018, compared to $31.9 million for the six months ended June 30, 2017. The increase of approximately $13.2 million was primarily attributable to the following increases: $4.9 million of variable research and development program costs and license fees, $4.4 million of employee stock based compensation costs, $3.6 million of employee-related costs, and $0.2 million of consulting and professional services costs. The remainder of the increase is primarily driven by facility-related costs. Total research and development expenses include $0.4 million related to the Collaboration Agreement with Vertex and $9.4 million associated with the JDA, which is net of $6.9 million for costs reimbursed by Vertex, for the six months ended June 30, 2018.

General and Administrative Expenses

General and administrative expenses were $21.6 million for the six months ended June 30, 2018, compared to $16.4 million for the six months ended June 30, 2017. The increase of $5.2 million was primarily due to the following increases: $2.5 million of employee stock compensation expense, $1.2 million in capital and franchise taxes related to financing rounds, $1.1 million of employee-related costs to support our overall growth, $0.9 million in intellectual property costs. The increases were offset by a reduction of $0.3 million in professional and consulting expenses and $0.2 million of facility-related costs.

Other (Expense) Income, Net

Other (expense) income, net was $2.2 million of expense for the six months ended June 30, 2018, compared to $1.1 million of expense for the six months ended June 30, 2017. The increase was primarily due to an increase in the loss from equity method investment from stock based compensation awards granted to employees of Casebia.

Liquidity and Capital Resources

As of June 30, 2018, we had cash of approximately $319.7 million of which approximately $312.1 million was held outside of the United States. In January 2018, we completed an offering of 5,750,000 common shares, which were sold at a price to the public of $22.75 per share. This offering resulted in $122.6 million of net proceeds to us. The underwriting discount of $7.8 million and other expenses of $0.4 million related to the equity offering were recorded as an offset to additional paid-in capital. With our cash on hand as of June 30, 2018, we expect cash and cash equivalents to be sufficient to fund its current operating plan through at least the next 24 months. As of June 30, 2018, our funds were held in non-interest-bearing deposit accounts.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, research and development activities, compensation and related expenses, laboratory and related supplies, legal and other regulatory expenses, patent prosecution filing and maintenance costs for our licensed intellectual property and general overhead costs. We expect our expenses to increase compared to prior periods in connection

with our ongoing activities, particularly as we continue research and development and preclinical activities, and initiate preclinical studies to support initial drug applications.

Because our research programs are still in preclinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of any current or future product candidates, if approved, or whether, or when, we may achieve profitability. Until such time as we can generate substantial product revenues, if ever, we expect to finance our cash needs through a combination of equity, debt financings and payments received in connection with our collaboration agreements. We are entitled to research payments under our collaboration with Vertex. Additionally, we are eligible to earn payments, in each case, on a per-product basis under the JV Agreement with Bayer for Casebia and our collaboration with Vertex. Except for these sources of funding, we do not have any committed external source of liquidity. We intend to consider opportunities to raise additional funds through the sale of equity or debt securities when market conditions are favorable to us to do so. To the extent that we raise additional capital through the future sale of equity or debt securities, the ownership interests of our shareholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing shareholders. If we raise additional funds through collaboration arrangements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Outlook

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect our existing cash, will enable us to fund our operating expenses and capital expenditures for at least the next 24 months, without giving effect to any additional proceeds we may receive under our Collaboration Agreement and JDA with Vertex and the agreements related to Casebia and any other capital raising transactions we may complete. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect. Given our need for additional financing to support the long term clinical development of our programs, we intend to consider additional financing opportunities when market terms are favorable to us.

Our ability to generate revenue and achieve profitability depends significantly on our success in many areas, including: developing our delivery technologies and our CRISPR/Cas9 technology platform; selecting appropriate product candidates to develop; completing research and preclinical and clinical development of selected product candidates; obtaining regulatory approvals and marketing authorizations for product candidates for which we complete clinical trials; developing a sustainable and scalable manufacturing process for product candidates; launching and commercializing product candidates for which we obtain regulatory approvals and marketing authorizations, either directly or with a collaborator or distributor; obtaining market acceptance of our product candidates, if approved; addressing any competing technological and market developments; negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter; maintaining good relationships with our collaborators and licensors; maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and attracting, hiring and retaining qualified personnel.

Cash Flows

The following table provides information regarding our cash flows for each of the period below:

	Six Months Ended June 30,		Period to Period
	2018	2017	Change
	(in thousands)		
Net cash and restricted cash used in operating activities	$ (47,903)	$ (39,383)	$ (8,520)
Net cash used in investing activities	(1,078)	(4,615)	3,537
Net cash provided by financing activities	128,980	715	128,265
Effect of exchange rate changes on cash	(9)	31	(40)
Net increase (decrease) in cash and restricted cash	$ 79,990	$ (43,252)	$ 123,242

Net Cash Used in Operating Activities

Net cash used in operating activities was $47.9 million for the six months ended June 30, 2018 as compared to $39.4 million for the six months ended June 30, 2017. The net cash used in operating activities for the six months ended June 30, 2018 primarily consisted of a net loss of $66.7 million adjusted for non-cash items (including equity-based compensation expense of $13.9 million, depreciation

and amortization expense of $1.7 million and a loss from an equity method investment of $2.2 million), a decrease in accounts receivable of $1.7 million, an increase in prepaid expenses and other assets of $3.8 million, an increase in accounts payable and accrued expenses of $3.8 million, a decrease of $0.4 million in deferred rent and a decrease in deferred revenue of $0.2 million.

Net Cash (Used in) Provided by Investing Activities

Net cash used in investing activities for the six months ended June 30, 2018 was $1.1 million as compared to $4.6 million for the six months ended June 30, 2017. The net cash used in investing activities for the six months ended June 30, 2018 consisted primarily of purchases of property and equipment for use in research and development activities.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2018 was $129.0 million, compared with $0.7 million for the six months ended June 30, 2017. The net cash provided by financing activities for the six months ended June 30, 2018 consisted of proceeds from the issuance of common shares in an offering in January of 2018 which resulted in $122.6 million of net proceeds to the Company, as well as exercises of stock options.

Contractual Obligations

The disclosure of our contractual obligations and commitments was reported in our Annual Report on Form 10-K for the year ended December 31, 2017. There have been no material changes from the contractual commitments and obligations previously disclosed in our Annual Report on Form 10-K other than the changes described in Note 6 to the accompanying financial statements.

Off-Balance Sheet Arrangements

As of June 30, 2018, we do not have any off-balance sheet arrangements as defined under applicable SEC rules.

Critical Accounting Policies and Significant Judgments and Estimates

This discussion and analysis of our financial condition and results of operations is based on our financial statements, which we have prepared in accordance with U.S. GAAP. We believe that several accounting policies are important to understanding our historical and future performance. We refer to these policies as critical because these specific areas generally require us to make judgments and estimates about matters that are uncertain at the time we make the estimate, and different estimates—which also would have been reasonable—could have been used. On an ongoing basis, we evaluate our estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and other market-specific or other relevant assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe that our most critical accounting policies are those relating to revenue recognition, variable interest entities and equity-based compensation, and there have been significant changes to our revenue recognition, multiple-element and milestone and royalty accounting policies discussed in the Annual Report. Please refer to Note 2, “Significant Accounting Policies”, for the updated revenue recognition policy that encompasses the changes to the historical revenue recognition, multiple-element and milestone and royalty accounting policies.

Recent Accounting Pronouncements

Refer to Note 2, “Summary of Significant Accounting Policies,” in the accompanying notes to the consolidated financial statements for a discussion of recent accounting pronouncements.

Item 3. Qualitative and Quantitative Disclosures about Market Risk

Foreign Exchange Market Risk

As a result of our foreign operations, we face exposure to movements in foreign currency exchange rates, primarily the Swiss Franc and British Pound, against the U.S. dollar. The current exposures arise primarily from cash, accounts payable, and intercompany receivables and payables. Changes in foreign exchange rates affect our consolidated statement of operations and distort comparisons between periods. We do not engage in any foreign exchange rate hedging activities and therefore we are subject to foreign currency impacts.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We have established disclosure controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

Our management, with the participation of our Principal Executive Officer and Principal Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2018. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of June 30, 2018, our Principal Executive Officer and Principal Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act) that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may become involved in litigation or other legal proceedings relating to claims arising from the ordinary course of business. Except as described below, there are currently no claims or actions pending against us that, in the opinion of our management, are likely to have a material adverse effect on our business.

In January 2016, the U.S. Patent and Trademark Office, or USPTO, declared an interference between one of the pending U.S. patent applications we have in-licensed from Dr. Charpentier and twelve issued U.S. patents owned jointly by the Broad Institute and Massachusetts Institute of Technology and, in some instances, the President and Fellows of Harvard College, which we refer to individually and collectively as Broad. The interference was redeclared in March 2016 to add a U.S. patent application owned by Broad. An interference is a proceeding conducted at the USPTO by the Patent Trial and Appeal Board, or PTAB, to determine which party was the first to invent subject matter claimed by at least two parties. There were two parties to this interference being Dr. Charpentier, the regents of the University of California, and the University of Vienna (collectively, "UC") and Broad.

Following motions by the parties and other procedural matters, in February 2017, the PTAB concluded that the declared interference should be dismissed. In its decision, the PTAB concluded that, although the claims overlap, the respective scope of UC and Broad's claim sets as presented did not define the same patentable invention and, accordingly, terminated the interference.

In April 2017, UC appealed the PTAB decision to the U.S. Court of Appeals for the Federal Circuit, or the Federal Circuit. In the appeal, UC is seeking review and reversal of the PTAB's February 2017 decision, which terminated the interference without determining which inventors actually invented the use of the CRISPR/Cas9 genome editing technology in eukaryotic cells. The Federal Circuit conducted a hearing on the appeal on April 30, 2018, and we expect a decision subsequent to such hearing.

In addition to the appeal of the PTAB decision to the Federal Circuit, in parallel, either party can pursue existing or new patent applications in the U.S. and elsewhere. Going forward, either party and other parties could seek a new interference related to the uses of the technology in eukaryotic cells or other aspects of the technology, and any existing or new patents could be the subject of other challenges to their validity of enforceability. If there is a second interference, either party could again appeal an adverse decision to the Federal Circuit.

In any case, it may be years before there is a final determination on priority. Pursuant to the terms of the license agreement with Dr. Charpentier, we are responsible for covering or reimbursing Dr. Charpentier's patent prosecution, defense and related costs associated with our in-licensed technology.

In February 2018, several parties filed oppositions in the European Patent Office to the grant of our in-licensed European patent. Opposition proceedings can lead to the revocation of a patent in its entirety; the maintenance of the patent as granted, or the maintenance of a patent in amended form. Opposition proceedings typically take years to resolve, including the time taken by appeals that can be filed by any of the parties. We cannot guarantee the outcome of the oppositions to our in-licensed European patent, and an adverse result could preclude us from enforcing our rights in Europe against third parties.

We are unable to predict the outcome of these matters and are unable to make a meaningful estimate of the amount or range of loss, if any, that could result from an unfavorable outcome. In the future, we may become party to legal matters and claims arising in the ordinary course of business, the resolution of which we do not anticipate would have a material adverse impact on our financial position, results of operations or cash flows. We devote considerable effort in building, maintaining and protecting a broad, worldwide portfolio of intellectual property related to the use of CRISPR/Cas9 genome editing systems to develop therapeutic products. In this regard, we have amassed a portfolio of patents, patent applications and other intellectual property covering, among other things:

- fundamental aspects of CRISPR/Cas9 systems for gene editing via the in-licensed patent rights of Dr. Emmanuelle Charpentier;
- internally developed platform technologies supporting the use of CRISPR/Cas9 genome editing systems;
- guide RNAs directed to specific targets as treatments for specific diseases;
- improved delivery technologies; and
- all aspects of our specific development candidates.

Our intellectual property portfolio for our CRISPR/Cas9 technologies and therapeutics includes over 45 active patent families and more than 15 granted or allowed patents in the United States, United Kingdom, Europe, Japan, China, Ukraine, New Zealand, Singapore, Australia, Mexico, Tunisia and South Africa, and pending patent applications in the United States, Europe, China, Japan, Canada, Mexico, Australia and other selected countries in Central America, South America, Asia and Africa. The granted patents and any other patents that may ultimately issue in this patent family are expected to expire starting in 2033, not including any applicable patent term extensions.

As both our platform and development pipeline mature, we intend to continue expanding our intellectual property portfolio through new patent filings that claim aspects of our proprietary technologies and development candidates. Furthermore, as the field of CRISPR/Cas9 technologies and therapeutics is maturing, patent applications are being examined by national patent offices around the world. There is uncertainty about which patents will issue, and, if they do, as to when, to whom and with what claims.

It is likely that there will be significant litigation and other proceedings, such as interference, reexamination, inter partes review, post-grant review and opposition proceedings, in various patent offices relating to patent rights in the CRISPR/Cas9 field. For example, the European patent we in-licensed from Dr. Charpentier has been opposed by several third parties. On September 16, 2012, the America Invents Act went into effect and expanded the opportunities to challenge issued U.S. patents, creating proceedings including inter partes reviews and post-grant reviews. These provide additional opportunities for third parties to challenge patents within our intellectual property portfolio. Given the importance of our intellectual property portfolio to our business operations, we intend to vigorously enforce our rights and defend against challenges that have arisen or may arise in this area, as deemed appropriate.

Item 1A. Risk Factors.

There have been no material changes from the risk factors previously disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2017.

Item 2. Unregistered Sales of Equity Securities.

During the period between January 1, 2018 and June 30, 2018, no options were issued to Casebia employees.

Item 6. Exhibits

Exhibit Number	Description of Document
10.1	CRISPR Therapeutics AG 2018 Stock Option and Incentive Plan and forms of agreements thereunder (incorporated herein by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.2	Form of Incentive Stock Option Agreement under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.2 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.3	Form of Non-Qualified Stock Option Agreement for Company Employees under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.3 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.4	Form of Non-Qualified Stock Option Agreement for Non-Employee Directors under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.4 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.5	Form of Restricted Stock Award under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.5 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.6	Form of Restricted Stock Award Agreement for Company Employees under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.6 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
10.7	Form of Restricted Stock Award for Non-Employee Directors under CRISPR Therapeutics AG's 2018 Stock Option and Incentive Plan (incorporated herein by reference to Exhibit 99.7 to the Company's Registration Statement on Form S-8 filed on June 1, 2018).
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	Financials in XBRL format.

* The certification attached as Exhibit 32.1 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the SEC and are not to be incorporated by reference into any filing of CRISPR Therapeutics AG under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURES

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

CRISPR Therapeutics AG

Dated: August 7, 2018

By: /s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

Dated: August 7, 2018

By: /s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial Officer)

Exhibit 31.1

CERTIFICATIONS

I, Samarth Kulkarni, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CRISPR Therapeutics AG;

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

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

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

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

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

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

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

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

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

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

Date: August 7, 2018

By: /s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Michael Tomsicek, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CRISPR Therapeutics AG;

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

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

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

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

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

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

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

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

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

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

Date: August 7, 2018

By: /s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

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

In connection with the Quarterly Report on Form 10-Q of CRISPR Therapeutics AG (the "Company") for the period ended June 30, 2018 as filed with the Securities and Exchange Commission on or about the date hereof (the "Report"), the undersigned officers of the Company hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his or her knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of, and for, the periods presented in the Report.

/s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

August 7, 2018

/s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial and Accounting Officer)

August 7, 2018