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

FORM 10-Q

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

For the quarterly period ended March 31, 2017

OR

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

For the transition period from _____ to _____.

Commission file number: 001-37923

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.)**
Aeschenvorstadt 36 **4051 Basel, Switzerland** **(Address of principal executive offices)**	**Not Applicable** **(zip code)**

+41 61 228 7800
(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 or a smaller reporting company. See definition of "large accelerated filer", "accelerated filer" and "smaller reporting 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	☐

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

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. ☒

As of May 8, 2017, there were 39,997,525 shares of registrant's common shares outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

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

	March 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash	$288,872	$ 315,520
Accounts receivable, including related party amounts of $1,057 and $752 as of March 31, 2017 and December 31, 2016, respectively	5,672	3,157
Prepaid expenses and other current assets including related party amounts of $577 and $0 as of March 31, 2017 and December 31, 2016, respectively	1,918	1,511
Total current assets	296,462	320,188
Property and equipment, net	22,165	21,027
Intangible assets, net	385	399
Restricted cash	3,151	3,150
Other non-current assets	183	198
Total assets	$322,346	$ 344,962
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 3,937	$ 4,569
Accrued expenses, including related party amounts of $219 and $537 as of March 31, 2017 and December 31, 2016, respectively	11,699	16,320
Accrued tax liabilities	190	23
Deferred rent	1,027	1,027
Other current liabilities	62	59
Total current liabilities	16,915	21,998
Deferred revenue, including related party amounts of $420 and $527 as of March 31, 2017 and December 31, 2016, respectively	78,311	77,646
Deferred rent non-current	11,768	12,283
Other non-current liabilities	177	189
Total liabilities	107,171	112,116
Commitments and contingencies (Note 6)		
Shareholders' equity:		
Common shares, CHF 0.03 par value	1,216	1,216
Treasury shares, at cost, 444,873 shares at March 31, 2017 and December 31, 2016	—	—
Additional paid-in capital	292,519	288,739
Accumulated deficit	(78,558)	(57,083)
Accumulated other comprehensive loss	(2)	(26)
Total shareholders' equity	215,175	232,846
Total liabilities and shareholders' equity	$322,346	$ 344,962

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 March 31,	
	2017	2016
Collaboration revenue (1)	$ 2,703	$ 476
Operating expenses:		
Research and development (2)	14,805	6,012
General and administrative	8,642	6,116
Total operating expenses	23,447	12,128
Loss from operations	(20,744)	(11,652)
Other (expense) income:		
Interest expense	—	(8,050)
Loss from equity method investment	(446)	—
Gain on extinguishment of convertible loan	—	11,482
Other expense, net	(6)	(146)
Total other (expense) income, net	(452)	3,286
Net loss before income taxes	(21,196)	(8,366)
Provision for income taxes	(279)	(76)
Net loss	(21,475)	(8,442)
Foreign currency translation adjustment	24	(4)
Comprehensive loss	$ (21,451)	$ (8,446)
Reconciliation of net loss to net loss attributable to common shareholders:		
Net loss	$ (21,475)	$ (8,442)
Loss attributable to noncontrolling interest	—	3
Net loss attributable to common shareholders	$ (21,475)	$ (8,439)
Net loss per share attributable to common shareholders—basic and diluted	$ (0.54)	$ (1.53)
Weighted-average common shares outstanding used in net loss per share attributable to common shareholders—basic and diluted	39,725,947	5,528,079

(1) Including the following amounts of revenue from a related party, see Note 11:	$ 1,164	$ —
(2) Including the following amounts of research and development expense with a related party, see Note 11:	$ 1,136	$ 269

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)

	Three Months Ended March 31,	
	2017	2016
Operating activities:		
Net loss	$ (21,475)	$ (8,442)
Reconciliation of net loss to net cash used in operating activities:		
Depreciation and amortization	720	106
Equity-based compensation	3,746	1,022
Non-cash interest expense	—	8,050
Loss from disposal of property and equipment	—	28
Unrealized foreign currency remeasurement loss	1	11
Gain on extinguishment of convertible loan	—	(11,482)
Changes in:		
Restricted cash	(1)	(2)
Accounts receivable	(2,515)	(626)
Prepaid expenses and other assets	(394)	(993)
Accounts payable and accrued expenses	(3,648)	1,956
Deferred revenue	665	151
Deferred rent	(515)	172
Other liabilities, net	4	35
Net cash used in operating activities	(23,412)	(10,014)
Investing activities:		
Purchase of property and equipment	(3,285)	(232)
Proceeds from contribution of intellectual property to equity method investee	—	20,000
Cash investment in equity method investee	—	(100)
Net cash (used in) provided by investing activities	(3,285)	19,668
Financing activities:		
Proceeds from exercise of options	20	—
Proceeds from issuance of convertible loans	—	35,000
Net cash provided by financing activities	20	35,000
Effect of exchange rate changes on cash	29	(15)
(Decrease) increase in cash	(26,648)	44,639
Cash, beginning of period	315,520	155,961
Cash, end of period	$288,872	$200,600
Supplemental disclosure of non-cash investing and financing activities		
Property and equipment purchases in accounts payable and accrued expenses	$ 973	$ 116
Conversion of Vertex convertible loan and accrued interest	$ —	$ 61,929
Noncash contribution of intellectual property to Casebia LLP	$ —	$ 36,372

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

CRISPR Therapeutics AG
Notes to Condensed Consolidated Financial Statements
(unaudited)

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 located in Basel, Switzerland and its principal research operations are in Cambridge, Massachusetts.

On January 23, 2014, the founders of the Company formed TRACR Hematology Limited ("TRACR") in the United Kingdom, to further the development of the CRISPR/Cas9 technology into medicines for the treatment of blood-borne illnesses. As the Company was funding and managing TRACR's operations in 2014, it has been consolidated by the Company from the date that the Company established a variable interest in TRACR in April 2014. In March 2015, the Company acquired 82.1% of the outstanding equity of TRACR in a share exchange transaction. Concurrent with its initial public offering ("IPO") in October 2016, the Company acquired the outstanding non-controlling interest in TRACR, and as such, as of March 31, 2017, TRACR is a wholly-owned subsidiary of the Company.

On February 7, 2014, the Company formed a wholly-owned subsidiary in the United Kingdom, CRISPR Therapeutics Limited ("CRISPR Ltd."), and on February 16, 2015, the Company formed a wholly-owned subsidiary in the United States, CRISPR Therapeutics, Inc. ("CRISPR Inc."), as its principal research and development operation.

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 $78.6 million as of March 31, 2017 and has financed its operations to date from proceeds obtained from its IPO, 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

The Company expects its cash of $288.9 million at March 31, 2017 to be sufficient to fund its current operating plan for at least the next 24 months. Thereafter, the Company may be required to obtain additional funding. There can be no assurance that the Company will be able to obtain additional debt or equity financing or generate product revenue or revenues from collaborative partners, on terms acceptable to the Company, on a timely basis or at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's business, results of operations, and financial condition.

2. Summary of Significant Accounting Policies

The Company's significant accounting policies are described in Note 2, "Summary of Significant Accounting Policies," in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 (the "Annual Report"). There have been no material changes to the significant accounting policies during the three months ended March 31, 2017.

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 (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("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 Annual Report.

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 Ltd., CRISPR Inc., and TRACR. 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 Accounting Standards Updates ("ASUs") of the Financial Accounting Standards Board ("FASB"). The Company accounts for its 50% investment in Casebia Therapeutics LLP ("Casebia") under the equity method of accounting. See Note 7 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, and reported amounts of expenses during the period. Significant estimates in these condensed consolidated financial statements have been made in connection with the calculation of revenues, research and development expenses, equity-based compensation expense, fair value of intangible assets, and the provision for or benefit from income taxes. 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. Actual results may differ from those estimates or assumptions.

Net Loss Per Share Attributable to Common Shareholders

Basic net income (loss) per share is calculated by dividing net income (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):

	Three Months Ended March 31,	
	2017	2016
Convertible preferred shares	—	24,301,632
Dr. Emmanuelle Charpentier call option	—	328,017
Outstanding options	4,829,891	2,384,908
Unvested unissued restricted common shares	80,987	142,794
Total	4,910,878	27,157,351

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"). Subsequently, the FASB also issued ASU 2015-14, *Revenue from Contracts with Customers* (Topic 606), which adjusted the effective date of ASU 2014-09; ASU No. 2016-08, *Revenue from Contracts with Customers* (Topic 606): *Principal versus Agent Considerations* (Reporting Revenue Gross versus Net), which amends the principal-versus-agent implementation guidance and illustrations in ASU 2014-09; ASU No. 2016-10, *Revenue from Contracts with Customers* (Topic 606): *Identifying Performance Obligations and Licensing*, which clarifies identifying performance obligation and licensing implementation guidance and illustrations in ASU 2014-09; and ASU No. 2016-12, *Revenue from Contracts with Customers* (Topic 606): *Narrow-Scope Improvements and Practical Expedients*, which addresses implementation issues and is intended to reduce the cost and complexity of applying the new revenue standard in ASU 2014-09 (collectively, the "Revenue ASUs").

The Revenue ASUs noted above provide an accounting standard for a single comprehensive model for use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance. The accounting standard is effective for interim and annual periods beginning after December 15, 2017, with an option to early adopt for interim and annual periods beginning after December 15, 2016. The guidance permits two methods of adoption: retrospectively to each prior reporting period presented (the full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). The Company currently anticipates adopting the new standard effective January 1, 2018 under the full retrospective method. The Company is in the process of determining the impact of the Revenue ASUs on its financial statements as it relates to their two revenue generating collaboration agreements.

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. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018 and interim periods within those years, which is the year ended 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 effect on its consolidated financial statements.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes* (Topic 740): *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 amendments should be applied on a modified retrospective transition basis, and are effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, and early adoption is permitted. The Company is evaluating the new guidance and the expected effect on its consolidated financial statements.

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 guidance is effective in the first quarter of fiscal 2018 and early adoption is permitted. ASU 2016-18 must be applied retrospectively to all periods presented. Upon adoption, the Company's 2016 statement of cash flows will reflect an increase in operating cash flows resulting from the adoption of this new standard. The Company does not expect any additional impact on its financial statements.

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 recording transactions as business acquisitions or asset acquisitions. The guidance is effective in annual periods beginning after December 15, 2017, including interim periods within those years, with early adoption permitted under certain circumstances. The Company does not expect any additional impact on its financial statements.

In January 2017, the FASB issued ASU No. 2017-03, *Accounting Changes and Error Corrections* (Topic 250) *and Investments—Equity Method and Joint Ventures* (Topic 323) ("ASU 2017-03"). ASU No. 2017-03 amends topics 250 and 323 which were previously released. The effect of the amendment to these topics subsequently amended topics 326 – *Measurement of Credit Losses on Financial Instruments*, *606 – Revenue from Contracts with Customers*, and 842 – *Leases*. This ASU was effective upon issuance. The adoption did not have a material impact on the Company's financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles - Goodwill and Other* (Topic 350): Simplifying the Test of Goodwill Impairment ("ASU 2017-04"). This new standard simplifies how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The new standard became effective for the Company on January 1, 2017 and did not have a material impact on the Company's financial statements.

3. Property and Equipment, net

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

	As of	
	March 31, 2017	**December 31, 2016**
Computer equipment and software	$ 110	$ 110
Furniture, fixtures, and other	2,044	2,044
Laboratory equipment	4,728	2,970
Leasehold improvements	15,765	15,780
Construction work in process	1,165	1,065
	23,812	21,969
Accumulated Depreciation	(1,647)	(942)
Property and equipment, net	$ 22,165	$ 21,027

Depreciation expense was $0.7 million, and $0.1 million, for the three months ended March 31, 2017 and 2016, respectively.

4. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	As of	
	March 31, 2017	December 31, 2016
Payroll and employee-related costs	$ 1,570	$ 2,585
Research costs	490	996
Licensing fees	1,111	492
Professional fees	1,873	2,715
Intellectual property costs	1,700	3,372
Accrued property and equipment	4,697	5,081
Other	258	1,079
Total	$ 11,699	$ 16,320

5. Convertible Loans

2015 Convertible Loan Agreement with Vertex and certain existing shareholders

On October 26, 2015, the Company entered into a convertible loan agreement with Vertex Pharmaceuticals Incorporated (“Vertex”) and certain existing shareholders (the “Vertex Convertible Loan”) under which the Company borrowed $38.2 million. The Vertex Convertible Loan accrued interest at 2.5% per annum and had an initial maturity date of April 26, 2016 subject to acceleration upon the occurrence of certain conditions. The Vertex Convertible Loan included various embedded conversion, redemption and other features, none of which required separate accounting from the host instrument under ASC Topic 815: *Derivatives and Hedging* (“ASC 815”).

The conversion terms, redemption terms, and other features of the Vertex Convertible Loan are included in the Annual Report.

Convertible Loan with Bayer Global Investments B.V.

On January 29, 2016, concurrent with the execution of an agreement to establish a Joint Venture (“JV”) with Bayer HealthCare LLC (“Bayer HealthCare”), the Company entered into a Convertible Loan Agreement (the “Bayer Convertible Loan”) with Bayer Global Investments B.V. (“Bayer BV”) under which the Company borrowed $35.0 million. The Bayer Convertible Loan accrued interest at 2.0% per annum and matured on January 29, 2016. The Bayer Convertible Loan included various embedded conversion, redemption and other features, none of which required separate accounting from the host instrument under ASC 815.

The conversion terms, redemption terms, and other features of the Bayer Convertible Loan are included in the Annual Report.

Conversion of Convertible Loans to Series B Preferred Shares

On January 29, 2016, concurrent with the issuance of the Bayer Convertible Loan, all of the outstanding principal under the $35.0 million Bayer Convertible Loan automatically converted into 2,605,330 Series B Redeemable Convertible Preferred Shares ("Series B Preferred Shares") at $13.43 per share. The Company determined the fair value of the Bayer Convertible Loan to be $24.5 million based on the fair value of the underlying Series B Preferred Shares that were exchanged as part of the immediate conversion. As the Bayer Convertible Loan was executed in contemplation of the joint venture agreement with Bayer, the Company evaluated the Bayer Convertible Loan as part of one multiple-element arrangement and, using a relative fair value allocation method, allocated $27.0 million of aggregate arrangement consideration to the Bayer Convertible Loan upon issuance. Upon conversion, the Company accreted the Bayer Convertible Loan to its face value of $35.0 million through a charge to interest expense of $8.0 million and converted the $35.0 million to Series B Preferred Shares under the conversion model.

The receipt of $35.0 million in proceeds under the Bayer Convertible Loan in exchange for equity securities, combined with the $38.2 million in proceeds from Vertex Convertible Loan, triggered an automatic conversion provision of the Vertex Convertible Loan Agreement. Accordingly, on January 29, 2016, the Vertex Convertible Loan, including loans from existing shareholders, plus accrued interest also converted into 2,859,278 of Series B Preferred Shares at $13.43 per share. The Company determined the fair value of the Vertex Convertible Loan to be $26.9 million based on the fair value of the underlying Series B Preferred Shares that were exchanged as part of the conversion. Upon extinguishment, the Company recorded a gain on extinguishment of $11.5 million for the difference between the carrying value of the debt and the fair value of the Series B Preferred Shares issued to settle the debt under the general extinguishment model.

6. Commitments and Contingencies

Operating Leases

In March 2017, the Company entered into a sublease for a portion of one research and office facility effective April 1, 2017. The sublease term is less than the remaining term under the original lease, and as a result, the Company does not believe it has met a cease use date as it may re-enter the space following the sublease. Net payments to be received under the sublease are consistent with scheduled rent payments under the original lease.

Litigation

The Company licenses a U.S. patent application 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, the Regents of the University of California ("California") appealed the PTAB decision to the U.S. Court of Appeals for the 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.

Under the Invention Management Agreement signed on December 15, 2016, the Company is obligated to share costs related to patent maintenance, defense and prosecution. The Company incurred $0.5 million and $0.6 million, for the three months ended March 31, 2017 and 2016, respectively, in shared costs. The Company recorded accrued legal costs from the cost sharing of $0.9 million and $2.8 million as of March 31, 2017 and December 31, 2016, respectively.

7. Significant Contracts

Intellectual Property Agreements

CRISPR Therapeutics AG—Charpentier License Agreement

In April 2014, the Company entered into a technology license agreement with Dr. Charpentier pursuant to which the Company licensed certain intellectual property rights under joint ownership from Dr. Charpentier to develop and commercialize products for the treatment or prevention of human diseases other than hemoglobinopathies ("CRISPR—Charpentier License Agreement"). In consideration for the granting of the license, the Company paid Dr. Charpentier an upfront fee of CHF 0.1 million ($0.1 million), and agreed to pay an immaterial annual license maintenance fee if Dr. Charpentier is not otherwise engaged in a service arrangement with the Company. During the years ended December 31, 2016 and 2015, and three months ended March 31, 2017 and 2016, Dr. Charpentier has been in a consulting arrangement with the Company, as such, no annual payments have been made under this provision. Dr. Charpentier is entitled to receive nominal clinical milestone payments. The Company is also obligated to pay Dr. Charpentier a low single digit percentage of sublicensing payments received under any sublicense agreement with a third party. In addition, the Company is also obligated to pay to Dr. Charpentier a low single-digit percentage royalty based on annual net sales of licensed products and licensed services by the Company and its affiliates and sublicensees.

During the three months ended March 31, 2017 and 2016, the Company recorded $0 and $0.3 million, respectively, of sublicensing fees due to Dr. Charpentier. These expenses were under the terms of the CRISPR—Charpentier License Agreement that was triggered by the execution of the Bayer Agreement ("Bayer Agreement").

TRACR Hematology Limited—Charpentier License Agreement

In April 2014, TRACR entered into a technology license agreement ("TRACR—Charpentier License Agreement") with Dr. Charpentier pursuant to which TRACR licensed certain intellectual property rights under joint ownership from Dr. Charpentier to develop and commercialize products for the treatment or

prevention of human diseases related to hemoglobinopathies. In consideration for the granting of the license, Dr. Charpentier is entitled to receive nominal clinical milestone payments. TRACR is also obligated to pay Dr. Charpentier a low single digit percentage of sublicensing payments received under any sublicense agreement with a third party. In addition, TRACR is obligated to pay to Dr. Charpentier low single digit percentage royalties based on annual net sales of licensed products and licensed services by the Company and its affiliates and sublicensees.

During the three months ended March 31, 2017 and 2016, the Company did not record any sublicensing fees due to Dr. Charpentier under the terms of the TRACR—Charpentier License Agreement.

Patent Assignment Agreement

In November 2014, the Company entered into a patent assignment agreement ("Patent Assignment Agreement") with Dr. Charpentier, Dr. Ines Fonfara, and the University of Vienna (collectively, the "Assignors"), pursuant to which the Company received from the assignors all rights, title and interest in and to certain patent rights claimed in the U.S. Patent Application No.61/905,835. In consideration for the assignment of such rights, the Assignors are entitled to receive clinical milestone payments totaling up to €0.3 million (approximately $0.4 million) in the aggregate for the first human therapeutic product. The Company is also obligated to pay to the Assignors low single digit royalties based on annual net sales of certain products and services by the Company and its affiliates and sublicensees.

During the three months ended March 31, 2017 and 2016, the Company recorded $0 and $19 thousand, respectively, of sublicensing fees due to the Assignors under the terms of the Patent Assignment Agreement that was triggered under the Vertex collaboration agreement and by the execution of the Bayer Agreement.

Collaboration Agreement with Vertex Pharmaceuticals, Incorporated

On October 26, 2015, the Company entered into a strategic collaboration, option, and license agreement ("Collaboration Agreement") with Vertex, focused on the use of CRISPR's gene editing technology, CRISPR/Cas9, to discover and develop potential new treatments aimed at the underlying genetic causes of human disease.

During the three months ended March 31, 2017 and 2016, the Company recognized $1.5 million and $0.5 million of revenue related to the collaboration with Vertex. Research and development expense incurred by the Company in relation to its performance under the Collaboration Agreement for the three months ended March 31, 2017 and 2016 was $2.6 million and $0.6 million, respectively. As of March 31, 2017 and December 31, 2016, there was $77.9 million and $77.1 million of non-current deferred revenue related to the Company's collaboration with Vertex, respectively.

Joint Venture with Bayer Healthcare LLC

On December 19, 2015, the Company entered into an agreement with Bayer HealthCare LLC to establish the JV to discover, develop and commercialize new therapeutics to cure blood disorders, blindness, and

congenital heart disease. On February 12, 2016, the Company and Bayer HealthCare completed the formation of the joint venture entity, Casebia. CRISPR contributed its proprietary CRISPR/Cas9 gene editing technology and intellectual property for selected disease indications and Bayer HealthCare contributed its protein engineering expertise and relevant disease know-how.

At March 31, 2017 and December 31, 2016, the Company's equity method investment in Casebia was zero.

During the three months ended March 31, 2017 and 2016, the Company recognized $1.2 million and $0 of revenue, respectively, related to the collaboration with Casebia. During the three months ended March 31, 2017 and 2016, the Company recognized $1.1 million and $0 of research and development expense, respectively, in relation to its performance under the agreement. During the three months ended March 31, 2017 and 2016, the Company recognized $0.5 million and $0, respectively, of stock-based compensation expense related to Casebia employees. Non-current deferred revenue related to the Company's collaboration with Casebia was $0.4 million and $0.5 million as of March 31, 2017 and December 31, 2016, respectively. Unrecognized equity method losses in excess of the Company's equity investment in Casebia was $6.5 million and $4.0 million as of March 31, 2017 and December 31, 2016, respectively.

Total operating expenses, and net loss of Casebia for the three months ended March 31, 2017 was $5.5 million. During the three months ended March 31, 2016, total operating expenses and net loss of Casebia was $73.8 million which included research and development expenses of $71.4 million for the fair value of the CRISPR license acquired.

8. Share Capital

The Company had 40,258,364 registered common shares as of March 31, 2017, with a par value of CHF 0.03 per share, which includes 80,987 shares of unvested unissued restricted common stock and 444,873 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	**March 31, 2017**	**December 31, 2016**
Unvested unissued restricted stock	166,667	166,667
Outstanding stock options	4,829,891	4,535,371
Reserved for future issuance under stock option plans	4,996,123	5,290,643
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	15,325,607	15,325,607

9. 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. Effective January 1, 2017, the company adopted ASU No. 2016-09 (“ASU 2016-09”), and made an accounting policy election to account for the impact of pre-vesting forfeitures as they occur rather than applying an estimated forfeiture rate, as previously required. The following table presents stock-based compensation expense included in the Company’s Condensed Consolidated Statements of Operations and Comprehensive Loss:

	Three Months Ended March 31,	
	2017	2016
Research and development	$ 1,730	$ 638
General and administrative	1,570	384
Loss from equity method investment	446	—
Total	$ 3,746	$ 1,022

Grant-Date Fair Value

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

	Three Months Ended March 31,	
	2017	2016
Employees:		
Weighted average expected volatility	73.0%	77.5%
Expected term (in years)	6.0	6.0
Risk free interest rate	2.2%	1.5%
Expected dividend yield	0.0%	0.0%
Non-employees:		
Weighted average expected volatility	81.0%	n/a
Expected term (in years)	10.0	n/a
Risk free interest rate	2.4%	n/a
Expected dividend yield	0.0%	n/a

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 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, 2016	4,535,371	$ 8.38	9.1	$ 53,966
Granted	440,032	$ 20.78		
Exercised	(4,690)	$ 4.24		
Cancelled or forfeited	(140,822)	$ 5.14		
Outstanding at March 31, 2017	4,829,891	$ 9.59	9.0	$ 58,960
Exercisable at March 31, 2017	1,289,490	$ 4.27	8.6	$ 22,568
Vested or expected to vest at March 31, 2017 (1)	4,755,902	$ 9.51	9.0	$ 58,417

(1) Represents the number of vested options at March 31, 2017 plus options expected to vest in the future.

As of March 31, 2017, total unrecognized compensation expense related to stock options was $28.9 million which the Company expects to recognize over a remaining weighted-average period of 3.2 years.

During the three months ended March 31, 2017 and 2016, the Company granted options to purchase 15,000 and 13,333 common shares, respectively, subject to performance-based vesting conditions. As of March 31, 2017, options to purchase 284,372 common shares subject to performance-based vesting conditions were vested, as performance conditions were achieved, and no options to purchase common shares subject to performance-based vesting conditions were deemed probable of vesting.

Restricted Stock Awards

The following table summarizes restricted stock activity for employees and non-employees during the three months ended March 31, 2017:

	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, 2016	89,367	650,856	740,223	$ 3.84
Vested	(8,380)	(106,000)	(114,380)	4.02
Unvested restricted common shares as of March 31, 2017	80,987	544,856	625,843	$ 3.81

During the three months ended March 31, 2017, the total fair value of vested restricted common shares was $2.3 million. As of March 31, 2017, total unrecognized compensation expense related to unvested restricted common shares was $6.4 million which the Company expects to recognize over a remaining weighted-average period of 1.2 years.

The Company did not grant any restricted common shares subject to performance-based vesting conditions during the three months ended March 31, 2017. As of March 31, 2017, 50,000 restricted common shares subject to performance-based vesting conditions were vested.

During the year ended December 31, 2016, the Company and Fay Corp. transferred 290,400 common shares to a founder, 268,093 of which were subject to vesting conditions with a weighted average grant date fair value of $12.65 per share. The unvested common shares are subject to repurchase by the Company upon termination of the holder's service relationship with the Company as well as upon certain triggering events such as termination for cause, material breach of agreement and insolvency of the holder. The Company recognized expense related to these common shares in the amount of $0.2 million and $0 during the three months ended March 31, 2017 and 2016, respectively.

10. Income Taxes

During the three months ended March 31, 2017 and 2016, the Company recorded an income tax provision of $0.3 million and $0.1 million, respectively, representing an effective tax rate of -1.3% and -0.9%, respectively. The income tax provision is primarily attributable to the year-to-date pre-tax income earned by the Company's U.S. and U.K. subsidiaries. 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 the Swiss losses generated in the current periods.

11. Related Party Transactions

The Company is a party to intellectual property license agreements with Dr. Charpentier. As of March 31, 2017 and December 31, 2016, the Company owed Dr. Charpentier approximately $0.2 million and $0.5 million, respectively, of sublicense fees primarily related to the Bayer Agreement. During the three months ended March 31, 2017 and 2016, the Company recorded sublicensing fees of $0 and $0.3 million, respectively, due to Dr. Charpentier in research and development expense related to the Bayer Agreement.

The Company is a party to the JV with Bayer HealthCare. During the three months ended March 31, 2017 and 2016, the Company recognized revenue of $1.2 million and $0, respectively, related to the collaboration with Casebia. During the three months ended March 31, 2017, and 2016, the Company recognized $1.1 million and $0 of research and development expense, respectively, related to the performance of services for Casebia. As of March 31, 2017 and December 31, 2016, the Company recorded accounts receivable of $1.1 million and $0.8 million, respectively, other current assets of $0.6 million and $0, respectively, and deferred revenue of $0.4 million and $0.5 million, respectively, related to Casebia.

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, 2016 filed with the Securities and Exchange Commission on March 10, 2016. 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, or 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 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 initiating the conduct of 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 the initial public offering ("IPO") of our common shares, private placements of our preferred and common shares, convertible loans and collaboration agreements with strategic partners. From our inception through March 31, 2017, we raised an aggregate of $397.1 million of which $53.7 million consisted of proceeds from our IPO, $35.0 million from a private placement of our

common shares, $125.2 million of gross proceeds from private placements of preferred shares, $73.2 million from the issuance of convertible loans, $75.0 million from an upfront payment under our collaboration with Vertex Pharmaceuticals, Incorporated, or Vertex, and $35.0 million from a technology access fee related to our license of technology to Casebia Therapeutics, LLP, our joint venture, or JV, with Bayer HealthCare LLC, or Bayer HealthCare.

In October 2016, we issued 4,429,311 of our common shares, including 429,311 common shares sold pursuant to the underwriters' partial exercise of their option to purchase additional common shares, in our IPO, at a public offering price of $14.00 per share, for aggregate gross proceeds of approximately $62.0 million. Concurrent with the IPO, we issued an aggregate of 2,500,000 common shares to Bayer Global Investments BV, or Bayer BV, in a private placement, at the IPO price of $14.00 a share, for aggregate net proceeds of $35.0 million.

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 March 31, 2017, we had $288.9 million in cash and an accumulated deficit of $78.6 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 and Joint Venture Agreement

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 proceeds from a convertible loan of $30 million.

In December 2015, we entered into a joint venture agreement, or the JV Agreement, with Bayer HealthCare to create a joint venture, Casebia, to discover, develop and commercialize new breakthrough therapeutics to cure blood disorders, blindness and heart disease. We and Bayer HealthCare each have a 50% interest in the JV. Under the JV Agreement, Bayer HealthCare 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 HealthCare 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 a technology access fee of $35.0 million 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 a convertible loan to Bayer BV (the "Bayer Convertible Loan") 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 the IPO in October 2016, we issued 2,500,000 common shares to Bayer BV, at the IPO 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 future. During the three months ended March 31, 2017 and 2016, we recognized revenue related to our collaboration agreements with Vertex and Casebia in the aggregate amount of $2.7 million and $0.5 million, respectively. As of March 31, 2017, we had not received any milestone or royalty payments under the Vertex collaboration agreement. For additional information about our revenue recognition policy, see the "Critical Accounting Policies and Estimates—*Revenue*" in our Annual Report.

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. 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 March 31, 2017 and 2016

The following table summarizes our results of operations for the three months ended March 31, 2017 and 2016, together with the dollar change in those items:

	March 31, 2017	March 31, 2016	Period Change
	(in thousands)		
Collaboration revenue	$ 2,703	$ 476	$ 2,227
Operating expenses:			
Research and development	14,805	6,012	8,793
General and administrative	8,642	6,116	2,526
Total operating expenses	23,447	12,128	11,319
Loss from operations	(20,744)	(11,652)	(9,092)
Other (expense) income, net	(452)	3,286	(3,738)
Net loss before income taxes	(21,196)	(8,366)	(12,830)
Provison for income taxes	(279)	(76)	(203)
Net loss	$(21,475)	$ (8,442)	$(13,033)

Collaboration Revenue

Collaboration revenue for the three months ended March 31, 2017 was $2.7 million, compared to $0.5 million for the three months ended March 31, 2016. The increase of $2.2 million was primarily due to an increase of research and development service revenue from the collaboration with Vertex of $1.0 million, and research and development service revenue of $1.2 million under a collaboration agreement with Casebia.

Research and Development Expenses

Research and development expenses for the three months ended March 31, 2017 was $14.8 million, compared to $6.0 million for the three months ended March 31, 2016. The increase of $8.8 million was primarily attributable to the following increases: $1.6 million of facilities costs including rent and utilities at our enlarged research facility, $3.3 million of variable process and platform development costs, $2.6 million of employee-related costs, $1.1 million of employee stock based compensation costs and $0.2 million increase in license fees.

General and Administrative Expenses

General and administrative expenses were $8.6 million for the three months ended March 31, 2017, compared to $6.1 million for the three months ended March 31, 2016. The increase of $2.5 million was primarily due to the following increases: $1.2 million of employee-related costs to support our overall growth, $1.2 million of employee stock based compensation, $0.7 million in facilities costs including rent

and utilities at our enlarged research facility, and $0.4 million of professional and consulting expenses including legal. These increases were partially offset by a $1.0 million decrease of intellectual property costs, including third-party costs to procure the issuance of patents in jurisdictions outside the United States, and costs related to an interference proceeding with respect to our in-licensed intellectual property.

Other (Expense) Income, Net

Other (expense) income, net, was $0.5 million of expense for the three months ended March 31, 2017, compared to $3.3 million of income for the three months ended March 31, 2016. The decrease of $3.7 million was primarily due $0.4 million of loss from equity method investment recognized in the three months ended March 31, 2017, as compared to a gain of $11.4 million on the extinguishment of convertible loans with Vertex, offset by $8.1 million of interest expense related to the convertible loan with Bayer recognized in the three months ended March 31, 2016.

Liquidity and Capital Resources

From our inception through March 31, 2017, we raised an aggregate of $397.1 million, of which $53.7 million consisted of proceeds from our IPO, $35.0 million from a private placement of our common shares, $125.2 million of gross proceeds from private placements of preferred shares, $73.2 million from the issuance of convertible loans, an up-front payment under our collaboration agreement with Vertex of $75.0 million, and a technology access fee of $35.0 million from Casebia, pursuant to our JV Agreement with Bayer HealthCare.

As of March 31, 2017, we had $288.9 million in cash of which approximately $281.6 million was held outside of the United States.

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, including preclinical studies to support clinical trial applications, and we initiate clinical trial. In addition, we expect to incur additional costs associated with operating as a public company.

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 future product candidates 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 or debt financings and collaboration arrangements. 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 and our collaboration with Vertex and Casebia. Except for these sources of funding, we do not have any committed external source of liquidity. To the extent that we raise additional capital through the future sale of equity or convertible debt securities, the ownership interest 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 that the net proceeds from our IPO, including the proceeds from the concurrent private placement with Bayer BV, together with 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 with Vertex and the JV. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect.

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; 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:

	March 31,		Period Change
	2017	2016	
	(in thousands)		
Net cash used in operating activities	$(23,412)	$(10,014)	$(13,398)
Net cash (used in) provided by investing activities	(3,285)	19,668	(22,953)
Net cash provided by financing activities	20	35,000	(34,980)
Effect of exchange rate changes on cash	29	(15)	44
Net (decrease) increase in cash	$(26,648)	$ 44,639	$(71,287)

Net Cash Used in Operating Activities

Net cash used in operating activities was $23.4 million for the three months ended March 31, 2017 as compared to $10.0 million for the three months ended March 31, 2016. The net cash used in operating activities for the three months ended March 31, 2017 primarily consisted of a net loss of $21.5 million adjusted for non-cash items (including equity-based compensation expense of $3.7 million, and depreciation and amortization expense of $0.7 million), an increase in accounts receivable of $2.5 million, an increase in prepaid expenses and other assets of $0.4 million and a decrease in accounts payable and accrued expenses of $3.6 million, and a decrease of $0.5 million in deferred rent, partially offset by an increase in deferred revenue of $0.7 million.

Net Cash (Used in) Provided by Investing Activities

Net cash used in investing activities for the three months ended March 31, 2017 was $3.3 million as compared with net cash provided by investing activities for the three months ended March 31, 2016 of $19.7 million. The net cash used in investing activities for the three months ended March 31, 2017 consisted primarily of purchases of property and equipment for use in research and development activities. We expect purchases of property and equipment to continue to increase in 2017 and 2018 as we build-out and outfit the office and laboratory space we began to occupy in December 2016.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the three months ended March 31, 2017 was $20 thousand, compared with $35.0 million for the three months ended March 31, 2016. The net cash provided by financing activities for the three months ended March 31, 2017 consisted of proceeds from the exercise of stock options. The cash provided by financing activities for the three months ended March 31, 2016 consisted of the proceeds from our subscription agreement with Bayer BV.

Contractual Obligations

We enter into agreements in normal course of business with vendors for preclinical research studies and other services and products for operating purposes.

We have engaged several research institutions to identify new delivery strategies and applications of the CRISPR/Cas9 technology. As a result of these efforts, we sponsored three research programs during the three months ended March 31, 2017. We have committed spending in one of these programs through 2018.

We have long-term liabilities associated with uncertain tax positions recorded under ASC 740, *Income Taxes* totaling $0.2 million. Due to the complexity associated with tax uncertainties, we cannot reasonably make a reliable estimate of the period in which we expect to settle these non-current liabilities. See Note 10 of the unaudited condensed consolidated financial statements contained in Item 1 of this interim report for more information on our unrecognized tax benefits.

Under the Invention Management Agreement ("IMA") signed on December 15, 2016, the Company is obligated to share costs related to patent maintenance, defense and prosecution for the CRISPR/Cas9 gene editing intellectual property with California, Vienna and their licensees including Caribou Biosciences, Inc. and Caribou's licensee Intellia Therapeutics, Inc.

Off-Balance Sheet Arrangements

As of March 31, 2017, 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. generally accepted accounting principles. 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 no significant changes to our accounting policies discussed in the Annual Report.

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. There were no new accounting pronouncements adopted during 2017 that had a material effect on our financial statements.

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

The Company has established disclosure controls and procedures designed to ensure that information required to be disclosed in the reports that the Company 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 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 Chief Executive Officer and Principal Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2017. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (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 Securities and Exchange Commission’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 March 31, 2017, our Chief 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. 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 the 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.

In addition to the appeal of the PTAB decision to the Federal Circuit, in parallel, either party can also 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 U.S. Court of Appeals for 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.

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, 2016.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Use of Proceeds

For the three months ended March 31, 2017, we estimate that we used approximately $45.9 million of the net proceeds from the IPO as follows: approximately $25.2 million on research and development activities to advance our product candidates; and approximately $20.7 million for working capital and general corporate purposes. None of the offering expenses consisted of direct or indirect payments made by us to directors, officers or persons owning 10% or more of our common stock or to their associates, or to our affiliates. There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC on October 19, 2016 pursuant to Rule 424. As of March 31, 2017, we had not invested the unused proceeds from the offering.

Item 6. Exhibits

The exhibits listed on the Exhibit Index immediately preceding such exhibits, which is incorporated herein by reference, are filed or furnished as part of this Form 10-Q.

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: May 11, 2017

By: /s/ Rodger Novak
Rodger Novak
Chief Executive Officer
(Principal Executive Officer)

Dated: May 11, 2017

By: /s/ Samarth Kulkarni
Samarth Kulkarni
President and Chief Business Officer
(Principal Financial Officer)

Exhibit Number	Description of Document
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.

EXHIBIT 31.1

CERTIFICATION

I, Rodger Novak, 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 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. (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

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

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

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

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

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

Date: May 11, 2017

By: /s/ Rodger Novak
Rodger Novak
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

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 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. (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

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

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

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

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

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

Date: May 11, 2017

By: /s/ Samarth Kulkarni
President and Chief Business Officer
(Principal Financial 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 March 31, 2017 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/ Rodger Novak

Rodger Novak
Chief Executive Officer
(Principal Executive Officer)

May 11, 2017

/s/ Samarth Kulkarni

Samarth Kulkarni
President and Chief Business Officer
(Principal Financial Officer)

May 11, 2017