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 September 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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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	☐	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 November 1, 2018, there were 51,896,995 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)

	As of	
	September 30, 2018	**December 31, 2017**
Assets		
Current assets:		
Cash	$ 487,295	$ 239,758
Accounts receivable, including related party amounts of $457 and $821 as of September 30, 2018 and December 31, 2017, respectively	552	2,626
Prepaid expenses and other current assets, including related party amounts of $52 and $1,871 as of September 30, 2018 and December 31, 2017, respectively	8,841	6,001
Total current assets	496,688	248,385
Property and equipment, net	18,097	18,857
Intangible assets, net	303	344
Restricted cash	3,165	3,154
Other non-current assets	650	606
Total assets	$ 518,903	$ 271,346
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 5,221	$ 1,639
Accrued expenses, including related party amounts of $234 and $0 as of September 30, 2018 and December 31, 2017, respectively	25,835	11,361
Accrued tax liabilities	24	347
Deferred rent	1,027	1,027
Other current liabilities	171	137
Total current liabilities	32,278	14,511
Deferred revenue non-current, including related party amounts of $0 and $91 as of September 30, 2018 and December 31, 2017, respectively	57,806	56,928
Deferred rent non-current	11,232	11,761
Other non-current liabilities	273	314
Total liabilities	101,589	83,514
Commitments and contingencies, see Note 5		
Shareholders' equity:		
Common shares, CHF 0.03 par value, 51,893,132 and 41,092,969 shares authorized at September 30, 2018 and December 31, 2017, respectively, 51,862,415 and 41,037,121 shares issued at September 30, 2018 and December 31, 2017, respectively, 51,554,479 and 40,592,248 shares outstanding at September 30, 2018 and December 31, 2017, respectively, 19,520,914 and 16,419,632 shares in conditional capital at September 30, 2018 and December 31, 2017, respectively.	1,575	1,240
Treasury shares, at cost, 307,936 and 444,873 shares at September 30, 2018 and December 31, 2017, respectively	(57)	-
Additional paid-in capital	659,776	312,018
Accumulated deficit	(243,979)	(125,440)
Accumulated other comprehensive income	(1)	14
Total shareholders' equity	417,314	187,832
Total liabilities and shareholders' equity	$ 518,903	$ 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 September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Collaboration revenue (1)	$ 563	$ 2,387	$ 3,009	$ 8,672
Operating expenses:				
Research and development (2)	39,820	17,845	84,972	49,770
General and administrative	10,175	8,112	31,752	24,522
Total operating expenses	49,995	25,957	116,724	74,292
Loss from operations	(49,432)	(23,570)	(113,715)	(65,620)
Other (expense):				
Loss from equity method investment	(1,012)	(359)	(3,256)	(1,310)
Other income (expense), net	(130)	(71)	(101)	(238)
Total other (expense), net	(1,142)	(430)	(3,357)	(1,548)
Net loss before income taxes	(50,574)	(24,000)	(117,072)	(67,168)
Provision for income taxes	(137)	(707)	(319)	(1,330)
Net loss	(50,711)	(24,707)	(117,391)	(68,498)
Foreign currency translation adjustment	(6)	8	(15)	38
Comprehensive loss	$ (50,717)	$ (24,699)	$ (117,406)	$ (68,460)
Reconciliation of net loss to net loss attributable to common shareholders:				
Net loss	$ (50,711)	$ (24,707)	$ (117,391)	$ (68,498)
Net loss per share attributable to common shareholders—basic and diluted	$ (1.07)	$ (0.62)	$ (2.51)	$ (1.72)
Weighted-average common shares outstanding used in net loss per share attributable to common shareholders—basic and diluted	47,391,988	40,088,718	46,709,388	39,904,863
(1) Including the following revenue from a related party, see Notes 6 & 10:	$ 443	$ 1,249	$ 2,406	$ 3,888
(2) Including the following research and development expense with a related party, see Notes 6 & 10:	$ 418	$ 1,208	$ 2,770	$ 3,699

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)

	Nine Months Ended September 30,	
	2018	**2017**
Operating activities:		
Net loss	$ (117,391)	$ (68,498)
Reconciliation of net loss to net cash and restricted cash used in operating activities:		
Depreciation and amortization	2,574	2,218
Equity-based compensation	21,960	11,894
Unrealized foreign currency remeasurement loss	-	(9)
Loss from equity method investment	3,256	1,310
Expense related to ViaCyte transaction	15,109	-
Other income, non-cash	(169)	-
Changes in:	-	
Accounts receivable	2,074	(54)
Prepaid expenses and other assets	(2,502)	(304)
Accounts payable and accrued expenses	7,982	(2,979)
Deferred revenue	(270)	2,043
Deferred rent	(528)	(903)
Other liabilities, net	38	31
Net cash and restricted cash (used in) operating activities	(67,867)	(55,251)
Investing activities:		
Purchase of property and equipment	(1,773)	(7,609)
Purchase of available for sale debt security	-	(500)
Net cash and restricted cash (used in) investing activities	(1,773)	(8,109)
Financing activities:		
Proceeds from issuance of common shares, net of issuance costs	309,019	-
Proceeds from exercise of options	8,241	1,324
Repurchase of common shares	(57)	-
Net cash provided by financing activities	317,203	1,324
Effect of exchange rate changes on cash	(15)	39
Increase (decrease) in cash and restricted cash	247,548	(61,997)
Cash and restricted cash, beginning of period	242,912	318,670
Cash and restricted cash, end of period	$ 490,460	$ 256,673
Supplemental disclosure of non-cash investing and financing activities		
Costs for supplemental offering in accounts payable and accrued expenses	$ 1,980	$ -
Property and equipment purchases in accounts payable and accrued expenses	$ -	$ 118

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 $244.0 million as of September 30, 2018 and has financed its operations to date from proceeds obtained from its IPO, subsequent offerings of its common shares in January 2018 and September 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. In September 2018, the Company completed an offering of 4,210,526 common shares, which were sold at a price to the public of $47.50 per share. This offering resulted in $187.6 million of net proceeds to the Company. In addition, $3.1 million of stamp taxes on the issuance proceeds from the January and September offerings were recorded as an offset to additional paid in capital. The Company expects its cash of $487.3 million at September 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.

In August 2018, the Company entered into an At-The-Market ("ATM") sales agreement with Jefferies LLC ("Jefferies"), under which it may offer and sell from time to time common shares having aggregate gross proceeds of up to $125.0 million. We have not yet issued or sold any securities under this sales agreement. We have incurred $0.2M in costs related to this sales agreement, which are included in other current assets as of September 30, 2018 and will be offset against future offering proceeds.

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 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 ("ASU 2014-09"), 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 Accounting Standards Codification ("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 September 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 cumulative 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 nine months ended September 30, 2018, to the pro-forma amounts had the previous guidance been in effect:

	As of September 30, 2018			
	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Consolidated Balance Sheet Data (in thousands):				
Other current liabilities	$ 171	$ (102)	(5)	$ 69
Total current liabilities	$ 32,278	$ (102)	(5)	$ 32,176
Deferred revenue	$ 57,806	$ (794)	(1)(2)(3)(5)	$ 57,012
Total liabilities	$ 101,589	$ (896)	(1)(2)(3)(5)	$ 100,693
Accumulated deficit	$ (243,979)	$ 895	(1)(2)(3)	$ (243,084)
Total shareholders' equity	$ 417,314	$ 896	(1)(2)(3)	$ 418,210
Total liabilities and shareholders' equity	$ 518,903	$ —	(1)(2)(3)	$ 518,903

	Three Months Ended September 30, 2018			
Consolidated Statement of Operations Data (in thousands):	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Collaboration revenue	$ 563	$ (57)	(2)(3)	$ 506
Loss from operations	$ (49,432)	$ (57)	(2)(3)	$ (49,489)
Net loss before income taxes	$ (50,574)	$ (57)	(2)(3)	$ (50,631)
Net loss	$ (50,711)	$ (57)	(2)(3)	$ (50,768)
Comprehensive loss	$ (50,717)	$ (57)	(2)(3)	$ (50,774)

	Nine Months Ended September 30, 2018			
Consolidated Statement of Operations Data (in thousands):	As Reported Under ASC 606	Adjustments	Notes	Adjusted Balance Under ASC 605
Collaboration revenue	$ 3,009	$ (252)	(2)(3)	$ 2,757
Loss from operations	$ (113,715)	$ (252)	(2)(3)	$ (113,967)
Net loss before income taxes	$ (117,072)	$ (252)	(2)(3)	$ (117,324)
Net loss	$ (117,391)	$ (252)	(2)(3)	$ (117,643)
Comprehensive loss	$ (117,406)	$ (252)	(2)(3)	$ (117,658)
Consolidated Statement of Cash Flows (in thousands):				
Operating activities:				
Net loss	$ (117,391)	$ (252)	(2)(3)	$ (117,643)
Reconciliation of net loss to net cash and restricted cash used in operating activities:				
Changes in:				
Deferred revenue	$ (270)	$ 354	(1)(2)(3)(4)(5)	$ 84
Other liabilities, net	$ 38	$ (102)	(1)(2)(3)(4)(5)	$ (64)
Net cash and restricted cash (used in) operating activities	$ (67,867)	$ —		$ (67,867)
Increase (decrease) in cash and restricted cash	$ 247,548	$ —		$ 247,548
Cash and restricted cash, end of period	$ 490,460	$ —		$ 490,460

(1) Adjustment of $1,148 to reverse the ASC 606 transition adjustment from retained earnings and deferred revenue.
(2) Adjustment of $31 and $175 for the three and nine months ended September 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 $77 for the three and nine months ended September 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 reclassify $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 (“ASU 2016-01”). 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 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 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 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 nine months ended September 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.

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 ASC 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. ASC 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 Company early adopted this standard on a prospective basis on July 1, 2018. 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. The adoption of this guidance did not have a material impact of the Company's consolidated financial statements.

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's project team has reviewed its portfolio of existing leases and current accounting policies to identify and assess the potential differences that would result from applying the requirements of the new standard. The Company anticipates that the amended guidance will result in the recognition of additional right of use assets and corresponding liabilities on its condensed consolidated balance sheets. The Company is also in the process of implementing appropriate changes to its controls to support lease accounting and related disclosures under the new standard.

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	
	September 30, 2018	September 30, 2017
Outstanding options	6,698,579	5,778,629
Unvested restricted common shares	178,884	64,277
Total	6,877,463	5,842,856

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 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	
	September 30, 2018	December 31, 2017
Computer equipment	$ 405	$ 285
Furniture, fixtures, and other	2,240	2,104
Laboratory equipment	7,993	6,603
Leasehold improvements	13,776	13,776
Construction work in process	127	-
	24,541	22,768
Accumulated depreciation	(6,444)	(3,911)
Property and equipment, net	$ 18,097	$ 18,857

Depreciation expense for the three and nine months ended September 30, 2018 was $0.8 million and $2.5 million, respectively. Depreciation expense for the three and nine months ended September 30, 2017 was $0.8 million and $2.2 million, respectively.

4. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	As of	
	September 30, 2018	December 31, 2017
Payroll and employee-related costs	$ 5,353	$ 5,550
Research costs	6,830	2,285
Licensing fees	144	609
Professional fees	2,397	2,176
Intellectual property costs	1,505	500
ViaCyte collaboration agreement	7,609	-
Other	1,997	241
Total	$ 25,835	$ 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 $1.0 million through 2020. In connection with these agreements, during the three and nine months ended September 30, 2018, the Company has made payments of $0.3 million and of $1.4 million, respectively. In connection with these agreements, during the three and nine months ended September 30, 2017, the Company has made payments of $0.4 million and of $2.1 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 $2.4 million as prepaid expenses on the condensed consolidated balance sheet as of September 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 Quarterly Report on Form 10-Q) 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 (collectively "UC") appealed the PTAB decision to the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit"). In the appeal, UC asked the court to review and reverse 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. On September 10, 2018, the Federal Circuit affirmed the PTAB's decision to terminate the interference proceeding.

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 nine months ended September 30, 2018, the Company incurred $0.5 million and $1.6 million, respectively, in shared costs. During the three and nine months ended September 30, 2017, the Company incurred $0.1 million, and $1.1 million, respectively, in shared costs. The Company recorded accrued legal costs from the cost sharing of $1.4 million and $0.4 million as of September 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 nine months ended September 30, 2018, the Company recognized $0.1 million and $0.5 million of revenue related to the collaboration with Vertex, respectively. During the three and nine months ended September 30, 2017, the Company recognized $1.2 million and $4.8 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 nine months ended September 30, 2018 was $0.1 million and $0.5 million, respectively. Research and development expense incurred by the Company in relation to its performance under the Collaboration Agreement for the three and nine months ended September 30, 2017 was $2.1 million and $8.0 million, respectively. Research and development expense incurred by the Company in relation to its performance under the JDA for the three and nine months ended September 30, 2018 was $8.7 million and $24.9 million, respectively. Reimbursements from Vertex under the JDA for the three and nine months ended September 30, 2018 was $3.7 million and $10.4 million, respectively. As of September 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 September 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 September 30, 2018.

At September 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 $0.0 and $0.9 million for both research and license agreements during the three and nine months ended September 30, 2018, respectively, which was recorded as a reduction of R&D expense in the income statement. The Company received reimbursements of $0.4 million and $2.1 million for both research and license agreements during the three and nine months ended September 30, 2017, respectively.

Collaboration Revenue

During the three and nine months ended September 30, 2018, the Company recognized $0.4 million and $2.4 million of revenue, respectively, related to the collaboration with Casebia. During the three and nine months ended September 30, 2017, the Company recognized $1.2 million and $3.9 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 nine months ended September 30, 2018, the Company recognized $0.4 million and $2.8 million of research and development expense, respectively, in relation to its performance under the agreement. During the three and nine months ended September 30, 2017, the Company recognized $1.2 million and $3.7 million of research and development expense, respectively, in relation to its performance under the agreement. During the three and nine months ended September 30, 2018, the Company recognized $1.0 million and $3.3 million, respectively, of stock-based compensation expense related to Casebia employees. During the three and nine months ended September 30, 2017, the Company recognized $0.4 million and $1.3 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 September 30, 2018 and December 31, 2017, respectively. Unrecognized equity method losses in excess of the Company's equity investment in Casebia was $38.8 million and $21.2 million as of September 30, 2018 and December 31, 2017, respectively.

Total operating expenses of Casebia for the three and nine months ended September 30, 2018 was $12.8 million and $39.1 million, respectively. Total net loss of Casebia for the three and nine months ended September 30, 2018 was $12.6 million and $38.4 million, respectively. Total operating expenses, and net loss of Casebia for the three and nine months ended September 30, 2017 was $10.2 million and $24.7 million, respectively.

Collaboration Agreement with ViaCyte, Inc.

On September 17, 2018, the Company entered into a research collaboration agreement ("ViaCyte Collaboration Agreement") with ViaCyte, Inc. ("ViaCyte") focused on the discovery, development, and commercialization of gene-edited allogeneic stem cell therapies for the treatment of diabetes. Under the terms of the ViaCyte Collaboration Agreement, the Company and ViaCyte will jointly seek to develop an immune-evasive stem cell line as a first step on the path to an allogeneic stem-cell derived product. Upon successful completion of these studies and identification of a product candidate, the parties will jointly assume responsibility for further development and commercialization worldwide.

Upon execution of the agreement, ViaCyte was entitled to receive $15.0 million from the Company that will be paid in two installments in either cash or in common shares at the Company's election. On September 24, 2018, the Company issued 165,636 common shares to ViaCyte which had a fair value of $7.5 million. The remaining amount will be paid in common shares or cash upon the close of market on the first business day after the Company files this Quarterly Report on Form 10-Q for the three and nine months ending September 30, 2018. The agreement includes certain provisions such that in the event ViaCyte sells shares received from the Company for less than $15.0 million in combined net proceeds, the Company will pay ViaCyte the deficient amount. In the event ViaCyte sells shares received from the Company for greater than $15.0 million in combined net proceeds, ViaCyte will pay the Company the surplus amount. Each party is responsible for certain research and development activities under the agreement and will be responsible for the respective costs of those activities. ViaCyte has the option, under certain circumstances, to receive an additional $10.0 million from the Company in the form of a convertible promissory note at fair value. The ViaCyte Collaboration Agreement may remain in force for up to six years.

The Company determined that the upfront payment of $15.0 million was for intellectual property which did not have an alternative future use, and as a result, the Company recorded the full amount as research and development expense upon execution of the agreement. The Company determined that upon issuing the 165,636 shares on September 24, 2018, there was an outstanding embedded derivative due to the provisions which require the Company and ViaCyte to settle the deficient or surplus amount. As of September 30, 2018, there was an outstanding derivative liability with a fair value of $0.1 million. The fair value of the derivative is determined based on the price of the Company's common stock and is considered a level 2 fair value instrument. The change in fair value of $0.1 million is included in other expense for the period ended September 30, 2018. The Company's total liability to ViaCyte was $7.6 million as of September 30, 2018 which is recorded in accrued expenses on the balance sheet.

Subsequent to September 30, 2018, ViaCyte sold the remainder of the shares issued September 24, 2018. The aggregate net proceeds from all shares issued September 24, 2018 was $6.9 million. As a result, the fair value of the remaining amount due to ViaCyte is $8.1 million, which will be paid in either cash or shares. Subsequent to September 30, 2018, the Company will recognize an additional loss of $0.5 million resulting from the change in fair value of the derivative liability ascribed to the shares issued September 24, 2018.

7. Share Capital

The Company had 51,893,132 registered common shares as of September 30, 2018, with a par value of CHF 0.03 per share, which includes 30,717 shares of unvested unissued restricted common shares and 307,936 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	**September 30, 2018**	**December 31, 2017**
Unvested unissued restricted stock	—	166,667
Outstanding stock options	6,698,579	6,262,339
Reserved for future issuance under stock option plans (1)	7,489,409	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	19,520,914	16,419,632

(1) The Company's Board of Directors and shareholders approved an increase in the number of common shares reserved for issuance under the Company's Amended and Restated 2016 Stock Option and Incentive Plan of 2,012,684 shares in May 2017, and the Company's Board of Directors approved an additional increase to the number of common shares reserved for issuance under the Company's 2018 Stock Option and Incentive Plan of an additional 4,000,000 shares 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 September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Research and development	$ 3,999	$ 2,420	$ 12,081	$ 6,095
General and administrative	4,056	2,448	9,879	5,799
Loss from equity method investment	1,012	359	3,256	1,310
Total	$ 9,067	$ 5,227	$ 25,216	$ 13,204

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:

	Nine Months Ended September 30,	
	2018	2017
Employees:		
Weighted average expected volatility	71.9%	72.6%
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 option and restricted stock awards, including those granted to employees of Casebia, were marked-to-market at each reporting period through June 30, 2018, the last period prior to the adoption of ASU 2018-07. All future expense related to these awards will be recorded based on the fair value measured as of June 30, 2018.

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	2,029,497	$ 52.86		
Exercised	(870,213)	$ 11.07		
Cancelled or forfeited	(723,044)	$ 19.10		
Outstanding at September 30, 2018	6,698,579	$ 24.89	8.6	$ 147,659
Exercisable at September 30, 2018	2,104,857	$ 14.28	8.0	$ 64,661
Vested or expected to vest at September 30, 2018 (1)	6,698,579	$ 24.89	8.6	$ 147,659

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

As of September 30, 2018, total unrecognized compensation expense related to stock options was $90.6 million which the Company expects to recognize over a remaining weighted-average period of 3.1 years.

During the nine months ended September 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 September 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 nine months ended September 30, 2018.

Restricted Stock Awards

The following table summarizes restricted stock activity for employees and non-employees during the nine months ended September 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	89,000	—	89,000	55.84
Vested	(67,631)	(168,613)	(236,244)	7.69
Cancelled or forfeited	—	(40,273)	(40,273)	3.52
Unvested restricted common shares as of September 30, 2018	178,884	—	178,884	$ 33.98

During the nine months ended September 30, 2018, the total fair value of vested restricted common shares was $10.9 million. As of September 30, 2018, total unrecognized compensation expense related to unvested restricted common shares was $5.3 million which the Company expects to recognize over a remaining weighted-average period of 1.7 years.

9. Income Taxes

During the three and nine months ended September 30, 2018, the Company recorded an income tax provision of $0.1 million and $0.3 million, respectively, representing an effective tax rate of -0.3% and -0.3%, respectively. During the three and nine months ended September 30, 2017, the Company recorded an income tax provision of $0.7 million and $1.3 million, respectively, representing an effective tax rate of -2.9%, and -2.0%, 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 September 30, 2018. There have been no changes to the provisional amounts recorded in the 2017 financial statements during the three and nine months ended September 30, 2018.

10. Related Party Transactions

The Company is a party to intellectual property license agreements with Dr. Charpentier. During the three and nine months ended September 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

Refer to Note 6 for discussion of changes in the fair value of the liability arising from the ViaCyte Collaboration Agreement.

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 the Securities and Exchange Commission 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.

*Investors and others should note that we announce material financial information to our investors using our investor relations website (*https://crisprtx.gcs-web.com/*), SEC filings, press releases, public conference calls and webcasts. We use these channels as well as social media to communicate with the public about our company, our business, our product candidates and other matters. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our company to review the information we post on the social media channels listed on our investor relations website.*

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.

In September 2018, we completed an offering of 4,210,526 common shares, which were sold at a price to the public of $47.50 per share. This offering resulted in $187.6 million of net proceeds to us. The underwriting discount of $12.0 million and other expenses of $0.4 million related to the equity offering were recorded as an offset to additional paid-in capital.

In addition, $3.1 million of stamp taxes on the issuance proceeds from the January and September offerings were recorded as an offset to additional paid in capital.

In August 2018, the Company repurchased 64,211 shares of restricted common stock from former employees for less than $0.1 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 September 30, 2018, we had $487.3 million in cash and an accumulated deficit of $244.0 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 an amendment to the collaboration agreement (“Amendment”). The Amendment, among other things, modified certain definitions and provisions of the Collaboration Agreement to make them consistent with the Joint Development Agreement (“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. On October 10, 2018, we and Vertex announced that the FDA has lifted the clinical hold and accepted the IND for CTX001 for the treatment of sickle cell disease. We and Vertex are currently enrolling patients with transfusion dependent β-thalassemia in a Phase 1/2 trial in β-thalassemia in Europe. 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.

Collaboration Agreement- ViaCyte

On September 17, 2018, we entered into a research collaboration agreement ("ViaCyte Collaboration Agreement") with ViaCyte, Inc. (“ViaCyte”) focused on the discovery, development, and commercialization of gene-edited allogeneic stem cell therapies for the treatment of diabetes. Under the terms of the ViaCyte Collaboration Agreement, we and ViaCyte will jointly seek to

develop an immune-evasive stem cell line as a first step on the path to an allogeneic stem-cell derived product. Upon successful completion of these studies and identification of a product candidate, we and ViaCyte will jointly assume responsibility for further development and commercialization worldwide.

Upon execution of the agreement, ViaCyte was entitled to receive $15.0 million from us that will be paid in two installments either in cash or in common shares at the Company's option. On September 24, 2018, we issued 165,636 common shares to ViaCyte which had a fair value of $7.5 million. The remaining amount will be paid in common shares or cash upon the close of market on the first business day after we file our Quarterly Report on Form 10-Q for the three months ending September 30, 2018. The agreement includes certain provisions such that in the event ViaCyte sells shares received from us for less than $15.0 million in combined net proceeds, we will owe ViaCyte the deficient amount. In the event ViaCyte sells shares received from us for greater than $15.0 million in combined net proceeds, ViaCyte will owe us the surplus amount. ViaCyte has the option, under certain circumstances, to receive an additional $10.0 million from us in the form of a convertible promissory note at fair value. The ViaCyte Collaboration Agreement may remain in force for up to six years.

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 nine months ended September 30, 2018, we recognized $0.6 million and $3.0 million, respectively, of revenue related to our collaboration arrangement with Vertex and Casebia. During the three and nine months ended September 30, 2017, we recognized $2.4 million and $8.7 million, respectively, of revenue related to our collaboration agreements with Vertex and Casebia. As of September 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 September 30, 2018 and 2017

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

	Three Months Ended September 30,		Period to Period Change
	2018	2017	
	(in thousands)		
Collaboration revenue	$ 563	$ 2,387	$ (1,824)
Operating expenses:			
Research and development	39,820	17,845	21,975
General and administrative	10,175	8,112	2,063
Total operating expenses	49,995	25,957	24,038
Loss from operations	(49,432)	(23,570)	(25,862)
Other expense, net	(1,142)	(430)	(712)
Net loss before income taxes	(50,574)	(24,000)	(26,574)
Provision for income taxes	(137)	(707)	570
Net loss	$ (50,711)	$ (24,707)	$ (26,004)

Collaboration Revenue

Collaboration revenue for the three months ended September 30, 2018, was $0.6 million, compared to $2.4 million for the three months ended September 30, 2017. The decrease of approximately $1.8 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 $39.8 million for the three months ended September 30, 2018, compared to $17.8 million for the three months ended September 30, 2017. The increase of approximately $22.0 million was primarily attributable to the following increases: $15.0 million of expenses related to the ViaCyte Collaboration Agreement, $2.6 million of variable research and development costs and license fees, $1.6 million of employee stock based compensation costs and $2.4 million of employee-related costs. Total research and development expenses include $0.1 million related to the collaboration agreement with Vertex and $5.0 million associated with the JDA, which is net of $3.7 million for costs reimbursed by Vertex, for the three months ended September 30, 2018.

General and Administrative Expenses

General and administrative expenses were $10.2 million for the three months ended September 30, 2018, compared to $8.1 million for the three months ended September 30, 2017. The increase of approximately $2.1 million was primarily attributable to an increase of $1.6 million of employee stock based compensation costs.

Other Expense, Net

Other expense, net, was $1.1 million of expense for the three months ended September 30, 2018, compared to $0.4 million of expense for the three months ended September 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. Other expense for the three months ended September 30, 2018 includes $0.1 million of expense related to the change in fair value of the derivative liability issued under the ViaCyte Collaboration Agreement.

Comparison of nine Months Ended September 30, 2018 and 2017

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

	Nine Months Ended September 30,		Period to Period Change
	2018	2017	
	(in thousands)		
Collaboration revenue	$ 3,009	$ 8,672	$ (5,663)
Operating expenses:			
Research and development	84,972	49,770	35,202
General and administrative	31,752	24,522	7,230
Total operating expenses	116,724	74,292	42,432
Loss from operations	(113,715)	(65,620)	(48,095)
Other (expense) income, net	(3,357)	(1,548)	(1,809)
Net loss before income taxes	(117,072)	(67,168)	(49,904)
Provision for income taxes	(319)	(1,330)	1,011
Net loss	$ (117,391)	$ (68,498)	$ (48,893)

Collaboration Revenue

Collaboration revenue for the nine months ended September 30, 2018 was $3.0 million, compared to $8.7 million for the nine months ended September 30, 2017. The decrease of $5.7 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 $85.0 million for the nine months ended September 30, 2018, compared to $49.8 million for the nine months ended September 30, 2017. The increase of approximately $35.2 million was primarily attributable to the following increases: $15.0 million of expenses related to the Viacyte Collaboration Agreement, $7.4 million of variable research and development costs and license fees, $5.8 million of employee stock based compensation costs, $6.0 million of employee-related costs, and $0.5 million of facility-related costs. Total research and development expenses include $0.5 million related to the collaboration agreement with Vertex and $14.5 million associated with the JDA, which is net of $10.4 million for costs reimbursed by Vertex, for the nine months ended September 30, 2018.

General and Administrative Expenses

General and administrative expenses were $31.8 million for the nine months ended September 30, 2018, compared to $24.5 million for the nine months ended September 30, 2017. The increase of $7.2 million was primarily due to the following increases: $4.1 million of employee stock based compensation costs, $2.4 million in intellectual property costs, $1.4 million in employee-related costs. The increases were offset by a reduction of $0.3 million in professional and consulting expenses and $0.3 million of facility-related costs.

Other (Expense) Income, Net

Other (expense) income, net was $3.4 million of expense for the nine months ended September 30, 2018, compared to $1.5 million of expense for the nine months ended September 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. Other expense for the nine months ended September 30, 2018 includes $0.1 million of expense related to the change in fair value of the derivative liability issued under the ViaCyte Collaboration Agreement.

Liquidity and Capital Resources

As of September 30, 2018, we had cash of approximately $487.3 million of which approximately $481.7 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. In September 2018, we completed an offering of 4,210,526 common shares, which were sold at a price to the public of $47.50 per share. This offering resulted in $187.6 million of net proceeds to us. The underwriting discount of $12.0 million and other expenses of $0.4 million related to the equity offering were recorded as an offset to additional paid-in capital. In addition, $3.1 million of stamp taxes on the issuance proceeds from the January and September offerings were recorded as an offset to additional paid in capital. With our cash on hand as of September 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 September 30, 2018, our funds were held in non-interest-bearing deposit accounts.

In August 2018, the Company entered into an At-The-Market (“ATM”) sales agreement with Jefferies, under which it may offer and sell from time to time common shares having aggregate gross proceeds of up to $125.0 million. We have not yet issued or sold any securities under this sales agreement. We have incurred $0.2M in costs related to this sales agreement, which are included in other current assets as of September 30, 2018 and will be offset against future offering proceeds.

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:

	Nine Months Ended September 30,		Period to Period Change
	2018	2017	
	(in thousands)		
Net cash and restricted cash used in operating activities	$ (67,867)	$ (55,251)	$ (12,616)
Net cash used in investing activities	(1,773)	(8,109)	6,336
Net cash provided by financing activities	317,203	1,324	315,879
Effect of exchange rate changes on cash	(15)	39	(54)
Net increase (decrease) in cash and restricted cash	$ 247,548	$ (61,997)	$ 309,545

Net Cash Used in Operating Activities

Net cash used in operating activities was $67.9 million for the nine months ended September 30, 2018 as compared to $55.3 million for the nine months ended September 30, 2017. The net cash used in operating activities for the nine months ended September 30, 2018 primarily consisted of a net loss of $117.4 million adjusted for non-cash items (including equity-based compensation expense of $22.0 million, depreciation and amortization expense of $2.6 million, a loss from an equity method investment of $3.3 million, expense of $15.1 million under the ViaCyte Collaboration Agreement, $7.5 million of which was paid through the issuance of common shares during the period ended September 30, 2018, and $7.6 million of which is accrued as of September 30, 2018), a decrease in accounts receivable of $2.1 million, an increase in prepaid expenses and other assets of $2.5 million, an increase in accounts payable and accrued expenses of $8.0 million, a decrease of $0.5 million in deferred rent and a decrease in deferred revenue of $0.3 million.

Net Cash (Used in) Provided by Investing Activities

Net cash used in investing activities for the nine months ended September 30, 2018 was $1.8 million as compared to $8.1 million for the nine months ended September 30, 2017. The net cash used in investing activities for the nine months ended September 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 nine months ended September 30, 2018 was $317.2 million, compared with $1.3 million for the nine months ended September 30, 2017. The net cash provided by financing activities for the nine months ended September 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, proceeds from the issuance of common shares in an offering in September of 2018 which resulted in $187.6 million of net proceeds to the Company, as well as exercises of stock options. In addition, $3.1 million of

stamp taxes on the issuance proceeds from the January and September offerings were recorded as an offset to additional paid in capital.

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 September 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. Based on our foreign currency exchange rate exposures at September 30, 2018, a hypothetical 10% adverse fluctuation in exchange rates would not have a material impact on the consolidated financial statements.

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 September 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 September 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 asked the court to review and reverse 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. On September 10, 2018, the Federal Circuit affirmed the PTAB's decision to terminate the interference proceeding.

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 September 30, 2018, we issued to Casebia employees options to purchase an aggregate of 6,000 common shares at a weighted-average exercise price of $50.14 per share. We deemed these issuances to be exempt from registration under the Securities Act either in reliance on Rule 701 of the Securities Act as sales and offers under compensatory benefit plans and contracts relating to compensation in compliance with Rule 701, or in reliance on Section 4(a)(2), as transactions by an issuer not involving a public offering. All recipients either received adequate information about our Company or had access, through employment or other relationships, to such information. No underwriters were involved in the foregoing issuances of securities.

Item 6. Exhibits

Exhibit Number	Description of Document
3.1	Amended and Restated Articles of Association of CRISPR Therapeutics AG, dated May 30, 2018.
10.1†	Research Collaboration Agreement by and between CRISPR Therapeutics AG and ViaCyte, Inc., dated as of September 17, 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.

† Application has been made to the Securities and Exchange Commission for confidential treatment of certain provisions. Omitted material for which confidential treatment has been requested has been filed separately with the Securities and Exchange Commission.

* 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: November 7, 2018

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

Dated: November 7, 2018

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

ARTICLES OF ASSOCIATION **of** **CRISPR Therapeutics AG** **(CRISPR Therapeutics SA)** **(CRISPR Therapeutics Ltd)** **with registered office in** **Zug** (Translation; in case of controversy the German text shall prevail)		**STATUTEN** **der** **CRISPR Therapeutics AG** **(CRISPR Therapeutics SA)** **(CRISPR Therapeutics Ltd)** **mit Sitz in** **Zug**
I. CORPORATE NAME, PRINCIPAL OFFICE, DURATION AND PURPOSE OF THE COMPANY		**I. FIRMA, SITZ, DAUER UND ZWECK DER GESELLSCHAFT**
Art. 1 Corporate Name, Principal Office and Duration Under the name CRISPR Therapeutics AG (CRISPR Therapeutics SA) (CRISPR Therapeutics Ltd) there exists a Company which is subject to the provisions of art. 620 et seq. of the Swiss Code of Obligations (CO) with registered office in Zug, The duration of the Company is unlimited.		**Art. 1 Firma, Sitz und Dauer** Unter der Firma CRISPR Therapeutics AG (CRISPR Therapeutics SA) (CRISPR Therapeutics Ltd) besteht für unbeschränkte Dauer eine Akti-engesellschaft gemäss Art. 620 ff. OR mit Sitz in Zug.

Art. 2 Purpose The purpose of the Company is the research and development in the field of pharmaceutical products, including biological and bio-technological products, as well as the production and commercialisation of such products. The Company may purchase, hold and sell patents, copy rights, trade marks and other intellectual property rights as well as licenses of any kind. The Company may engage in and carry out any and all commercial, financial or other activity, which is directly or indirectly related to the purpose of the Company. The Company may purchase, hold and sell shares or interests in other companies in Switzerland or abroad. It may establish and maintain branches and subsidiaries in Switzerland and abroad. The Company may purchase, hold and sell real estate and carry out other investments.		**Art. 2 Zweck** Die Gesellschaft bezweckt die Forschung und Entwicklung auf dem Gebiet von pharmazeu-tischen Produkten, einschliesslich biologischen und biotechnologischen Produkten, sowie die Herstellung und Kommerzialisierung derartiger Produkte. Die Gesellschaft kann Patente, Urheberrechte, Marken und andere Immaterialgüterrechte sowie Lizenzen jeder Art erwerben, halten und veräussern. Die Gesellschaft kann alle kommerzieilen, fi-nanziellen und anderen Tätigkeiten ausuben, welche mit dem Zweck der Gesellschaft dire kt oder indirekt im Zusammenhang ste-hen. Die Gesellschaft kann Beteiligungen an anderen Unternehmen im In- und Ausland erwerben, halten und veräussern. Sie kann Zweigniederlassungen und Tochtergesell-schaften im In- und Ausland errichten. Die Gesellschaft kann Grundstücke erwerben, verwalten und veraussern sowie Ver-mögensanlagen anderer Art tätigen.
II. SHARE CAPITAL AND SHARES		**II. AKTIENKAPITAL UND AKTIEN**
Art. 3 Share Capital and Shares The share capital of the Company is CHF 1’405’289.07 and is fully paid-in. It is divided into 46’842’969 registered shares with a nominal value of CHF 0.03 each.		**Art. 3 Aktienkapital und Aktien** Das Aktienkapital der Gesellschaft betragt CHF 1’405’289.07 und ist voll liberiert. Es ist in 46’842’969 Namenaktien mit einem Nennwert von je CHF 0.03 eingeteilt.
Art. 3a Authorized Share Capital The Board of Directors is authorized to increase the share capital, in one or several steps until 29 May 2020, by a maximum amount of CHF 690’055.11 by issuing a maximum of 23’001’837 registered shares with a par value of CHF 0.03 each, to be fully paid up. An increase of the share capital (i) by means of an offering underwritten by a financial institution, a syndicate or another third party or third parties, followed by an offer to the then-existing shareholders of the Company and (ii) in partial amounts shall also be permissible.		**Art. 3a Genehmigtes Kapital** Der Verwaltungsrat ist ermachtigt, jederzeit bis zum 29. Mai 2020, das Aktienkapital im Maximalbetrag von CHF 690’055.11 durch Ausgabe von hochstens 23’001’837 vollstan-dig zu liberierende Namenaktien mit einem Nennwert von je CHF 0.03 zu erhohen. Eine Erhohung des Aktienkapitals (i) durch die Zeichnung von Aktien aufgrund eines von einem Finanzinstitut, eines Verbandes, einer anderen Drittpartei oder Drittparteien unter-zeichneten Angebots, gefolgt von einem An-gebot gegenuber den zu diesem Zeitpunkt bestehenden Aktionaren der Gesellschaft so wie (ii) in Teilbetragen ist zulassig.

The Board of Directors shall determine the time of the issuance, the issue price, the manner in which the new registered shares have to be paid up, the date from which the registered shares carry the right to dividends, the conditions for the exercise of the preemptive rights . and the allotment of preemptive riqhts that have not been exercised. The Board of Directors may allow the preemptive rights that have not been exercised to expire, or it may place with third parties such rights or registered shares, the preemptive rights of which have not been exercised, at market conditions or use them otherwise in the interest of the Company.		Der Verwaltungsrat soil den Ausgabezeitpunkt, den Bezugspreis, die Art und Weise der Liberierung, das Datum, ab welchem die Aktien zum Bezug einer Dividende berechtigen, die Bedingungen zur Ausubung der Bezugsrechte sowie die Zuteilung nicht ausgeubter Bezugsrechte festlegen. Der Verwaltungsrat kann bestimmen, dass nicht ausgeubte Bezugsrechte verfallen oder er kann Drittparteien solche Rechte oder Aktien, fur welche die Bezugsrechte nicht ausgeubt wurden, zu Marktbedingungen zuteilen oder sie sonst im Interesse der Gesellschaft verwenden.

The Board of Directors is authorized to withdraw or limit the preemptive rights of the shareholders and to allot them to third parties: a) if the issue price of the new registered shares is determined by reference to the market price; or b) for the acquisition of an enterprise, part of an enterprise or participations, or for the financing or refinancing of any of such acquisition, or in the event of share placement for the financing or refinancing of such placement; or c) for purposes of broadening the shareholder constituency of the Company in certain financial or investor markets, for purposes of the participation of strategic partners, or in connection with the listing or registration of new registered shares on domestic or foreign stock exchanges; or d) for purposes of granting an over-allotment option (Greenshoe) of up to 20% of the total number of registered shares in a placement or sale of registered shares to the respective initial purchaser(s) or underwriter(s); or e) for raising of capital (including private placements) in a fast and flexible which probably could not be reached without the exclusion of the statutory pre-emptive right of the existing shareholders; f) for other valid grounds in the sense of Article 652b para. 2 CO; or g) following a shareholder or a group of shareholders acting in concert having accumulated shareholdings in excess of 15% of the share capital registered in the commercial register without having submitted to the other shareholders a takeover offer recommended by the Board of Directors, or for the defense of an actual, threatened or potential takeover bid, in relation to which the Board of Directors, upon consultation with an independent financial adviser retained by it, has not recommended to the shareholders acceptance on the basis that the Board of Directors has not found the takeover bid to be financially fair to the shareholders.	Der Verwaltungsrat ist ermachtigt, das Be-zugsrecht der Aktionare auszuschliessen oder Dritten zuzuteilen: a) falls der Ausgabepreis der neuen Aktien anhand des Marktwertes festgelegt wird; oder b) fur die Ubernahme eines Unternehmens, den Teil eines Unternehmens oder Betei-ligungen oder fur die Finanzierung oder Refinanzierung solcher Erwerbe, oder im Falle einer Aktienplatzierung fur die Finanzierung oder Refinanzierung solcher Platzierungen; oder c) zum Zweck der Erweiterung der Aktionarskreises der Gesellschaft in bestimmten finanziellen oder Investorenmarkten, fur die Zwecke der Beteiligung von strategischen Partnern, oder im Zusammenhang mit der Auflistung oder Meldung neuer Namenaktien an inlandischen oder auslandischen Borsen; oder d) zum Zweck der Gewahrung einer Mehr-zuteilungsoption (Greenshoe) von bis zu 20% aller Namenaktien im Falle einer Vermittlung oder eines Verkaufs von Namenaktien an den jeweiligen ur-sprunglichen Kaufer oder Zeichner; oder e) urn Kapital (inklusive durch private Vermittlung) in schneller und flexibler Weise zu beschaffen, welches wahrscheinlich ohne den Ausschluss der gesetzlichen Vorkaufsrechte der existierenden Aktionare nicht erhoben werden konnte; oder f) aus anderen, qemass Art. 652 Abs. 2 OR zulassigen Grunden; oder g) einem Aktionar oder einer Gruppe von Aktionaren folgend, die gemeinsam mehr als 15 % des im Handelsregister eingetragenen Aktienkapitals halten und den ubrigen Aktionaren auf Empfehlung des Verwaltungsrats hin kein Ubernah-meangebot unterbreitet haben, oder im Rahmen der Abwehr eines tatsachlichen, drohenden oder etwaigen Obernahme-versuchs, fur den der Verwaltungsrat, nach Konsultation eines unabhangigen Finanzberaters, keine Zustimmungs-empfehlung abgegeben hat, da das Ubernahmeangebot vom Verwaltungsrat den Aktionaren gegenuber als finanziell zu wenig angemessen betrachtet wird.
The acquisition of registered shares out of authorized capital increase of share capital for general purposes and any transfers of registered shares shall be subject to the restrictions specified in Article 4 of the Articles of Association.	Der Erwerb von Namenaktien aufgrund einer genehmigten Aktienkapitalerhohung fur all-gemeine Zwecke sowie jeder Transfer von Namenaktien unterliegen den Einschrankun-gen in Art. 4 dieser Statuten.
Art. 3b Conditional Capital Increase for Bonds and Similar Debt Instruments The share capital of the Company shall be increased by a maximum amount of CHF 147’591.00 through the issue of a maximum of 4’919’700 registered shares, payable in full, each with a nominal value of CHF 0.03 through the exercise of conversion and/or option rights granted in connection with bonds or similar instruments, issued or to be issued by the Company or by subsidiaries of the Company, including convertible debt instruments.	**Art. 3b Bedingtes Kapital für Aniei-hensobligationen oder ähnliche Instrumente** Das Aktienkapital der Gesellschaft wird im Maximalbetrag von CHF 147’591.00 durch Ausgabe von hochstens 4’919’700 vollstan-dig zu liberierenden Namenaktien mit einem Nennwert von CHF 0.03 je Aktie erhoht durch die Ausubung von Wandlungs-und/oder Optionsrechte,” welche im Zusam-menhang mit von der Gesellschaft oder ihren Tochtergesellschaften emittierten oder noch zu emittierenden Anleihensobligationen oder ahnlichen Instrumenten eingeraumt wurden oder werden, einschliesslich Wandelanleihen.

Shareholders' subscription rights are excluded. Shareholders' advance subscription rights with regard to the new bonds or similar instruments may be restricted or excluded by decision of the Board of Directors in order to finance or re-finance the acquisition of companies, parts of companies or holdings, or new investments planned by the Company, or in order to issue convertible bonds or similar instruments on the international capital markets or through private placement. If advance subscription rights are excluded, then (1) the instruments are to be placed at market conditions, (2) the exercise period is not to exceed ten years from the date of issue of option rights and twenty years for conversion rights and (3) the conversion or exercise price for the new shares is to be set at least in line with the market conditions prevailing at the date on which the instruments are issued.		Das Bezugsrecht der Aktionare ist fur diese Aktien ausgeschlossen. Das Vorwegzeich-nungsrecht der Aktionare in Bezug auf neue Anleihensobligationen oder ahnliche Instrumente kann durch Beschluss des Verwaltungsrates zu folgenden Zwecken einge-schrankt oder ausgeschlossen werden: Fi-nanzierung und Refinanzierung des Erwerbs von Unternehmen, Unternehmensteilen, Be-teiligungen, oder von der Gesellschaft ge-planten neuen Investitionen, oder fur die Ausgabe von Anleihensobligationen oder ahnlichen Instrumenten auf internationalen Kapitalmarkten oder mittels Privatplatzie-rungen. Falls Vorwegzeichnungsrechte ausgeschlossen werden, miissen (1) die Instruments zu Marktkonditionen platziert werden, mussen (2) der Ausubungszeitraum darf zehn Jahre seit dem Ausgabedatum der Optionsrechte und 20 Jahre seit dem Ausgabedatum der Wandlungsrechte nicht uberschreiten und (3) der Wandlungs- oder Aus-ubungspreis fur die neuen Aktien muss mindestens gemass den Marktbedingungen am Ausgabedatum der Instrumente festgelegt werden.
The acquisition of registered shares through the exercise of conversion or option rights and any transfers of registered shares shall be subject to the restrictions specified in Article 4 of the Articles of Association.		D Der Erwerb von Namenaktien durch Aus-ubung von Wandel- oder Optionsrechten so wie samtliche weiteren Ubertragungen von Namenaktien unterliegen den Ubertragungs-beschrankungen gemass Art. 4 der Statuten.
Art. 3c Conditional Share Capital for Employee Benefit Plans The share capital of the Company shall be increased by an amount not exceeding CHF 467'378.88. through the issue of a maximum of 15'579'296 registered shares, payable in full, each with a nominal value of CHF 0.03, in connection with the exercise of option rights granted to any employee of the Company or a subsidiary, and any consultant, members of the Board of Directors, or other person providing services to the Company or a subsidiary.		**Art. 3c Bedingtes Aktienkapital fur Mitarbeiterbeteiligungsplane** Das Aktienkapital kann durch die Ausgabe von höchstens 15'579'296 voll zu liberieren-den Namenaktien im Nennwert von je CHF 0.03 urn höchstens CHF 467'378.88 durch Ausübung von Optionsrechten erhöht werden, welche Mitarbeitenden der Gesellschaft oder ihrer Tochtergesellschaften, Personen In vergleichbaren Positionen, Beratern, Verwal-tungsratsmitgliedern oder anderen Personen, welche Dienstleistungen zu Gunsten der Gesellschaft erbringen, gewährt wurden.
Shareholders' subscription rights shall be excluded with regard to these shares. These new registered shares may be issued at a price below the current market price. The Board of Directors shall specify the precise conditions of issue including the issue price of the shares.		Das Bezugsrecht der Aktionäre ist für diese Aktien ausgeschlossen. Diese neuen Namenaktien können zu einem Preis unter dem ak-tuellen Marktpreis ausgegeben werden. Der Verwaltungsrat legt die qenauen Bedingungen für die Ausgabe, einschliesslich des Ausgabepreises der Aktien fest.

The acquisition of registered shares in connection with employee participation and any further transfers of registered shares shall be subject to the restrictions specified in Article 4 of the Articles of Association.	Der Erwerb von Namenaktien im Zusam-menhang. der Mitarbeiterbeteiligung sowie samtliche weiteren Übertragungen von Namenaktien unterliegen den Übertragungsbeschränkungen gemäss Art. 4 der Statuten.
Art. 3d Contribution in Kind The Company takes over at the capital increase as of 1 April 2015 and according to the contribution in kind agreement as of 11 March 2015 from Rodger Novak 1'600, according to the contribution in kind agreement as of 10 March 2015 from Shaun Foy 1'000, according to the contribution in kind agreement as of 10 March 2015 from Andrea Corcoran 100, according to the contribution in kind agreement as of 11 March 2015 from Chad Cowan 200, according to the contribution in kind agreement as of 12 March 2015 from Matthew Porteus 600, according to the contribution in kind agreement as of 12 March 2015 from Daniel G. Anderson, Inc. 600, according to the contribution in kind agreement as of 12 March 2015 from Craig Mello 500, thus, altogether 4'600 shares as well as according to the contribution in kind agreement as of 18 March 2015 from FAY PARTICIPATION CORP. 1'400 entitlements to shares, all with a nominal value of GPB 0.001 each of Tracr Hematology Limited, in Stevenage (UK), and the contributors receive 590'428 shares (Common Shares) in the Company with nominal value of CHF 0.10 each as follows: Rodger Novak 157'449 Shaun Foy 98'405 Andrea Corcoran 9'840 Chad Cowan 19'681 Matthew Porteus 59'043 Daniel G. Anderson, Inc. 59'043 Craig Mello 49'202 FAY PARTICIPATION CORP. 137'765.	**Art. 3d Sacheinlage** Die Gesellschaft übemimmt anlässlich der Kapitalerhöhung vom 1. April 2015 und gemäss Sacheinlagevertrag vom 11. März 2015 von Rodger Novak 1'600, gemäss Sacheinlagevertrag vom 10. März 2015 von Shaun Foy 1'000, gemäss Sacheinlagevertrag vom 10. März 2015 von Andrea Corcoran 100, gemäss Sacheinlagevertrag vom 11. März 2015 von Chad Cowan 200, gemäss Sacheinlagevertrag vom 12. März 2015 von Matthew Porteus 600, gemäss Sacheinlagevertrag vom 12; März 2015 von Daniel G. Anderson, Inc. 600, gemäss Sacheinlagevertrag vom 12. März 2015 von Craig Mello 500, demnach insgesamt 4'600 Aktien, sowie gemäss Sacheinlagevertrag vom 18. März 2015 von FAY PARTICIPATION CORP. 1'400 Anrechte auf Aktien, alle im Nennwert von je GPB 0.001 der Tracr Hematology Limited, in Stevenage (UK), wofur die Sacheinleger insgesamt 590'428 Namenaktien (Stammaktien) der Gesellschaft im Nennwert von je CHF 0.10 wie folgt erhalten: Rodger Novak 157'449 Shaun Foy 98'405 Andrea Corcoran 9'840 Chad Cowan 19'681 Matthew Porteus 59'043 Daniel G. Anderson, Inc. 59'043 Craig Mello 49'202 FAY PARTICIPATION CORP. 137'765.

Art. 4 Share Register	**Art. 4 Aktienbuch**
The Company shall maintain a share register in which it shall register the name, first name and place of residence (in,case of legal persons the place of incorporation) of the owners and usufructuaries of its registered shares. Natural and legal persons as well as legal representatives of minors etc. entitled by law to the voting rights of a share which they do not own will be noted in the share register upon request.	Die Gesellschaft führt ein Aktienbuch, worin die Eigentumer und Nutzniesser von Namenaktien mit Namen, Vornamen und Wohnort (bei juristischen Personen Sitz) eingetragen werden. Natürliche und juristische Personen sowie gesetzliche Vertreter von Minderjährigen usw., welchen kraft Gesetzes Stimmrechte eines Anteils zukommen, den sie nicht besitzen, werden auf Anfrage im Aktienregister angemerkt.
Upon request, acquirers of shares will be registered in the share register without limitation as shareholders if they expressly certify that they acquired the shares in their own name and for their own account.	Erwerber von Aktien werden auf Gesuch hin ohne Begrenzung als Aktionäre mit Stimmrecht im Aktienregister eingetragen, falls sie ausdrucklich erklären, die Aktien im eigenen Namen und auf eigene Rechnung erworben zu haben.
Persons who do not expressly declare in the registration application that they are holding the shares on their own account (thereafter: nominees) shall forthwith be entered on the share register as shareholders with voting rights up to a maximum of 3 percent of the share capital. Beyond that limit, registered shares of nominees shall only be entered as voting if the nominees in question confirm in writing that they are willing to disclose the names, addresses and shareholdings of the persons on whose account they hold 0.5 percent or more of the share capital. The Board of Directors concludes agreements with nominees that among other things govern the representation of shareholders and the voting rights.	Personen, die im Eintragungsgesuch nicht ausdrücklich erklären, die Aktien fur eigene Rechnung zu halten (nachstehend: Nominees) werden ohne weiteres bis maximal 3% des jeweils ausstehenden Aktienkapitals mit Stimmrecht im Aktienbuch eingetragen. liber diese Limite hinaus werden Namenaktien von Nominees nur dann mit Stimmrecht eingetragen, wenn sich der betreffende Nominee schriftlich bereit erklärt, gegebenenfalls die Namen, Adressen und Aktienbestande derjenigen Person offenzulegen, fur deren Rechnung er 0.5% oder mehr des jeweils ausstehenden Aktienkapitals hält. Der Verwaltungsrat schliesst mit Nominees Vereinbarungen ab, die unter anderem die Vertretung der Aktionäre und der Stimmrechte regeln.
After hearing the registered shareholder or nominee, the Board of Directors may remove entries in the share register with retroactive effect as per the date of entry, if such entry was based on false information. The party affected must be informed of such, removal immediately.	Nach Anhörung des eingetragenen Aktionärs oder Nominees, kann der Verwaltungsrat die Eintragungen im Aktienregister rückwirkend nach dem Datum der Eintragung entfernen, wenn ein solcher Eintrag aufgrund falscher Angaben erfolgte. Der Betroffene muss über eine solche Entfernung sofort informiert werden.

No individual or legal entity may, directly or indirectly, formally, constructively or beneficially own (as defined in the next paragraph below) or otherwise control voting rights (“Controlled Shares”) with respect to 15 % or more of the registered share capital recorded in the Commercial Register except if such individual or legal entity has submitted prior to the acquisition of such Controlled Shares an orderly tender offer to all shareholders with a minimum price of the higher of (i) the volume weighted average price of the last 60 trading days prior to the publication of the tender offer or (ii) the highest price paid by such individual or legal entity in the 12 months preceding to the publication of the tender offer. Those associated through capital, voting power, joint management or in any other way, or joining for the acquisition of shares, shall be regarded as one person. The registered shares exceeding the limit of 15 % and not benefiting from the exemptiori regarding a tender offer shall be entered in the share register as shares without voting rights.		Weder eine Einzelperson, noch eine juristi-sche Person kann, direkt oder indirekt, formell, konstruktiv oder vorteilhaft (wie im nächsten Abschnitt unten definiert) oder sonst wie das Stimmrecht (“Kontrollierte Aktien”) hinsichtlich 15% oder mehr des im Handelsregister registrierten Aktienkapitals innehaben oder kontrollieren. Eine Ausnah-me besteht dann, wenn diese Einzelperson oder juristische Person vor der Übernahme solcher Kontrollierter Aktien alien Aktionären eine ordentliche Offerte mit einem Minimalpreis stellt, wovon der hohere Preis, der entweder (i) dem gewichteten Durch-schnittskurs der letzten 60 Handelstage vor der Veröffentlichung der Übernahmeofferte oder (ii) dem höchsten bezahlten Preis durch diese Einzelperson oder juristische Person während der 12 Monate vor der Veröffentlichung der Übernahmeofferte entspricht, der relevante Preis darstellt. Die durch Kapital, Stimmrecht, gemeinsame Führung oder in anderer Weise oder durch Beitritt zur Übernahme der Aktien verbundenen Personen, sind als eine Person zu betrachten. Die Namenaktien, welche die Limite von 15 % ubersteigen und nicht von der Ausnahme mit Bezug auf die Übernahmeofferte profitieren, sollen im Aktienbuch als Aktien ohne Stimmrecht verzeichnet werden.

For the purposes of this Article 4, “Controlled Shares” in reference to any individual or entity means:

(a) all shares of the Company directly, indirectly or constructively owned by such individual or entity; provided that

(i) shares owned, directly or indirectly, by or for a partnership, or trust or estate will be considered as being owned proportionately by its partners, or beneficiaries; and

(ii) shares owned, directly or indirectly, by or for a corporation will be considered as being owned proportionately by any shareholder owning 50% or more of the outstanding voting shares of such corporation; and

(iii) shares subject to options, warrants or other similar rights

shall be deemed to be owned; and

(b) all shares of the Company directly, indirectly or beneficially owned by such individual or entity; provided that

(i) a beneficial owner of a security includes, any person who, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise alone or together with other such persons has or shares;

(1) voting power which includes the power to vote, or to direct the voting of, such security; and/or

(2)investment power which includes the power to dispose, or to direct the disposition of, such security.

(ii) Any person who, directly or indirectly, creates or uses a trust, proxy, power of attorney, pooling arrangement or any other contract, arrangement, or device with the purpose or effect of divesting such person of beneficial ownership of shares of the Company or preventing the vesting of such beneficial ownership as part of a plan or scheme to evade the provisions of these articles of association shall be deemed to be the beneficial owner of such shares.

(iii) A person shall be deemed to be the beneficial owner of shares if that person has the right to acquire beneficial ownership of such shares within 60 days, including but

not limited to any right acquired: (A) through the exercise of any option, warrant or right; (B) through the conversion of a security; (C) pursuant to the power to revoke a trust, discretionary account, or similar ar-rangement; or (D) pursuant to the automatic termination of a trust, discretionary account or similar arrangement.

The limit of 15 % of the registered share capital also applies to the subscription for, or acquisition of, registered shares by exercising option or convertible rights arising from registered or bearer securities or any other securities issued by the Company or third parties, as well as by means of exercising purchased preemptive rights arising from either registered or bearer shares. The registered

shares exceeding the limit of 15 % shall be entered in the share register as shares without voting rights.

The Board of Directors may in special cases approve exceptions to the above regulations. The Board of Directors is in addition authorized, after due consultation with the person concerned, to delete with retroactive effect entries in the share register which were effected on the basis of false information.

Im Rahmen dieses Art. 4 bedeuten “Kontrollierte Aktien” in Bezug auf jegliche Einzelperson oder juristische Person:

(a) alle Aktien der Gesellschaft, die direkt, indirekt oder konstruktiv von einer sol-chen Einzelperson oder juristischen Person gehalten werden; vorausgesetzt dass

(i) Aktien, die direkt oder indirekt durch oder für eine Personengesell-schaft oder einen Trust oder eine Vermögensmasse gehalten werden, proportional auf die Partner oder Begünstigten aufgeteilt werden; und

(ii) Aktien, die direkt oder indirekt durch oder für eine Gesellschaft gehalten werden, proportional auf jeden Aktionär, der 50% oder mehr der ausgegebenen Stimmrechtsaktien besitzt, aufgeteilt werden; und

(iii) Aktien, die in Abhängigkeit zu Opti-onen, Bezugsrechten oder anderen ähnlichen Rechten stehen, als Eigentum gelten; und

(b) alle Aktien der Gesellschaft, die direkt, indirekt oder vorteilhaft durch eine solche Einzelperson oder eine juristische Person gehalten werden, vorausgesetzt dass

(i) ein begünstigter Eigentümer eines Wertpapiers jede Person umfasst, die direkt oder indirekt, durch jede Art von Vertrag, Vereinbarung, Einvernehmen, Bindung oder anderweitig allein oder mit anderen Personen gemeinsam hat oder teilt:

(1) das Stimmrecht, welches das Recht zur Stimmabgabe, oder zur Leitung der Stimme eines solchen Wertpapiers umfasst; und/oder

(2) das Investitionsrecht, welches die Verfügungsmacht oder ein Recht zur Bestimmung uber die Verfügung eines solchen Wertpapiers umfasst.

(ii) Jede Person, die, direkt oder indirekt, einen Trust, Stellvertretung, Vollmacht, Pooling-Vertrag oder jede andere Form von Vertrag, mit dem Zweck oder Ziel schafft oder benutzt, um eine Person von ihren wirtschaftlichen Begünstigungen aus dem Eigentum an den Aktien der Gesellschaft zu entheben oder zur Verhinderung der Ausübung eines solchen begünstigenden Eigentums als Teil eines Plans oder Vorhabens zur Umgehung der Regelungen in diesen Statuten, soil als begünstigter Eigentümer solcher Aktien gesehen werden.

(iii) Eine Person soil als begünstigter Eigentümer von Aktien eingestuft werden, wenn diese Person das Recht hat, ein begünstigendes Eigentum an solchen Aktien innerhalb von 60 Tagen zu erwerben, inklusive, aber nicht beschränkt auf jegliches erworbenes Recht: (A) durch die Ausübung jeglicher Option, jedes Bezugsrechts oder sonstigen Rechts; (B) durch die Umwandlung eines Wertpapiers; (C) aufgrund der Befugnis, einen Trust, ein Vermögensverwaltungskonto oder ähnliche Verhältnisse zu widerrufen oder (D) in Zusammenhang mit der automatischen Auflösung eines Trusts, Vermögensverwaltungskontos oder eines ähnlichen Verhältnisses.

Die Grenze von 15 % des eingetragenen Aktienkapitals gilt auch für zur Zeichnung von, oder Akquisition von Namenaktien durch Ausübung einer Option oder umwandelbaren Rechte, welche aus Namen- oder Inhaberak-tien hervor gehen oder jeder anderen von der Gesellschaft oder Dritten ausgegebenen Sicherheit, sowie durch die Ausübung von erworbenen Vorkaufsrechten, welche entweder aus Namen- oder Inhaberaktien hervor-gehen. Die Namenaktien, welche die Grenze von 15 % übersteigen, sind im Aktienbuch als Aktien ohne Stimmrecht einzutragen.

Der Verwaltungsrat kann in besonderen Fällen Ausnahmen zu den oben genannten Regelungen genehmigen, Der Verwaltungsrat ist zusätzlich berechtigt, nach angemessener Anhörung der betreffenden Person,

	Einträge ins Aktienbuch, welche aufgrund falscher Informationen erfolgten, rückwirkend zu 16-schen.

Art. 5 Share Certificates and Intermediated Securities The Company may issue its registered shares in the form of single certificates, global certificates and uncertificated securities. Under the conditions set forth by statutory law, the Company may convert its registered shares from one form into another form at any time and without the approval of the shareholders. The shareholder has no right to demand a conversion of the form of the registered shares. Each shareholder may, however, at any time request a written confirmation from the Company of the registered shares held by such shareholder, as reflected in the share register. The transfer, of intermediated securities based on the Company's shares and the pledging of these intermediated securities shall be based on the provisions of the Swiss Federal Intermediated Securities Act. Transfer of propriety as collateral by means of written assignment is not permitted.	**Art. 5 Aktienzertifikate und Bucheffekten** Die Gesellschaft kann ihre Namenaktien in Form von Einzelurkunden, Globalurkunden oder Wertrechten ausgeben. Der Gesellschaft steht es im Rahmen der gesetzlichen Vorhaben frei, ihre in einer dieser Formen ausgegebenen Namenaktien jederzeit und ohne Zustimmung der Aktionäre in eine andere Form umzuwandeln. Der Aktionär hat keinen Anspruch auf Umwandlung von in bestimmter Form ausgegebenen Namenaktien in eine andere Form. Jeder Aktionär kann jedoch von der Gesellschaft jederzeit die Ausstellung einer Bescheinigung über die von ihm gemäss Aktienbuch gehaltenen Namenaktien verlangen. Die Übertragung von Bucheffekten, denen Aktien der Gesellschaft zugrunde liegen, und die Bestellung von Sicherheiten an diesen Bucheffekten richten sich nach den Bestimmungen des Bucheffektengesetzes. Eine Übertragung des Eigentums am Titel durch schriftliche Abtretungserklärung (Zession) ist ausgeschlossen.
Art. 6 Exercise of Shareholders Rights The shares are indivisible and the Company recognizes only one single representative per share. The tight to vote and the other rights pertaining to a registered share may only be exercised by a shareholder, a usufructuary or a nominee who is registered with the right to vote in the share register and by persons who. are'entitled by law to the voting rights of a share.	**Art. 6 Ausübung von Aktionärsrechten** Die Aktien sind unteilbar und die Gesellschaft anerkennt nur einen einzigen Vertreter pro Aktie. Das Stimmrecht und die anderen zu einer Namenaktien gehörenden Rechte dürfen nur von einem Aktionär, einem Nutzniesser oder Nominee, dessen Stimmrecht im Aktienregister eingetragen ist und von Personen, welchen kraft Gesetzes die Stimmrechte einer Aktie zustehen, ausgeübt werden.

III. CORPORATE STRUCTURE		**III. ORGANISATION DER GESELLSCHAFT**
Art. 7 Corporate Bodies The corporate bodies are: A. the General Meeting; B. the Board of Directors; C. the Auditors.		**Art. 7 Gliederung** Gesellschaftsorgane: A. Generalversammlung; B. Verwaltungsrat; C. Revisionsstelle.
IV. THE GENERAL MEETING		**IV. GENERALVERSAMMLUNG**
Art.8 Powers The General. Meeting is the supreme body of the Company. It has the following non delegable powers:		**Art. 8 Befugnisse** Oberstes Organ der Gesellschaft ist die Generalversammlung. Ihr stehen folgende un-übertragbare Befugnisse zu:

a) to adopt and amend the Articles of association (Art. 651a, 652g, 653g und 653i CO remain reserved);	a) Festsetzung und Änderung der Statuten (Art. 651a, 652g, 653g und 653i OR bleiben vorbehalten);
b) to elect and remove the members of the Board of Directors, the Chairman of the Board of Directors, the members of the Compensation Committee, the Auditors and the Independent Proxy;	b) Wahl und Abberufung der Mitglieder des Verwaltungsrats, des Präsidenten des Verwaltungsrats, der Mitglieder des Vergütungsausschusses, der Revisionsstelle und des unabhängigen Stimmrechtsvertreters;
c) to approve the management report and the annual accounts and to determine the allocation of profits, in particular with regard to dividends and bonus payments;	c) Genehmigung des Lageberichts und der Jahresrechnung sowie Beschlussfassung über die Verwendung des Bilanzgewinnes, insbesondere die Festsetzung der Dividende und der Tantieme;
d) to discharge the members of the Board of Directors and of the Executive Committee;	d) Entlastung der Mitglieder des Verwal-tungsrates und der Geschäftsleitung;
e) to approve the total compensation paid to the Board of Directors and the Executive Committee as per Art. 32 and Art. 32 below;	e) Genehmigung der Gesamtvergütungen des Verwaltungsrats und der Geschäftsleitung nach Massgabe von Art. 32 und Art. 33 hiernach;
f) to pass resolutions concerning all matters which are reserved to the authority of the General Meeting by law or by the Articles of association.	f) Beschlussfassung uber die Gegenstände, die der Generalversammlung durch das Gesetz oder die Statuten vorbehalten sind.
Art. 9 Ordinary General Meeting The Ordinary General Meeting shall be held annualy within six months after the end of the business year at such time?1and at such location, which may be within or outside Switzerland, as determined by the Board of Directors.	**Art. 9 Ordentliche Generalversammlung** Die ordentliche Generalversammlung findet jährlich innerhalb von sechs Monaten nach Abschluss des Geschäftsjahres statt, zum Zeitpunkt und an einem Ort, der innerhalb oder ausserhalb der Schweiz sein kann, gemäss Festlegung durch den Verwaltungsrat.
Art. 10 Extraordinary General Meeting Extraordinary General Meetings may be called by resolution of the General Meeting, the Auditors or the Board of Directors, or by shareholders with voting powers, provided they represent at least 10% of the share capital and who submit (a)(1) a request signed by such shareholder(s) that specifies the item(s) to be included on the agenda, (2) the respective proposals of the shareholders and (3) evidence of the required shareholdings recorded in the share register and (b) such other, information as would be required to be included in a proxy statement pursuant to the rules of the country where the Company's shares are primarily listed.	**Art. 10 Ausserordentliche Generalversammlung** Ausserordentliche Generalversammlungen können einberufen werden durch Beschluss der ordentlichen Generalversammlung, durch die Revisionsstelle oder den Verwaltungsrat oder durch stimmberechtigte Aktionäre, sofern sie mindestens 10 % des Aktienkapitals erreichen und die Folgendes einreichen: (a)(1) einen unterschriebenen Antrag dieser Aktionäre, welcher die Traktanden angibt, die auf die Traktandenliste gesetzt werden, (2) die entsprechenden Anträge der Aktionäre und (3) den Nachweis der erforderlichen Beteiligung dieser Aktionare aufgrund des Aktien registers und (b) alle anderen Informationen, die für eine Vollmacht nach den Regeln des Landes, in welchem die Aktien des Unternehmens hauptsachiich eingetragen sind, erforderlich wären.

Art. 11 Notice and Agenda of Shareholders' Meetings Notice of a General Meeting of Shareholders shall be given by the Board of Directors or, if necessary, by the Auditor, not later than twenty calendar days prior to the date of the General Meeting of Shareholders. Notice of the General Meeting of Shareholders shall be given by way of a one-time announcement in the official means of publication of the Company pursuant to Article 46 of these Articles of Association- The notice period shall be deemed to have been observed if notice of the General Meeting of Shareholders is published in such official means of publication, it being understood that the date of publication shall not be computed in the notice period. Shareholders of record may in addition be informed of the General Meeting of Shareholders by ordinary mail or e-mail.		**Art. 11 Mitteilung und Traktanden der Generalversammlung** Die Mitteilung einer Generalversammlung er-folgt durch den Verwaltungsrat oder gege-benenfalls durch die Revisionsstelle, spatestens zwanzig Kalendertage vor dem Datum der Generalversammlung. Die Mitteilung der Generalversammlung erfolgt durch eine ein-malige Bekanntmachung in den amtlichen Publikationsmittein der Gesellschaft gemass Artikel 46 dieser Statuten. Die Frist gilt als einqehalten, wenn Ankundigung der Generalversammlung im offiziellen Publikationsmittel veroffentlicht wurde, wobei das Datum der Veroffentlichung nicht in die Mitteilungsfrist eingerechnet werden darf. Eingetragene Aktionare konnen zusatzlich per Post oder E-Mail über die Generalversammlung informiert werden.
The notice of a General Meeting of Shareholders shall specify the items on the agenda and the proposals of the Board of Directors and the shareholder(s) who requested that a General Meeting of Shareholders be held or an item be included on the agenda, and, in the event of elections, the name(s) of the candidate(s) that has or have been put on the ballot for election.		Die Mitteilung der Generalversammlung hat die Traktanden und die Antrage des Verwal-tungsrates und der Aktionare, welche beantragt haben, dass eine Generalversammlung abgehalten werden oder ein Traktandum auf die Traktandenliste gesetzt werden soil zu enthalten sowie, im Falle von Wahlen, die Namen der Kandidaten, welche auf den Wahlzettel gesetzt wurden.
The Board of Directors shall state the matters on the agenda.		Der Verwaltungsrat setzt die Verhandlungs-gegenstande auf die Traktandenliste.

Shareholders who represent an aggregate of at least 10 percent of the share capital or together representing shares with a nominal value of 1 million Swiss francs may demand that an item be placed on the agenda of a General Meeting of Shareholders. A request for inclusion of an item on the agenda must be. requested in writing delivered to or mailed and received at the registered office of the Company at least 120 calendar days before the first anniversary of the date that the Company's proxy statement was released to shareholders in connection with the previous year's ordinary General Meeting of Shareholders. However, if no ordinary General Meeting of Shareholders was held in the previous year or if the date of the ordinary General Meeting of Shareholders has been changed by more than 30 calendar days from the date contemplated at the time of the previous year's proxy statement, request for inclusion of an item on the agenda must be requested not fewer than the later of (i) 150 calendar days prior to the date of the contemplated annual General Meeting or (ii) the date which is ten calendar days after the date of the first public announcement or other notification to the shareholders of the date of the contemplated annual General Meeting. To be timely for an extraordinary General Meeting, a shareholder's notice to the Secretary must be delivered to or mailed and received at the registered office of the Company not fewer than the later of (i) 120 calendar days before the date of the extraordinary General Meeting of Shareholders or (ii) the date which is ten calendar days after the date of the first public announcement or other notification to the shareholders of the date of the contemplated extraordinary General Meeting of Shareholders.		Aktionare, welche insgesamt mindestens 10 Prozent des Aktienkapitals vertreten oder gemeinsam Aktien mit einem Nominalwert von CHF 1 Million vertreten, konnen verlangen, dass ein Traktandum auf die Traktandenliste der Generalversammlung aufgenommen wird. Das Aufnahmegesuch fur ein Traktandum auf der Traktandenliste muss schriftlich eingereicht oder per E-mail gesendet und am Sitz der Gesellschaft empfangen werden. Dies hat mindestens 120 Kalendertage vor dem ersten Jahrestag der Veroffentlichung der Stimmrechtsinformationen an die Aktionare der Gesellschaft in Verbindung mit der Generalversammlung des vergangenen Jahres zu erfolgen. Fur den Fall, dass im vorangegangenen Jahr keine ordentliche Generalversammlung stattgefunden hat oder das Datum der ordentlichen Generalversammlung urn mehr als 30 Kalendertage vom zum Zeitpunkt der letztjahrigen Stimmrechtsvollmacht definierten Datum verschoben wurde, hat das Aufnahmebegehren spatestens (i) 150 Kalendertage vor dem angedachten Termin fur die jahrliche Gene- | ralversammlung oder (ii) am Tag, der zehn Kalendertage nach der ersten offentlichen Bekanntmachung oder anderweitigen Be-nachrichtigung der Aktionare uber den ange-dachten Termin fur die jahrliche Generalversammlung liegt, zu erfolgen. Urn ein Auf-nahmegesuch im Rahmen einer ausseror-dentlichen Generalversammlung rechtzeitig zu stellen, muss der Aktionar den Sekretar der Gesellschaft spatestens (i) 120 Kalendertage vor dem Termin der ausserordentlichen Generalversammlung oder (ii) am Tag, der zehn Kalendertage nach der ersten offentlichen Bekanntmachung oder anderweitigen Benachrichtigung der Aktionare Qber den angedachten Termin fur die ausseror-dentliche Generalversammlung liegt, per eingegangener schriftlicher Nachricht oder Email am Firmensitz informieren.
Each request for inclusion of an item on the agenda must include (i) a brief description of the business desired to be brought before the meeting and the reasons for conducting such business at the meeting; (ii) the name and address, as they appear on the Company's register of shareholders, of the shareholder proposing such business; (iii) the number of shares of the Company which are beneficially owned by such shareholder; (iv) the dates upon which the shareholder acquired such shares; (v) documentary support for any claim of beneficial ownership; (vi) any material interest of such shareholder in such business; and (vii) a statement in support of the matter and, for proposals sought to be included in the Company's proxy statement, any other information required by Securities and Exchange Commission Rule "14a-8".		Jeder Antrag auf Aufnahme eines Trak-tandums hat zu enthalten: (i) eine kurze Zusammenfassung des Geschafts, welches der Generalversammlung vorgelegt werden soli, sowie eine Begrundung, weshalb an der Ver-sammlung daruber entschieden werden soli; (ii) den Namen und die Adresse des Gesuchstellenden Aktionars, wie sie im Aktienbuch der Gesellschaft eingetragen sind; (iii) die Anzahl Aktien der Gesellschaft, die in der wirtschaftlichen Berechtigung des Aktionars stehen; (iv) die Daten, an denen der Aktionar seine Aktien erworben hat; (v) erforderliche Nachweise bei allfalligen Anspruchen von wirtschaftlicher Berechtigung; (vi) jegliches materielle Interesse des Aktionars im Zusammenhang mit diesem Geschaft; und (vii) eine Stellungnahme zum fraglichen Punkt und, fur Antrage, welche der Aktionarsinformation durch die Gesellschaft beigefugt werden sollen, jede andere Information, welche die Securities and Exchange Commission Rule "14a-8" verlangt.
In addition, if the shareholder intends to solicit proxies from the shareholders of the Company, such shareholder shall notify the Company of this intent in accordance with Securities and Exchange Commission Rule "14a-4" and/or Rule "14a-8".		Fur den Fall, dass ein Aktionar gedenkt, die Stimmrechtsvertretung von anderen Aktionaren der Gesellschaft zu erlangen, hat dieser Aktionar die Gesellschaft uber diese Absicht gemass der Securities and Exchange Commission Rule "14a-4" und/oder Rule "14a-8" zu informieren.

No resolution may be passed at a General Meeting of Shareholders concerning an item in relation to which due notice was not given. Proposals made during a General Meeting of Shareholders to (i) convene a extraordinary General Meeting or (ii) initiate a special investigation in accordance with article 697a of the Swiss Code of Obligations are not subject to the due notice requirement set forth herein.		An der Generalversammlung darf kein Be-schluss iiber ein Traktandum getroffen werden, uber den nicht mit entsprechender Vorlaufzeit informiert worden ist. Antrage, die wahrend der Generalversammlung gestellt werden, fuhren zu (i) einer ausserordentlichen Generalversammlung oder (ii) einer speziellen Untersuchung gemass Art. 697a OR und unterliegen nicht der hie.rin geforderten Voraussetzung der rechtzeitigen Information.
No advance notice is required to propose motions on duly notified agenda items and to debate items without passing resolutions.		Zur Stellung von Antragen im Rahmen der Verhandlungsgegenstande und zu verhandlungen ohne Beschlussfassung bedarf es keiner vorherigen Ankundigung.
Art. 12 Documentation The annual business report, the compensation report and the Auditor's report must be submitted for examination by the shareholders at the registered office of the Company at least 20 days prior to the date of the Ordinary General Meeting. Each shareholder may request that a copy of this documentation be sent to him promptly. Such reference shall be included in the invitation to the General Meeting.		**Art. 12 Unterlagen** Spatestens zwanzig Tage vor der ordentli-chen Generalversammlung sind der Geschaftsbericht, der Vergutungsbericht und der Revisionsbericht am Sitz der Gesellschaft zur Einsicht der Aktionare aufzulegen. Jeder Aktionar kann verlangen, dass ihm unverzuglich eine Kopie dieser Unterlagen zugestellt wird. In der Einberufung zur Generalversammlung ist hierauf hinzuweisen.
Art. 13 Meeting of All Shareholders Shareholders or their proxies representing all shares issued may hold a General Meeting without observing the formalities required for calling a meeting, unless objection is raised. At such a meeting, discussions may be held and resolutions passed on all matters within the scope of the powers of a General Meeting for so long as the shareholders or proxies representing all shares issued are present.		**Art.13 Universalversammlung** Die Eigentumer oder Vertreter samtlicher Aktien konnen, falls keih Widerspruch erho-ben wird, eine Generalversammlung ohne Einhaltung der fur die Einberufung vorge-schriebenen Formvorschriften abhalten (Universalversammlung). Solange die Eigentumer oder Vertreter samtlicher Aktien anwe-send sind, kann in dieser Versammlung über alle in den Geschaftskreis der Generalversammlung fallenden Gegenstande verhandelt und gtiltig Beschluss gefasst werden.

Art 14 Chairman, Secretary, Scrutineers The Chairman of the Board of Directors shall preside over the General Meeting. In his absence, a member of the Board of Directors or another Chairman of the Meeting designated by the General Meeting shall preside. The Chairman of the Meeting shall designate a Secretary and the scrutineers who need not be shareholders.		**Art. 14 Vorsitz, Protokollfiihrer, Stimmenzahler** Den Vorsitz der Generalversammlung fiihrt der President, bei dessen Verhinderung ein anderes Mitglied des Verwaltungsrates oder ein anderer von der Generalversammlung gewahlter Tagesprasident. Der Vorsitzende bezeichnet den Protokollfuh-rer und die Stimmenzahler, die nicht Aktionare zu sein brauchen.
Art. 15 Minutes The Board of Directors is responsible for the keeping of the minutes of the Meeting, which shall state the number, kind, nominal value of shares represented by the shareholders, by the corporate bodies and by the independent proxy and gives information on resolutions passed, elections, requests for information and information as well as declarations given by the shareholders. The minutes shall be signed by the Chairman and the Secretary. The shareholders are entitled to inspect the minutes.		**Art. 15 Protokoll** Der Verwaltungsrat sorgt fur die Fuhrung des Protokolls iiber die Generalversammlung, welches Anzahl, Art, Nennwert und Kategorie der von den Aktionaren, von den Or-ganen und von unabhangigen Stimmrechtsvertretern vertretene Aktien festhalt und Aufschluss iiber Beschlusse, Wahlergebnisse, Begehren urn Auskunft und die darauf erteilten Auskunfte sowie die von den Aktionaren zu Protokoll gegebenen Erklarungen gibt. Das Protokoll wird vom Vorsitzenden und vom Protokollfiihrer unterzeichnet. Die Aktionare sind berechtigt, das Protokoll einzusehen.
Art.16 Right to Vote Each share entitles to one vote. Each shareholder may be represented at a General Meeting by any person who is so authorized by a written proxy. A proxy need not be a shareholder. Each shareholder may be represented by the Independent Proxy. The requirements regarding proxies and instructions are determined by the Board of Directors.		**Art.16 Stimmrecht** Jede Aktie berechtigt zu einer Stimme. Jeder Aktionar kann sich in der Generalversammlung aufgrund einer schriftlichen Voll-macht durch eine andere handlungsfahige Person vertreten lassen, die nicht Aktionar zu sein braucht. Jeder Aktionar kann sich vom unabhangigen Stimmrechtsvertreter vertreten lassen. Die Anforderungen an Vollmachten und Weisungen werden vom Verwaltungsrat festgelegt.

Art. 17 Resolutions and Elections	**Art. 17 Beschlussfassung und Wahlen**
All voting and elections are hold openly or electronically. A written voting or election shall be held if instructed so by the Chairman or if decided by the General Meeting.	Die Abstimmungen und Wahlen erfolgen offen oder elektronisch. Eine schriftliche Abstimmung oder Wahl wird durchgefuhrt, wenn dies vom Vorsitzenden angeordnet oder von der Generalversammlung beschlossen wird.
The General Meeting shall pass its resolutions and carry out its elections with the simple majority of the votes cast regardless of abstentions and empty or invalid votes, unless law or articles of association state otherwise, In the event of tie votes, the request shall be refused. The Chairman shall not have a casting vote.	Die Generalversammlung fasst ihre Beschlusse und vollzieht ihre Wahlen, soweit das Gesetz oder die Statuten es nicht anders bestimmen, mit der einfachen Mehrheit der abgegebenen Aktienstimmen ohne Beruck-sichtigung von Stimmenthaltungen oder leer eingelegten oder ungultigen Stimmen. Bei Stimmengleichheit gilt ein Antrag als abgelehnt. Dem Vorsitzenden steht kein Stichentscheid zu.
A resolution of the General Meeting passed by at least two thirds of the represented share votes and the absolute majority of the represented shares par value is required for:	Ein Beschluss der Generalversammlung, durch mindestens zwei Drittel der vertretenen Aktienstimmen und die absolute Mehrheit der vertretenen Aktiennennwerte, ist erforderlich fur:

a) The cases listed in art. 704 para. 1 CO, i.e.: (i) the change of the company purpose; (ii) the creation of shares with privileged voting rights; (iii) the restriction of the transferability of registered shares; (iv) an increase of capital, authorized or subject to a condition; (v) an increase of capital out of equity, against contribution in kind, or for the purpose of acquisition of assets and the granting of special benefits; (vi) the limitation or withdrawal of subscription rights; (vii) the change of the domicile of the Company; and (viii) the liquidation of the Company; b) the merger, de-merger or conversion of the Company (subject to mandatory law); c) the alleviating or withdrawal of restrictions upon the transfer of registered shares; d) the conversion of registered shares into bearer shares and vice versa; and e) the amendment or elimination of the provisions of Article 4 and 29 of the Articles of Association as well as those contained in this Article 17.	a) die Falle gemass Art. 704 Abs. 1 OR: (i) die Anderung des Gesellschafts-zweckes; (ii) die Einfuhrung von Stimmrechtsaktien; (iii) die Beschrankung der Ubertragbarkeit von Namenaktien; (iv) eine genehmigte oder eine bedingte Kapitalerhohung; (v) die Kapitalerhohung aus Eigenkapital, gegen Sacheinlage oder zwecks Sachubernahme und die Gewahrung von besonderen Vorteilen; (vi) die Einschrankung oder Aufhebung des Bezugsrechtes; (vii) die Verlegung des Sitzes der Gesellschaft; et (viii) die Auflosung der Gesellschaft; b) die Fusion, Spaltung oder Umwandlung der Gesellschaft (vorbehalten zwingender gesetzlicher Bestimmungen); c) die Erleichterung oder den Entzug der Beschrankungen betreffend die Ubertragung von Namenaktien; d) die Umwandlung von Namenaktien in Inhaberaktien und umgekehrt; und e) die Anderung oder Aufhebung der Best-immungen der Artikel 4 und 29 der Statuten sowie dieses Artikels 17.

Art. 18 Votes on Compensation	**Art. 18 Abstimmung über Vergütungen**
Each year, the General Meeting separately approves the total maximum amounts proposed by the Board of Directors pursuant to Art. 31 and 32 of the Articles of Association for: a) the non-performance-related compensation of the Board of Directors for the next term of office; b) a possible additional compensation of the Board of Directors for the preceding business year; c) the non-performance-related compensation of the Executive Committee for the 12-month period starting on 1 July following the General Meeting; d) the variable compensation for the Executive Committee for the current year; and e) the grant of options or shares in the Company to the Board of Directors and the Executive Committee. The respective total compensation amounts include all social security and occupational pension contributions for the benefit of the members of the Board of Directors, the Executive Committee and the Company. If the General Meeting refuses to approve a respective motion by the Board of Directors, the Board of Directors may either submit a new motion at the same meeting or determine a maximum total remuneration or several maximum partial remunerations, subject to the relevant principles of the compensation, or submit a new motion to the next General Meeting for approval. The Company may pay remunerations within the framework of the maximum total or partial remuneration and subject to the approval by the General Meeting.	Die Generalversammlung genehmigt jahrlich separat und auf Antrag des Verwaltungsrats die maximalen Vergutungen gemass Art. 32 und 33 der Statuten betreffend: a) die nicht-erfolgsabhangige Vergutung des Verwaltungsrates fur die Zeitperiode bis zur nachsten Generalversammlung; b) eine allfallige zusatzliche Vergutung fur den Verwaltungsrat fur das abgeschlossene Geschaftsjahr; c) die nicht-erfolgsabhangige Vergutung der Geschaftsleitung fur die Zeitperiode von 12 Monaten, welche an dem der Generalversammlung folgenden 1. Juli beginnt; d) die variable Vergutung der Geschaftsleitung fur das laufende Geschaftsjahr; und e) die Gewahrung von Optionen oder Aktien der Gesellschaft an den Verwaltungsrat oder die Geschaftsleitung. Die entsprechenden Gesamtvergutungen umfassen samtliche Beitrage zugunsten des Verwaltungsrats und der Geschaftsleitung an die Sozialversicherung und die Berufliche Vorsorge. Lehnt die Generalversammlung einen entsprechenden Antrag des Verwaltungsrats ab, kann der Verwaltungsrat entweder an der gleichen Versammlung einen neuen Antrag stellen, eine ausserordentliche Generalversammlung einberufen oder einen maximalen Gesamtbetrag oder mehrere maximale Teilbetrage unter Berucksichtigung der relevanten Grundsatze festsetzen und der nachsten Generalversammlung zur Genehmigung vorlegen. Die Gesellschaft kann im Rahmen des maximalen Gesamt- oder Teilbetrages und unter Vorbehalt der Genehmigung durch die Generalversammlung Vergutungen ausrichten.
Art. 19 Independent Proxy The Independent Proxy shall be elected by the Ordinary General Meeting for a term of one year until the end of the next Ordinary General Meeting. Re-election is permitted. The Independent Proxy informs the Company about number, type, par value and category of the represented shares. The Chairman of the Board discloses the information to the General Meeting. The other duties of the Independent Proxy are determined by the applicable statutory provisions.	**Art. 19 Unabhangiger Stimmrechtsvertreter** Der Unabhangige Stimmrechtsvertreter wird von der ordentlichen Generalversammlung fur eine Amtsdauer von einem Jahr bis zum Ende der nachsten ordentlichen Generalversammlung gewahlt. Wiederwahl ist moglich. Der Unabhangige Stimmrechtsvertreter informiert die Gesellschaft uber Anzahl, Art, Nennwert und Kategorie der vertretenen Aktien. Der President des Verwaltungsrats gibt diese Informationen der Generalversammlung bekannt. Die Pflichten des Unabhangigen Stimmrechtsvertreters ergeben sich aus den anwendbaren gesetzlichen Bestimmungen.
V. BOARD OF DIRECTORS	**V. VERWALTUNGSRAT**
Art. 20 Number of Members, Term of Office The Board of Directors shall consist of at least 3 and not more than 9 members. The chairman and the members of the Board of Directors are individually elected by the General Meeting for a term of one year until the end of the next Ordinary General Meeting, provided that he/she does not resign or is not replaced during his term. The members of the Board of Directors may be re-elected without limitation. The maximum age limit of members of the Board shall be 75 years. When a member of the Board of Directors reaches this age limit during his term of office, such term shall automatically extend to the next ordinary shareholders' meeting. The shareholders' meeting may resolve to grant an exception to the age limit.	**Art. 20 Anzahl der Mitglieder, Amtsdauer** Der Verwaltungsrat besteht aus mindestens 3 und hochstens 9 Mitgliedern. Der President sowie die Mitglieder des Verwaltungsrates werden jeweils für die Dauer von einem Jahr bis zum Ende der nachsten ordentlichen Generalversammlung einzeln gewahlt. Vorbehalten bleiben vorheriger Rucktritt oder Abberufung. Die Mitglieder des Verwaltungsrates sind jederzeit wieder wahlbar. Die oberste Altersqrenze von Mitgliedern des Verwaltungsrats betragt 75 Jahre. Wenn ein Mitglied des Verwaltungsrats diese Altersgrenze wahrend seiner Amtszeit erreicht, wird diese automatisch zur nachsten ordentlichen Generalversammlung verlangert. Die Generalversammlung kann eine Ausnahme von der Altersgrenze beschliessen.

Art. 21 Constitution Subject to the powers of the General Meeting, the Board of Directors determines its own organization. It appoints a Secretary who needs not be a member of the Board of Directors.		**Art.21 Konstituierung** Der Verwaltungsrat konstituiert sich vorbehaltlich der Befugnisse der Generalversammlung selbst. Er bezeichnet insbesondere einen Sekretar, der nicht Mitglied des Verwaltungsrates sein muss.
Art. 22 Function, Organization It is the Board of Director's duty to lead the Company and to supervise the management. The Board of Director represents the Company and may take decisions to all affairs which are not assigned to any other body of the Company by law, the Articles of association or Regulations. The Board of Directors shall adopt the organizational regulations and the corresponding contractual relationships.		**Art. 22 Funktion, Organisation** Dem Verwaltungsrat obliegt die oberste Leitung der Gesellschaft und die Uberwachung der Geschaftsfuhrung. Er vertritt die Gesellschaft nach aussen und besorgt alle Angelegenheiten, die nicht nach Gesetz, Statuten oder Reglement einem anderen Organ der Gesellschaft ubertragen sind. Der Verwaltungsrat erlasst das Organisationsreglement und ordnet die entsprechenden Vertragsverhaltnisse.

Art. 23 Powers The Board of Directors has the following nondelegable and inalienable duties: a) the overall management of the company and the issuing of all necessary directives; b) the determination of the company's organisation; c) the organisation of the accounting, financial control and financial planning systems as required for management of the company; d) the appointment and dismissal of the persons entrusted with the management and representation of the Company and grant of signatures; e) the overall supervision of the persons entrusted with managing the company, in particular with regard to compliance with the law, articles of association, operational regulations and directives; f) the compilation of the annual report, preparation for the general meeting andimplementation of its resolutions; g) the preparation of the compensation report and to request approval by the General Meeting regarding compensation of the Board of Directors and the Executive Committee; and h) the notification of the court if liabilities "exceed assets. The Board of Directors may assign responsibility for preparing and implementing its resolutions or monitoring transactions to committees or individual members. It must ensure appropriate reporting to its members.	**Art. 23 Aufgaben** Der Verwaltungsrat hat folgende unuber-tragbare und unentziehbare Aufgaben: a) Oberleitung der Gesellschaft und Ertei-lung der notigen Weisungen; b) Festlegung der Organisation der Gesellschaft; c) Organisation des Rechnungswesens, der Finanzkontrolle sowie der Finanz-planung zur Fuhrung der Gesellschaft; d) Ernennung und Abberufung der mit der Geschaftsfuhrung und der Vertretung betrauten Personen und Regelung der Zeichnungsberechtigung; e) Oberaufsicht uber die mit der Geschaftsfuhrung betrauten Personen, namentlich im Hinblick auf die Befolgung der Gesetze, Statuten, Reglemente und Weisungen; f) Erstellung des Geschaftsberichtes sowie Vorbereitung der Generalversammlung und Ausfuhrung ihrer Beschlusse; g) Erstellung des Vergutungsberichts sowie Antragsstellung betreffend die Genehmigung der Vergutungen des Verwaltungsrats und der Geschaftsleitung an die Generalversammlung; h) Benachrichtigung des Richters im Falle der Uberschuldung. Der Verwaltungsrat kann die Vorbereitung und die Ausfuhrung seiner Beschlusse oder die Uberwachung von Geschaften Ausschtis-sen oder einzelnen Mitgliedern zuweisen. Er hat fur eine angemessene Berichterstattung an seine Mitglieder zu sorgen.
Art. 24 Representation of the Company The, Board of Directors shall assign the persons with signatory power for the Company and the kind of signatory power.	**Art. 24 Vertretung der Gesellschaft** Der Verwaltungsrat bestimmt die fur die Gesellschaft zeichnungsberechtigten Personen und die Art ihrer Zeichnung.
Art. 25 Delegation Moreover, the Board of Directors is authorized to delegate, in part or entirely, the management and the representation of the Company, within the limits of the law, to one or more individual directors (Delegates) or to third parties by pursuant to organizational regulations.	**Art. 25 Delegation** Der Verwaltungsrat kann die Geschaftsfuhrung und alle Aufgaben und Befugnisse, die ihm nicht durch das Gesetz oder die Statuten zwingend zugewiesen sind, nach Massgabe des Organisationsreglements ganz oder zum Teil an einzelne oder mehrere Mitglieder oder Dritte ubertragen.

Art, 26 Meetings, Resolutions and Minutes The organization of the meetings, the presence quorum and the passing of resolutions of the Board of Directors is determined by the organizational regulations. No presence quorum is required for the approval of the capital increase. Resolutions may be passed via telephone or videoconference. Resolutions may also be passed by way of circulation, provided that no member requests oral deliberation. Minutes are kept of the Board's discussions and resolutions and signed by the chairman and the minute-taker.	**Art. 26 Sitzungen, Beschlussfassung und Protokoll** Sitzungsordnung, Beschiussfahigkeit und Beschlussfassung des Verwaltungsrats richten sich nach dem Organisationsreglement. Fürden Feststellungsbeschluss einer Kapitalerhohung ist kein Prasenzquorum erforderlich. Beschlussfassung via Telefon- oder Video-konferenz ist zulassig. Beschlusse konnen auch auf dem Zirkularweg gefasst werden, sofern nicht ein Mitglied die Durchfuhrung einer Sitzung verlangt. Uber Verhandlungen und Beschlusse des Verwaltungsrats wird ein Protokoll erstellt, welches vom Vorsitzenden und vom Sekretar des Verwaltungsrates zu unterzeichnen ist.
Art. 27 Disclosure and Right of Inspection Any member of the Board of Directors may request information on any company business. Outside meetings, any member may request information from the persons entrusted with managing the company's business concerning the Company's business performance and, with the Chairman's authorization, specific transactions. Where required for the performance of his duties, any member may request the Chairman to have books of account and documents made available to him for inspection. If the Chairman refuses a request for information, a request to be heard or an application to inspect documents, the Board of Directors rules on the matter.	**Art. 27 Recht auf Auskunft und Einsicht** Jedes Mitglied des Verwaltungsrates kann Auskunft uber alle Angelegenheiten der Gesellschaft verlangen. Ausserhalb der Sitzungen kann jedes Mitglied von den mit der Geschaftsfuhrung betrauten Personen Auskunft uber den Geschaftsgang und, mit Ermachtigung des Prasidenten, auch uber einzelne Geschafte verlangen. Soweit es fur die Erfullung einer Aufgabe er-forderlich ist, kann jedes Mitglied dem Prasi-denten beantragen, dass ihm Bucher und Akten vorgelegt werden. Weist der President ein Gesuch auf Auskunft, Anhorung oder Einsicht ab, so entscheidet der Verwaltungsrat.

Art. 28 Compensation Committee	**Art. 28 Vergiitungsausschuss**
The Compensation Committee shall comprise at least 2 members. The members of the Compensation Committee shall be individually elected by the Ordinary General Meeting from among the members of the Board of Directors for a term of one year until the next Ordinary General Meeting. Re-election is permitted. The Compensation Committee has the following duties;	Der Vergutungsausschuss umfasst mindestens 2 Mitglieder. Die Mitglieder des Vergutungsausschusses werden jahrlich von der ordentlichen Generalversammlung aus den Mitgliedern des Verwaltungsrats fur die Dauer von einem Jahr bis zur nachsten ordentlichen Generalversammlung einzeln gewahlt. Wiederwahl ist zulassig. Der Vergutungsausschuss hat folgende Aufgaben:
a) to draw up principles for compensation of members of the Board of Directors and the Executive Committee and to submit them to the Board of Directors for approval;	a) Ausarbeiten der Grundsatze betreffend Vergutung an den Verwaltungsrat und an die Geschaftsleitung und Vorlegen derselben zur Genehmigung durch den Verwaltungsrat;
b) to propose to the Board of Directors the resolution to be submitted to the Ordinary General Meeting for the maximum total compensation of the Board of Directors and Executive Committee;	b) Antragstellung an den Verwaltungsrat zur Unterbreitung an die Generalversammlung betreffend Gesamtvergutung des Verwaltungsrats und der Geschaftsleitung;
c) subject to and within the bounds of the maximum compensation approved by the Ordinary General Meeting, to request approval by the Board of Directors of the individual remuneration packages to be paid to members of the Board of Directors and members of the Executive Committee;	c) Antragstellung an den Verwaltungsrat betreffend individuelle Vergutung der Verwaltungsratsmitglieder und der Mitglieder der Geschaftsleitung unter Vorbehalt und im Rahmen der Hohe der Gesamtvergutung;
d) to request approval by the Board of Directors regarding the determination of the compensation-related targets for the Executive Committee;	d) Antragstellung an den Verwaltungsrat hinsichtlich der fur die Geschaftsleitung vergiitungsrelevanten Ziele;
e) to request approval by the Board of Directors regarding the adjustments to the Articles of association relating to remuneration; and	e) Antragstellung an den Verwaltungsrat betreffend Anpassung der Statuten hinsichtlich des Vergutungssystems; und
f) to prepare the Compensation Report and submit it to the Board of Directors.	f) Entwurf des Vergutungsberichts und Unterbreitung des Vergutungsberichts an den Verwaltungsrat.
The Board of Directors shall set out any further duties and responsibilities vested on the Compensation Committee in the Company's organizational regulations.	Der Verwaltungsrat kann weitere Aufgaben und Zustandigkeiten des Vergutungsaus-schusses im Organisationsreglement vorsehen.

Art. 29 Indemnification As far as is permissible under applicable law, the Company shall indemnify any current or former member of the Board of Directors, former members of the Executive Committee/ or any person who is serving or has served at the request of the Company as a member of the Board of Directors or member of the Executive Committee (each individually, a “Covered Person”), against any expenses, including attorneys’ fees, judgments, fines, and amounts paid in settlement actually and reasonably incurred by him or her in connection with any threatened, pending, or completed actions, suits or proceedings, whether civil, criminal or administrative, to which he or she was, is, or is threatened to be made a party, or is otherwise involved (a “Proceeding”). This provision shall not indemnify any Covered Person against any liability arising out of (a) any fraud or dishonesty in the performance of such Covered Person’s duty to the Company, or (b) such Covered Party’s conscious, intentional or willful or grossly negligent breach of the obligation to act honestly and in good faith with a view to the best interests of the Company. Notwithstanding the preceding sentence, this section shall not extend to any person holding the office of auditor or special auditor of the Company.	**Art. 29 Schadloshaltung** Soweit gemass anwendbarem Recht zulassig, wird die Gesellschaft jegliche aktuellen oder ehemaligen Verwaltungsratsmitglieder, ehemalige Geschaftsleitungsmitglieder, oder jede Person, die auf Ersuchen der Gesellschaft Verwaltungsratsmitglied oder Geschaftsleitungsmitglied ist oder war (jede einzeln eine “versicherte Person”), gegen alle Kosten, einschliesslich Anwaltsgebuhren, Urteile, Bussen und Ausgleichszahlungen, die tatsachlich und angemessenerweise durch diese Person zu tragen waren, entschadigen, die im Zusammenhang mit angedrohten, an-hangig gemachten oder abgeschlossenen Klagen, Prozesse oder Verfahren, seien diese zivil-, straf- oder administrativrechtlicher Art, bei welchen die versicherte Person Partei war, ist oder es zu werden droht oder sonst wie beteiligt ist (ein “Verfahren”), ent-standen sind. Diese Bestimmung halt die versicherte Person nicht schadlos gegen jegliche Haftung, die aufgrund (a) von Betrug oder Unehrlichkeit im Rahmen der Leistung der versicherten Person bei der Erfullung einer Pflicht gegeniiber der Gesellschaft, oder (b) eines bewussten, absichtlichen oder vorsatzlichen oder grob fahrlassigen Verstosses gegen die Verpflichtung der versicherten Person, ehrlich und in gutem Glauben im Hinblick auf die besten Interessen der Gesellschaft zu handeln, entstanden ist. Ungeachtet des vorstehenden Satzes, ist dieser Absatz nicht anwendbar fur Revisoren oder Sonderrevisioren der Gesellschaft.
In the case of any Proceeding by or in the name of the Company, the Company shall indemnify each Covered Person against expenses, including attorneys’ fees, actually and reasonably incurred in connection with the defense or settlement thereof, except no indemnification shall be made in respect of any claim, issue or matter as to which a Covered Person shall have been adjudged to be liable for fraud or dishonesty in the performance of his or her duty to the Company, or for conscious, intentional or willful or grossly negligent breach of his or her obligation to act honestly and in good faith with a view to the best interests of the Company, unless and only to the extent that a court in which such action or suit was brought shall determine upon application that despite the adjudication of liability, but in view of all the circumstances of the case, such Covered Person is fairly and reasonably entitled to indemnity for such expenses as the court shall deem proper. Notwithstanding the preceding sentence, this section shall not extend to any person holding the office of auditor or special auditor of the Company.	Im Falle eines Verfahrens, durch die oder im Namen der Gesellschaft, wird die Gesellschaft jeder versicherten Personen Aufwendungen, einschliesslich Anwaltskosten, die tatsachlich und angemessenerweise im Zusammenhang mit der Verteidigung oder Beilegung desselben entstanden sind, mit der Ausnahme, dass keine Entschadigung gewahrt werden soli in Bezug auf eine Forderung, ein Problem oder eine Angelegenheit, bei welcher sich eine versicherte Person die Haftung aufgrund von Betrug oder Unehrlichkeit im Rahmen der Leistung der versicherten Person bei der Erfullung einer Pflicht gegeniiber der Gesellschaft, oder fur die be-wusste, absichtliche oder vorsatzliche oder grob zu sein fahrlassige Verletzung seiner Pflichten, ehrlich und in gutem Glauben im Hinblick auf die im besten Interesse der Gesellschaft zu handeln, anrechnen lassen muss, es sei denn, und nur in dem Masse, als ein Gericht, bei dem eine solche Klage oder MaBnahme anhangig gemacht wurde, auf Antrag feststellt, dass trotz der Zurechnung der Haftung, aber in Anbetracht alter Umstande des Einzelfalls, die versicherte Person gerechter- und vernunftigerweise Anspruch auf Schadloshaltung hat, in einem Masse, als es das Gericht fur angemessen halt. Ungeachtet des vorstehenden Satzes, ist dieser Absatz nicht anwendbar fur Revisoren oder Sonderrevisioren der Gesellschaft.

Any indemnification under this Article 29 (unless ordered by a court) shall be made by the Company only as authorized in the specific case upon a determination that indemnification of the Covered Person is proper in the circumstances because such person has met the applicable Standard of conduct set forth in this Article 29. Such determination shall be made, with respect to a Covered Person (a) by a majority vote of the members of the Board of Directors who are not parties to such proceeding, even though less than a quorum; (b) by a committee of such members of the Board of Directors designated by a majority vote of such the Board of Directors, even though less than a quorum; (c) if there are no such member of the Board of Directors, or if such member of the Board of Directors so direct, by independent legal counsel in a written opinion; or (d) by the General Meeting of Shareholders. Such determination shall be made, with respect to any other Covered Person, by any person or persons having the authority to act on the matter on behalf of the Company. To the extent, however, that any Covered Person has been successful on the merits or otherwise in defense of any proceeding, or in defense of any claim, issue or matter therein, such Covered Person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.		Jegliche Schadloshaltung gemass diesem Artikel 29 (ausser bei gerichtlicher Anordnung) wird von der Gesellschaft im Einzelfall nur aufgrund einer Genehmigung entrichtet, aufgrund eines Beschlusses, wonach die Schadloshaltung der versicherten Person in Anbetracht der Umstande angemessen ist, weil die versicherte Person den anzuwendenden Verhaltensmassstab gemass diesem Artikel 29 erfullt hat. Eine solcher Beschluss betreffend die versicherte Person wird getroffen durch (a) einen Mehrheitsbeschluss des Verwaltungsrast, die nicht Partei eines solchen Verfahrens sind, auch wenn das Quorum nicht erreicht wird; (b) von einem durch Mehrheitsbeschluss des Verwaltungsrats bestimmten Ausschusses dieser Verwaltungsratsmitglieder, auch wenn das Quorum nicht erreicht wird; (c) wenn es keine solche Verwaltungsratsmitglieder gibt oder wenn diese Verwaltungsratsmitglieder es schriftlich durch einen unabhangigen Rechtskonsulenten entsprechend anordnen; oder (d) durch die Generalversammlung. Ein solcher Beschluss wird gemacht, betreffend jede andere versicherte Person, von jeder Person oder Personen, die die Befugnis haben, im Namen der Gesellschaft in der Angelegenheit zu handeln. Mit der Ausnahme jedoch, dass jede versicherte Person, die in der Sache selbst oder auf andere Weise bei der Abwehr eines Verfahrens oder der Abwehr von An-spruchen, Problemen oder einer damit verbundenen Angelegenheit erfolgreich gewesen ist, fur tatsachliche und angemessenerweise damit verbundene Aufwendungen (einschliesslich Anwaltskosten) entschadigt wird, ohne dass es einer Genehmigung im Einzelfall bedarf.

As far as is permissible under applicable law, expenses, including attorneys' fees, incurred in defending any proceeding for which indemnification is permitted pursuant to this Article 29 shall be paid by the Company in advance of the final disposition of such proceeding upon receipt by the Board of Directors of an undertaking by or on behalf of the Covered Person to repay such amount if it shall ultimately be determined that he or she is not entitled to be indemnified by the Company under these Articles of Association.		Soweit gemass anwendbarem Recht zulassig, werden Aufwendungen, einschliesslich Anwaltskosten, die im Rahmen der Verteidigung bei jeglichen Verfahren anfallen, fur welche eine Schadloshaltung aufgrund dieses Artikels 29 zulassig ist, von der Gesellschaft vor der endgultigen Entscheidung eines solchen Verfahrens bezahlt gegen eine gegeniiber dem Verwaltungsrat ausgesprochene Verpflichtung der versicherten Person, diesen Betrag zuriickzuzahlen, sollte endgultig entschieden werden, dass er oder sie nicht berechtigt ist, von der Gesellschaft im Rahmen dieser Statuten schadlos gehalten zu werden.
It being the policy of the Company that indemnification of the persons specified in this Article 29 shall be made to the fullest extent permitted by law and the indemnification provided by this Article 29 shall not be deemed exclusive (a) of any other rights to which those seeking indemnification or advancement of expenses may be entitled under these Articles of Association, any agreement, any insurance purchased by the Company, vote of shareholders or disinterested members of the Board of Directors, or pursuant to the decision of any court of competent jurisdiction, or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office, or (b) of the power of the Company to indemnify any person who is or was an employee or agent of the Company or of another corporation, joint venture, trust or other enterprise which he or she is serving or has served at the request of the Company, to the same extent and in the same situations and subject to the same determinations as are hereinabove set forth with respect to a Covered Person. As used in this Article 29, references to the "Company" include all constituent corporations in a consolidation or merger in which the Company or a predecessor to the Company by consolidation or merger was involved. The indemnification provided by this Art. 29 shall continue as to a person who has ceased to be a member of the Board of Directors or the Executive Committee and shall inure to the benefit of their heirs, executors, and administrators.		Es wird die Politik des Unternehmens, dass Schadloshaltung der in diesem Artikel 29 genannten Personen vollumfanglich gesetzeskonform ist, und dass die gemass diesem Artikel 29 gewahrte Schadloshaltung nicht ausschliesst: (a) jegliche anderen Rechte, welche Personen, die Schadloshaltung oder einen Kostenvorschuss beanspruchen, aufgrund dieser Statuten, jeglicher Vereinbarung, jeglicher durch die Gesellschaft bezahlter Versicherungsleistung, einer Abstimmung der Aktionare oder der neutralen Verwaltungsratsmitglieder oder aufgrund der Entscheidung jedes zustandigen Gerichts, oder sonstwie zustehen konnen, jeweils aufgrund des Handelns gemass der zustehenden Ent-scheidungsbefugnis oder aufgrund des Handelns als Stellvertreter mit fremder Ent-scheidungsbefugnis; oder (b) die Befugnis der Gesellschaft, jede Person in gleichem Umfang und in den gleichen Situationen und gemass den gleichen Bestimmungen, wie sie oben betreffend eine versicherte Person aufgestellt wurden, zu entschadigen, die ein Angestellter oder Vertreter der Gesellschaft oder einer anderen Gesellschaft, einer Joint Venture, eines Trusts oder eines anderen Unternehmens ist oder war, welchem oder welcher er oder sie auf Ersuchen der Gesellschaft dient oder gedient hat. Sofern in diesem Artikel 29 verwendet, bein-halten Bezugnahmen auf die "Gesellschaft" alie Korperschaftsbestandteile einer Konsolidierung oder Fusion, in denen die Gesellschaft oder ein Vorlaufer der Gesellschaft durch Konsolidierung oder Fusion beteiligt war. Die in diesem Art. 29 vorgesehenen Ent-schadigungen stehen Personen, die nicht mehr Verwaltungsrats- oder Geschaftsleitungsmitglied sind, weiter zu und sollen deren Erben, Vollstrecker und Verwalter zugutekommen.

VI. AUDITORS		**VI. REVISIONSSTELLE**
Art. 30 Election, Term The General Meeting shall elect one or more accountants as its Auditors in terms of Art. 727 et seq. CO every year with the rights and duties determined by law. The General Meeting may appoint Special Auditors for a term of up to three years who provide the attestations required for capital increases.		**Art. 30 Wahl, Amtsdauer** Die Generalversammlung wahlt jedes Jahr eine oder mehrere naturliche oder juristische Personen als Revisionsstelle im Sinne von Art. 727 ff. OR mit den im Gesetz festgehaltenen Rechten und Pflichten. Die Generalversammlung kann fur die Dauer von bis zu drei Jahren Sonderrevisoren be-stimmen, welche die bei Kapitalerhdhungen erforderlichen Bescheinigungen erbringen.
Art. 31 Duties The Auditors shall perform their duties to audit and report whether the accounting, the annual accounts and the proposal regarding allocation of profits is in accordance with law and the Articles of association.		**Art. 31 Aufgaben** Die Revisionsstelle priift, ob die Buchfuhrung und die Jahresrechnung sowie der Antrag uber die Verwendung des Bilanzgewinns Gesetz und Statuten entsprechen.
VII. COMPENSATION AND RELATED PROVISIONS		**VII. VERGUTUNGEN UND VERWANDTE BESTIMMUNGEN**

Art. 32 Principles of the Compensation of the Board of Directors	**Art. 32 Grundsatze der Vergutung fur die Mitglieder des Verwaltungsrats**
The compensation payable to the members of the Board of Directors comprises, subject to and within the bounds of the approval by the General Meeting of the total compensation, the following elements:	Die Vergutung fur die Mitglieder des Verwaltungsrats umfasst, unter Vorbehalt der Genehmigung durch die Generalversammlung und im Rahmen der durch diese genehmigten Gesamtvergutung, folgende Elemente:
a) a fixed basic remuneration;	a) ein fixes Grundhonorar;
b) a fixed committee fee for work in a committee of the Board of Directors;	b) eine fixe Entschadigung fur Tatigkeiten als Mitglied eines Ausschusses des Verwaltungsrats;
c) a lump sum compensation for expenses;	c) eine pauschaie Spesenentschadigung;
d) a number of options or shares in the Company, as further outlined in Art. 41.	d) eine Anzahl von Optionen oder Aktien der Gesellschaft, gemass Art. 41.
The compensation is paid in cash and in form of options or shares in the Company. The	Die Vergutung kann bar und in Form von Optionen und Aktien der Gesellschaft bezahlt werden. Der Verwaltungsrat oder, soweit an ihn delegiert, der Vergutungsausschuss legen Zuteilungs-, Ausubungs- und Verfallsbe-dingungen fest. Sie konnen insbesondere vorsehen, dass aufgrund des Eintritts im Voraus bestimmter Ereignisse, wie eines Kontrollwechsels oder der Beendigung des Arbeits- oder Mandatsverhaltnisses, Vesting-, Ausubungs- und Verfallsbedingungen weitergelten, verkurzt oder aufgehoben werden, Vergutungen unter der Annahme der Erreichung von Zielwerten aiisgerichtet werden oder Vergutungen verfallen. Die Gesellschaft kann die erforderlichen Aktien auf dem Markt erwerben, aus Bestanden eigener Aktien entnehmen oder unter Verwendung von bedingtem oder genehmigtem Kapital bereitstellen.
board of directors or, to the extent delegated to it, the Compensation Committee shall determine grant, exercise and forfeiture conditions. In particular, they may provide for continuation, acceleration or removal of vesting, exercise and forfeiture conditions, for payment or grant of compensation based upon assumed target achievement, or for forfeiture, in each case in the event of pre-determined events such as a change-of-control or termination of an employment or mandate agreement. The Company may procure the required shares through purchases in the market, from treasury shares or by using contingent or authorized share capital.	
Subject to the approval by the General Meeting, the members of the Board of Directors may receive remuneration in cash at customary conditions for advisory services rendered outside their capacity as Board member for the benefit of the Company or companies under its control. The General Meeting may approve an additional bonus for the members of the Board of Directors in exceptional cases.	Vorbehaltlich der Genehmigung durch die Generalversammlung, kann den Mitgliedern des Verwaltungsrats eine Entschadigung in bar zu marktublichen Konditionen fur Beratungstatigkeiten, welche diese ausserhalb ihrer Funktion als Verwaltungsratsmitglied und zu Gunsten der Gesellschaft oder von ihr kontrollierter Gesellschaften erbringen, ausbezahlt werden. Die Generalversammlung kann in Ausnahmefallen einen zusatzlichen Bonus zu Gunsten der Verwaltungsratsmitglieder genehmigen.
The compensation may also be paid for activities in companies that are directly or indirectly controlled by the Company and may be paid by the Company or by a company controlled by it.	Die Vergutung kann auch ausgerichtet werden fur Tatigkeiten in Unternehmen, die durch die Gesellschaft direkt oder indirekt kontrolliert werden und kann durch die Gesellschaft oder durch von ihr kontrollierte Unternehmen ausgerichtet werden.

Art. 33 Principles of the Compensation of the Executive Committee	**Art. 33 Grundsatze der Vergutung fur die Mitglieder der Geschaftsleitung**
The compensation payable to the members of the .Executive Committee is subject to the approval by the General Meeting and comprises the following elements: a) a fixed remuneration payable in cash; b) a performance-related remuneration payable in cash (variable); c) a number of options or shares in the Company (variable), as further outlined in Art. 41. The performance-related remuneration depends on the Company's business success and the individual performance of the member of the Executive Committee based on the achievement of pre-determined targets during a business year. The Board of Directors determines annually at the beginning of each relevant business year the decisive targets and their weighting upon proposal by the Compensation Committee. The amount of the performance-related remuneration for each member of the Compensation Committee is determined by the Board of Directors and may not exceed 100. percent of the respective individual fixed remuneration for the same year. The compensation may also be paid for activities in companies that are directly or indirectly controlled by the Company and may be paid by the Company or by a company controlled by it.	Die Vergutung fur die Mitglieder der Geschaftsleitung ist von der Generalversammlung zu genehmigen und umfasst folgende Elemente: a) eine fixe Vergütung in bar; b) eine erfolgsabhängige Vergütung in bar (variabel); c) eine Anzahl Optionen oder Aktien der Gesellschaft (variabel), gemäss Art. 41. Die erfolgsabhängige Vergütung richtet sich nach dem Geschäftserfolg und der individuellen Leistung gemessen nach dem Erreichen bestimmter vordefinierter Ziele über ein Geschaftsjahr. Der Verwaltungsrat definiert jährlich am Anfang jeder Leistungsperiode auf Antrag des Vergutungsausschusses hin die relevanten Ziele und deren Gewichtung. Die Höhe der erfolgsabhängigen Vergütung für das jeweilige Geschäftsleitungsmitglied wird vom Verwaltungsrat festgelegt und da'rf 100% der im entsprechenden Geschäftsjahr relevanten individuellen, fixen Vergütung nicht überschreiten. Die Vergutung kann auch ausgerichtet werden für Tatigkeiten in Unternehmen, die durch die Gesellschaft direkt oder indirekt kontrolliert werden und kann durch die Gesellschaft oder durch von ihr kontrollierte Unternehmen ausgerichtet werden.

Art. 34 Compensation for new Members of the Executive Committee If new members of the Executive Committee are appointed and take up their position in the Company after the General Meeting has approved the maximum total compensation for members of the Executive Committee for the year in question, the new members may be paid an additional amount for the period until the next Ordinary Meeting of Shareholder. The additional amount payable to all new members of the Executive Committee may not exceed 50 percent of the respective total compensation already approved by the General Meeting. The additional compensation may only be paid if the total compensation amount that has been approved by the General Meeting for the compensation of the members of the Executive Committee is insufficient to compensate the newly appointed members. The General Meeting is not required to vote on this additional amount. This additional overall compensation is understood to include any settlements for any disadvantage suffered as a result of the change of job.	**Art. 34 Vergutungen für neue Mitglieder der Geschäftsleitung** Sofern neue Mitglieder der Geschäftsleitung ernannt werden und ihre Stelle antreten, nachdem die Generalversammlung die Gesamtvergütung für die Geschäftsleitungsmit-glieder im entsprechenden Jahr genehmigt hat, darf diesen neuen Mitglieder ein zusätzlicher Betrag für die Dauer bis zur nachsten ordentlichen Generalversammlung vergütet werden. Dieser Zusatzbetrag an alle neuen Mitglieder der Geschaftsleitung darf 50% der von der Generalversammlung für das betreffende Jahr bereits genehmigten Gesamtvergütung nicht ubersteigen. Der Zusatzbetrag darf nur ausgerichtet werden, sofern und soweit die von der Generalversammlung beschlossenen Vergütungsbetrage an die Geschäftsleitungsmitglieder bis zur nächsten ordentlichen Generalversammlung für die Vergütung der neuen Mitglieder nicht aus-reicht. Über den verwendeten Zusatzbetrag stimmt die Generalversammlung nicht ab. Mit diesem Zusatzbetrag sind allfallige durch ein Geschaftsleitungsmitglied erlittene Nachteile aufgrund Stellenwechsel abgegolten.
Art. 35 Expenses Expenses which are not covered by the lump sum compensation pursuant to the Company's expense regulations shall be reimbursed following presentation of the supporting receipts. This additional remuneration is not subject to a separate vote by the General Meeting.	**Art. 35 Spesen** Spesen, welche nicht durch die pauschale Spesenentschädigung gemäss Spesenregle-ment abgedeckt sind, werden nach Vorlage der entsprechenden Belege rückvergütet. Diese Rückvergütung ist von der Generalversammlung nicht zu genehmigen.
Art. 36 Compensation Agreements Agreements on compensation with members of the Board of Directors may not exceed the term of maximal one year. Employment agreements of the members of the Executive Committee are principally concluded for an indefinite period of time whereas a notice period may not exceed twelve months. If an employment agreement is concluded for a fixed term such term may not exceed one year.	**Art. 36 Vertrage über die Vergütung** Vertrage, die den Vergutungen fur die Mitglieder des Verwaltungsrats zugrunde liegen, sind auf maximal ein Jahr befristet. Die Arbeitsverträge der Geschäftsleitungsmitglieder sind grundsätzlich unbefristet, wobei die Kundigungsfrist maximal zwölf Monate betragen darf. Wird ein befristeter Vertrag abgeschiossen, so darf dieser die Dauer von ein Jahr nicht überschreiten.

Art. 37 Mandates of a Member of the Board of Directors outside the Company	**Art. 37 Mandate eines Verwaltungsratsmitglieds ausserhalb der Gesellschaft**
A member of the Board of Directors may cumulatively assume not more than the following number of mandates in the board of directors; the superior management or an administrative body of a legal entity which is obliged to be registered in the Swiss commercial register or an equivalent foreign register:	Ein Mitglied des Verwaltungsrats darf kumulativ maximal folgende Mandate in einem obersten Leitungs- oder Verwaltungsorgan von Rechtseinheiten, die verpflichtet sind, sich ins Handelsregister oder in ein entsprechendes ausländisches Register eintragen zu lassen, übernehmen:
a) 7 mandates for publicly traded companies pursuant to Art. 727 para. 1 number 1 CO; and	a) 7 Mandate für Publikumsgesellschaften gemäss Art. 727 Abs. 1 Ziff. 1 OR; und
b) 8 mandates for companies pursuant to Art. 727 para. 1 number 2 CO; and	b) 8 Mandate für Gesellschaften gemäss Art. 727 Abs. 1 Ziff. 2 OR; und
c) 5 mandates for companies which do not fulfil the criteria under a) and b) hereunder.	c) 5 Mandate für Rechtseinheiten, welche die Kriterien gemäss lit. a) und b) hier-vor nicht erfüllen.
Mandates held in several legal entities each operating under the same management or same beneficial owner (group) are deemed to be a single mandate.	Mandate von verschiedenen Rechtseinheiten, welche aber derselben Führung oder dersel-ben wirtschaftlichen Eigentümerin unterstehen (Konzern), gelten als ein Mandat, durfen aber insgesamt vierzig nicht übersteigen.
If a legal entity fulfills several of the above mentioned criteria, it can be freely counted towards any category. The following mandates are excepted from this restrictions:	Erfüllt eine Rechtseinheit mehrere der vorgenannten Kriterien, kann sie beiiebig jeder auf sie zutreffenden Kategorie zugerechnet werden. Folgende Mandate sind von diesen Beschränkungen ausgenommen:
a) mandates in legal entities which are controlled by the Company or which control the Company;	a) Mandate in Rechtseinheiten, welche von der Gesellschaft kontrolliert werden oder welche die Gesellschaft kontrollieren;
b) honorary mandates in charitable legal entities,	b) Ehrenamtliche Mandate in gemeinnützigen Rechtseinheiten.

Art. 38 Mandates of a Member of the Executive Committee outside the Company	**Art. 38 Mandate eines Geschäftsleitungsmitglieds ausserhalb der Gesellschaft**
Each member of the Executive Committee may, with approval of the Board of Directors, cumulatively assume not more than the following number of mandates in the board of directors, the superior management or an administrative body of a legal entity which is obliged to be registered in the Swiss commercial register or an equivalent foreign register: a) 2 mandates for publicly traded companies pursuant to Art. 727 para. 1 number 1 CO; and b) 3 mandates for companies pursuant to Art. 727 para. 1 number 2 CO; and c) 5 mandates for companies which do not fulfil the criteria under litera a) and b) hereunder. Mandates held in several legal entities each operating under the same management or same beneficial owner (group) are deemed to be a single mandate. If a legal entity fulfills several of the above mentioned criteria, it can be freely counted towards any category. The following mandates are excepted from this restrictions: a) mandates in legal entities which are controlled by the Company or which control the Company; b) honorary mandates in charitable legal entities.	Jedes Mitglied der Geschäftsleitung darf mit Genehmigung des Verwaltungsrats kumulativ maximal folgende Mandate in einem obersten Leitungs- oder Verwaltungsorgan von Rechtseinheiten, die verpflichtet sind, sich ins Handelsregister oder in ein entsprechendes ausländisches Register eintragen zu lassen, übernehmen: a) 2 Mandate für Publikumsgesellschaften gemäss Art. 727 Abs. 1 Ziff. 1 OR; und b) 3 Mandate für Gesellschaften gemäss Art. 727 Abs. 1 Ziff. 2 OR; und c) 5 Mandate für Rechtseinheiten, welche die Kriterien gemäss lit. a) und b) hiervor nicht erfüllen. Mandate von verschiedenen Rechtseinheiten, welche aber derselben Führung oder derselben wirtschaftlichen Eigentümerin unterstehen (Konzern), gelten als ein Mandat. Erfüllt eine Rechtseinheit mehrere der vor-genannten Kriterien, kann sie beliebig jeder auf sie zutreffenden Kategorie zugerechnet werden. Folgende Mandate sind von diesen Beschränkungen ausgenommen: a) Mandate in Rechtseinheiten, welche von der Gesellschaft kontrolliert werden oder welche die Gesellschaft kontrollieren; b) Ehrenamtliche Mandate in gemeinnützigen Rechtseinheiten.
Art. 39 Loans and Credits The members of the Board of Directors and the Executive Committee may not be granted any loans, credits or securities. Excepted from the above are advances in the maximum amount of CHF 500’000 per person for attorneys’ fees, court and other similar costs required for the defence of third-party liability claims permitted by Art. 29.	**Art. 39 Darlehen und Kredite** Den Mitgliedern des Verwaltungsrats und der Geschäftsleitung durfen keine Darlehen, Kredite oder Sicherheiten gewährt werden. Ausnahme davon bilden Vorschusszahlungen über einen Betrag von maximal CHF 500’000 pro Person für Anwalts-, Gerichts- und ähnliche Kosten zur Abwehr von Verantwortlichkeitsansprüchen, sofern zulässig nach Art. 29.

Art. 40 Pension Funds	**Art. 40 Pensionskasse**
The Company shall remunerate members of the Board of Directors only in respect of the employer's mandatory contributions to social insurance. Above and beyond this, the Company shall not make any contributions to pension funds or other such pension plans. In exceptional cases, contributions such as these may be made subject to a request by the Compensation Committee and the approval of the General Meeting.	Die Gesellschaft leistet für die Mitglieder des Verwaltungsrats die gesetzlichen Arbeitge-bersozialversicherungsbeiträge. Abgesehen davon richtet die Gesellschaft keine Beiträge an die Pensionskasse oder andere Vorsorge-einrichtungen für die Mitglieder des Verwaltungsrats aus. Solche Beiträge können ausnahmsweise auf Antrag des Vergutungsaus-schusses und nach Genehmigung der Generalversammlung ausgerichtet werden.
Members of the Executive Committee participate in the Company's pension plans (the Company's pension fund and the management pension plan). The pension plans conform to the legal requirements (BVG). For members of the Executive Committee, the insured income is defined as the fixed remuneration plus 50 percent of the target performance-related remuneration, up	Die Mitglieder der Geschäftsleitung partizi-pieren am Pensionsplan der Gesellschaft (Pensionskasse sowie Management Pensionsplan). Der Pensionsplan hat den gesetzlichen Bestimmungeri (BVG) zu entsprechen. Das versicherte Einkommen der Mitglieder der Geschäftsleitung entspricht jeweils dem Betrag der fixen Vergütung zuzuglich 50% der erfolgsabhängigen Vergutung bis zum gesetzlichen Maximum. Aktienbezogene Vergutungen werden nicht berücksichtigt.
to the legal maximum. Equity-linked income components are not included.	Die Gesellschaft kann zugunsten der Geschäftsleitungsmitglieder und im Rahmen der von der Generalversammlung genehmig-ten Gesamtvergütungen zusätzliche Einkäufe in die Pensionskasse tätigen, urn Nachteile aufgrund von Stellenwechsel auszugleichen oder zugunsten zusätzlicher Rentenansprüche. In diesem Zusammenhang kann die Gesellschaft Lebensversicherungen zugunsten der Mitglieder der Geschäftsleitung abschliessen und die Versicherungsprämien vollumfänglich oder teilweise zahlen.
Within the overall compensation approved by the General Meeting, the Company may make additional payments into the Company's pension funds for the benefit of members of the Executive Committee in order to cover any disadvantage suffered as a result of the change of jobs or to purchase additional pension entitlements. In this context the Company may conclude life insurance policies on behalf of members of the Executive Committee and pay the insurance premiums either fully or in part.	Die Gesellschaft kann ihren Geschäftsleitungsmitgliedern eine Überbrückungsrente zusichern, um die Zeitdauer zwischen einer Frühpensionierung ab dem 62. Altersjahr und dem ordentlichen Pensionsalter abzudecken, soweit eine solche Überbrückungsrente 100% der letztmalig an dieses Mitglied be zahlte Jahresvergütung nicht übersteigt.
Upon retirement, the Company may also grant members of the Executive Committee a bridging pension to cover the period between early retirement at 62 and the ordinary age of retirement, if such bridging pension does not exceed 100 percent of the total annual compensation of the respective member last paid.	

Art. 41 Option and Share Plans	**Art. 41 Options- und Aktienpläne**
Under the Company's Option Plan, the Board of Directors, upon proposal of the Compensation Committee, allocates the participating members of the Executive Committee and the Board of Directors a fixed number of options or shares with a vesting for a period of at least three years (the vesting period). At the end of the vesting period, participants in the Option Plan are entitled to exercise the options granted against payment of the strike price. These options to acquire shares in the Company or allocated shares are subject to the basic principles set out in the following:	Gemäss dem Optionsplan der Gesellschaft, teilt der Verwaltungsrat auf Antrag des Vergütungsausschusses den Mitgliedern der Geschäftsleitung und des Verwaltungsrats eine bestimmte Anzahl Optionen oder Aktien zu, welche einer Sperrfrist von mindestens drei Jahren unterliegen. Am Optionsplan partizipierende Mitglieder sind nach Ablauf der Sperrfrist berechtigt, die gewährten Optionen gegen Bezahlung des Ausübungspreises auszuüben. Die Optionen, welche zum Erwerb von Aktien an der Gesellschaft berechtigen, bzw. zugeteilten Aktien unterliegen den folgenden Grundsätzen:
a) it is the sole discretion of the Board of Directors to decide whether to allocate options or shares and to whom;	a) Es liegt im freien Ermessen des Verwaltungsrats, ob und wem Optionen und Aktien zugeteilt werden;
b) each year, the Board of Directors, upon proposal of the Compensation Committee, stipulates the number of options and shares to be allocated, the date of allocation and the strike price;	b) Der Verwaltungsrat bestimmt jährlich auf Antrag des Vergutüngsausschusses Anzahl und Datum der Zuteilung sowie Ausübungspreis der Optionen und Aktien;
c) each option incorporates a non-transferable, pre-emptive, and contingent right to acquire a certain number of Company's shares;	c) Jede Option begrundet ein unübertragbares, bedingtes Bezugsrecht eine bestimmte Anzahl Aktien der Gesellschaft zu erwerben;
d) in the case of a change of control (as defined in the Option Plan) or delisting of the Company's shares, the vesting period shall end (accelerated vesting) and the participant shall be entitled to exercise the options on a pro rata basis on the day the transaction that led to the change of control or delisting was executed. It is at the sole discretion of the Board of Directors to decide upon proposal of the Compensation Committee whether the financial objectives have been met;	d) Im Falle eines Kontrollwechsels (gemass Definition im Optionsplan) oder der Dekotierung der Aktien der Gesellschaft endet die Sperrfrist vorzeitig und das teilnehmende Geschäftsleitungs-mitglied ist berechtigt, seine Optionen pro-rata basierend auf dem Stichtag der Transaktion, welche zum Kontrollwechsel geführt hat, oder der Dekotierung der Aktien auszuüben. Der Verwaltungsrat entscheidet nach freiem Ermessen und auf Antrag des Vergutungsausschusses, ob die finanzwirtschaftlichen Ziele in diesem Zusammenhang gegeben sind;
e) the individual members of the Executive Committee or the Board of Directors participating in the Option Plan are responsible for paying any taxes or social security contributions and for declaring income correctly to the authorities;	e) Das jeweilige Mitglied der Geschaftsleitung oder des Verwaltungsrats, welches am Optionsplan teilnimmt, ist selber dafiir verantwortlich, dass jegliche damit zusammenhangenden Steuern oder Sozialabgaben bezahlt und Einkommen der zustandigen Behorden korrekt ge-meldet werden.
f) it is at the sole discretion of the Board of Directors to decide whether to supplement the Option Plan within the bounds of the principles set out above or to discontinue it.	f) Der Verwaltungsrat entscheidet nach freiem Ermessen uber Ergänzungen des Optionsplans im Rahmen der obge-nannten Grundsätze oder uber dessen Beendigung.
The Company may periodically offer shares in the Company to important and long-term employees for a price being at maximum ten percent below the average volume-weighted price of the last 30 trading days at the stock exchange. Members of the Board of Directors and the Executive Committee may be included in this programme. The shares acquired thereby shall be blocked for a period of at least 3 years.	Die Gesellschaft kann periodisch Aktien der Gesellschaft zu einem Preis, der maximal zehn Prozent unter dem über 30 Börsentage volumengewichteten durchschnittlichen Kurs an der Börse liegt, an wichtige und langjährige Mitarbeiter abgeben. Die Mitglieder des Verwaltungsrats und der Geschäftsleitung können in dieses Programm eingeschlossen werden. Die so erworbenen Aktien sind fur mindestens 3 Jahre gesperrt.

VIII. FISCAL YEAR, ACCOUNTING PRINCIPLES, ALLOCATION OF PROFITS		VIII. GESCHÄFTSJAHR, RECHNUNGSLEGUNG, GEWINNVERTEILUNG
Art. 42 Fiscal Year The Board of Directors shall determine the start and the end of the Company's business year.		**Art. 42 Geschäftsjahr** Der Verwaltungsrat bestimmt, wann das Geschäftsjahr beginnt und wann es endet.
Art. 43 Accounting The annual accounts consist of the profit and loss statement, the balance sheet, the cash flow statement, the annex and the management report, and shall be drawn up pursuant to the provisions of the Swiss Code of Obligations, particularly of Art. 958 et seq. CO, and the generally accepted commercial principles and customary rules in that business area. If required by law, the consolidated financial statements shall be drawn in accordance with the provisions of Art. 962 CO.		**Art. 43 Rechnungslegung** Die Jahresrechnung besteht aus der Erfolgs-rechnung, der Bilanz, der Geldflussrechnung, dem Anhang und dem Lagebericht und ist gemäss den Vorschriften des Schweizerischen Obligationenrechts, insbesondere Art. 958 ff. OR, sowie nach den allgemein anerkannten kaufmännischen und branchenüblichen Grundsätzen zu erstellen. Die Konzernrechnung wird, sofern gesetzlich vorgeschrieben, gemäss den Bestimmungen von Art. 962 OR erstellt.
Art. 44 Allocation of Profits Subject to the legal provisions regarding distribution of profits, the profit as shown on the balance sheet shall be allocated by the General Meeting at its discretion after receipt of the proposals of the Board of Directors and the Auditors. In addition to the legal reserves, the General Meeting may create supplemental reserves. Dividends not claimed within five years after the due date shall remain with the Company and be allocated to the general reserves.		**Art. 44 Gewinnverteilung** Die Generalversammlung beschliesst nach Entgegennahme der Anträge des Verwaltungsrates und des Berichtes der Revisionsstelle unter Vorbehalt der gesetzlichen Bestimmungen uber die Verwendung des Bilanzgewinnes und setzt die Dividende und den Zeitpunkt ihrer Auszahlung fest. Zusätzlich zu den gesetzlichen Reserven kann die Generalversammlung zusätzliche Reserven bereitstellen. Dividenden, die nicht innerhalb von fünf Jahren nach dem Fälligkeitstag beansprucht werden, verbleiben bei der Gesellschaft und werden den allgemeinen Rücklagen zugefuhrt.

IX. DISSOLUTION AND LIQUIDATION		**IX. AUFLÖSUNG UND LIQUIDATION**
Art. 45 Dissolution and Liquidation The dissolution and liquidation of the Company shall take place in accordance with the provisions of the Swiss Code of Obligations.		**Art. 45 Auflösung und Liquidation** Fur die Auflosung und Liquidation der Gesellschaft gelten die Bestimmungen des Schwei-zerischen Obligationenrechts.
X. NOTICES AND PUBLICATIONS		**X. MITTEILUNGEN UND BEKANNTMACHUNGEN**
Art. 46 Notices and Publications The Swiss Official Gazette of Commerce is the official publication medium. Shareholder communications and notices the shareholders shall be made by publication in the Swiss Official Gazette of Commerce or sent by mail or e-mail to.the addresses registered in the share register. Unless the law provides otherwise, notices shall be given to creditors by publication in the Swiss Official Gazette of Commerce. The Board of Directors may assign further means of communication.		**Art. 46 Mitteilungen und Bekanntmachungen** Das Schweizerische Handelsamtsblatt (SHAB) ist das offizielle Publikationsmedium. Mitteilungen und Bekanntmachungen an die Aktionäre erfolgen durch Publikation im Schweizerischen Handelsamtsblatt oder durch Brief oder E-Mail an die im Aktienbuch verzeichneten Adressen. Bekanntmachungen an die Gläubiger erfolgen in den vom Gesetz vorgeschriebenen Fällen durch Veröffentlichung im Schweizerischen Handelsamtsblatt, dem Publikationsorgan der Gesellschaft. Der Verwaltungsrat kann weitere Publikationsmittel bezeichnen.

EXHIBIT 10.1

RESEARCH COLLABORATION AGREEMENT

This RESEARCH COLLABORATION AGREEMENT (this "**Agreement**") is entered into as of September 17, 2018 (the "**Effective Date**") by and between, on the one hand, **ViaCyte, Inc.**, a corporation organized and existing under the laws of Delaware, and CRISPR Therapeutics AG ("**CRISPR**"). ViaCyte and CRISPR each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**."

RECITALS

WHEREAS, CRISPR possesses certain Patents, Know-How, technology and expertise with respect to the CRISPR/Cas System (as defined below);

WHEREAS, ViaCyte possesses certain Patents, Know-How, technology and expertise with respect to the field of regenerative medicine;

WHEREAS, ViaCyte and CRISPR desire to enter into a research collaboration focused on Establishment of POC (as defined below) with a Product Candidate (as defined below); and

WHEREAS, in consideration of ViaCyte entering into this Agreement, CRISPR will issue to ViaCyte $15,000,000 of its common shares on the terms and conditions set forth on Schedule A attached hereto and may, subject to the terms and conditions of this Agreement and at the option of ViaCyte, provide funding of up to $10,000,000 through a convertible promissory note on the terms and conditions described further below.

NOW, THEREFORE, in consideration of the respective covenants, representations, warranties and agreements set forth herein, the Parties hereto agree as follows:

ARTICLE 1.
DEFINITIONS

For purposes of this Agreement, the following capitalized terms will have the following meanings:

1.1. "**Acquisition Transaction**" has the meaning set forth in Section 2.10.2.

1.2. "**Affiliate**" means, as of any point in time and for so long as such relationship continues to exist with respect to any Person, any other Person that controls, is controlled by or is under common control with such Person. A Person will be regarded as in control of another Person if it (a) owns or controls more than 50% of the equity securities of the subject Person entitled to vote in the election of directors (or, in the case of a Person that is not a corporation, for the election of the corresponding managing authority); *provided*, *however*, that the term "Affiliate" will not include subsidiaries or other entities in which a Person owns a majority of the ordinary voting power necessary to elect a majority of the board of directors or other governing board, but is restricted from electing such majority by contract or otherwise, until such time as such restrictions are no longer in effect, or (b) possesses, directly or indirectly, the power to direct or cause the direction of the management or policies of an such Person (whether through ownership of securities or other ownership interests, by contract or otherwise).

1.3. "**Agreement**" has the meaning set forth in the Preamble.

1.4. "**Agreement Term**" means the period commencing on the Effective Date and ending on the expiration of this Agreement pursuant to Section 9.1, unless terminated earlier as provided herein.

1.5. "**Alliance Manager**" has the meaning set forth in Section 3.3.1.

1.6. "**AAA**" means the American Arbitration Association.

1.7. "**Applicable Law**" means the applicable provisions of any and all national, supranational, regional, state and local laws, treaties, statutes, rules, regulations, administrative codes, guidance, ordinances, judgments, decrees, directives, injunctions, orders, permits (including Marketing Approvals) of or from any court, arbitrator or Governmental Authority having jurisdiction over or related to the subject item.

1.8. "**Approval Application**" means a biologics license application, NDA or similar application or submission for a Product filed with a Regulatory Authority in a country or group of countries to obtain marketing approval for a biological or pharmaceutical product in that country or group of countries.

1.9. "**Available**" has the meaning set forth in Section 1.19.

1.10. "**Breaching Party**" means the Party that is believed by the other Party to be in material breach of this Agreement.

1.11. "**Business Day**" means a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in Boston, Massachusetts are obligated to be closed.

1.12. "**Calendar Quarter**" means the respective periods of three consecutive calendar months ending on March 31, June 30, September 30 or December 31, during the Agreement Term, or the applicable part thereof during the first or last calendar quarter of the Agreement Term.

1.13. "**Calendar Year**" means any calendar year ending on December 31, or the applicable part thereof during the first or last year of the Agreement Term.

1.14. "**cGMP**" means current Good Manufacturing Practices as specified in the United States Code of Federal Regulations, ICH Guideline Q7A, or equivalent laws, rules, or regulations of an applicable Regulatory Authority at the time of manufacture.

1.15. "**Change of Control**" means, with respect to a Party, (a) a merger or consolidation of such Party with a Third Party that results in the voting securities of such Party outstanding immediately prior thereto, or any securities into which such voting securities have been converted or exchanged, ceasing to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately after such merger or consolidation, or (b) a transaction or series of related transactions in which a Third Party, together with its Affiliates, becomes the beneficial owner of more than 50% of the combined voting power of the outstanding securities of such Party, or (c) the sale or other transfer to a Third Party of all or substantially all of such Party's business to which the subject matter of this Agreement relates. Notwithstanding the foregoing, the term "Change of Control" will not include any sale of shares of capital stock of a Party, in a single

transaction or series of related transactions in which such Party issues new securities solely to institutional investors for cash or the cancellation or conversion of indebtedness or a combination thereof where such transaction(s) are conducted primarily for bona fide equity financing purposes.

1.16. "**Clinical Trial**" means a study in humans that is conducted in accordance with GCP and is designed to generate data in support of an Approval Application.

1.17. "**Commercialize**" or "**Commercializing**" means to market, promote, distribute, offer for sale, sell, have sold, import, export or otherwise commercialize a product, to conduct activities, other than Research, Development and Manufacturing, in preparation for the foregoing activities, including obtaining Price Approval. When used as a noun, "Commercialization" means any and all activities involved in Commercializing.

1.18. "**Commercially Reasonable Efforts**" means, with respect to the performance by a Party of an obligation or activity specified hereunder, that level, caliber and quality of efforts and resources reasonably and normally used by biopharmaceutical companies of similar size and resources to such Party to perform a similar obligation or activity, taking into account, without limitation, scientific, technical and business factors relevant to such obligation or activity, and considering, without limitation, the following factors in assessing the efforts and resources used by a Party: (i) application of appropriate resources and personnel with an appropriate level of education, experience and training for the relevant obligation; (ii) assignment of responsibility for the relevant obligation to appropriate personnel who are responsible for monitoring progress, (iii) establishment and measurement of achievement of objectives and timelines for carrying out such obligation, and (iv) decision-making and resource allocation to advance progress with respect to relevant objectives and timelines.

1.19. "**Confidential Information**" means, with respect to each Party, all Know-How or other information, including proprietary information (whether or not patentable) regarding or embodying such Party's technology, products, business information or objectives, that is communicated in any way or form by or on behalf of the Disclosing Party to the Receiving Party or its permitted recipients, prior to, on or after the Effective Date, whether or not such Know-How or other information is identified as confidential at the time of disclosure. The terms and conditions of this Agreement will be considered Confidential Information of both Parties, with both Parties deemed to be the Receiving Party of such Confidential Information. Notwithstanding any provision of this Section 1.19 to the contrary, Confidential Information does not include any Know-How or information that: (a) was already known by the Receiving Party (other than under an obligation of confidentiality to the Disclosing Party) at the time of disclosure by or on behalf of the Disclosing Party; (b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party; (c) became generally available to the public or otherwise part of the public domain after its disclosure to the Receiving Party, other than through any act or omission of the Receiving Party in breach of its obligations under this Agreement; (d) was disclosed to the Receiving Party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the Disclosing Party not to disclose such information to the Receiving Party; or (e) was independently discovered or developed by or on behalf of the Receiving Party without the use of any Confidential Information belonging to the Disclosing Party; *provided*, in connection with the foregoing exclusions from protection, that specific Confidential Information shall not be deemed to be

known, generally available, in the public domain, disclosed, independently discovered or developed (individually and collectively "**Available**"), merely because broader or related information is Available, nor shall combinations of elements or principles be considered to be Available merely because individual elements thereof are Available.

1.20. "**Continuing Party**" has the meaning set forth in Section 9.3.2(a)(iii).

1.21. "**Control**" or "**Controlled**" means with respect to any Know-How or Patent or other data, information or Materials, possession of the ability by a Party or its Affiliate(s) (whether by sole or joint ownership, license or otherwise, other than pursuant to this Agreement) to grant, without violating the terms of any agreement with a Third Party, a license, access or other right in, to or under such Know-How or Patent or other data, information or Materials. Notwithstanding anything in this Agreement to the contrary, a Party will be deemed not to Control any Patents or Know-How or other data, information or Materials that are owned or controlled by a Third Party that becomes an Affiliate of such Party in a Change of Control or such Third Party's Affiliates (other than such Party and any Affiliate of such Party prior to the Change of Control), (a) prior to the closing of such Change of Control, or (b) after such Change of Control to the extent that such Patents or Know-How or other data, information or Materials are developed or conceived by such Third Party or its Affiliates (other than such Party and any Affiliate of such Party prior to the Change of Control) after such Change of Control without using or incorporating such Party's technology (i.e. CRISPR Technology or ViaCyte Technology, as applicable).

1.22. "**Convertible Note Financing**" has the meaning set forth in Section 7.5.

1.23. "**Cover**," "**Covering**" or "**Covers**" means, as to a product and Patent, that, in the absence of a license granted under, or ownership of, such Patent, the making, using, keeping, selling, offering for sale or importation of such product would infringe such Patent or, as to a pending claim included in such Patent, the making, using, selling, offering for sale or importation of such product would infringe such Patent if such pending claim were to issue in an issued patent without modification.

1.24. "**CREATE Act**" means the Cooperative Research and Technology Enhancement Act of 2004, 35 U.S.C. § 103(c)(2)-(c)(3).

1.25. "**CRISPR**" has the meaning set forth in the Preamble.

1.26. "**CRISPR Activities**" means any and all Research Program activities conducted by CRISPR, including those Research activities for which CRISPR is designated as the responsible Party under the Research Plan.

1.27. "**CRISPR Background Know-How**" means any Know-How, other than Joint Know-How and CRISPR Program Know-How, that (a) CRISPR or any of its Affiliates Control as of the Effective Date or that comes into the Control of CRISPR or any of its Affiliates during the Agreement Term and (b) is reasonably necessary or reasonably useful for the Research, Development, Manufacture, Commercialization or use of Product Candidates or Products.

1.28. "**CRISPR Background Patents**" means any Patent, other than a Joint Patent or CRISPR Program Patent that (a) CRISPR or any of its Affiliates Control as of the Effective Date or

that comes into the Control of CRISPR or any of its Affiliates during the Agreement Term and (b) claims or discloses any CRISPR Background Know-How or is otherwise reasonably necessary or reasonably useful for the Research, Development, Manufacture, Commercialization or use of Product Candidates or Products.

1.29. "**CRISPR Background Technology**" means the CRISPR Background Know-How and the CRISPR Background Patents.

1.30. "**CRISPR Entity**" means, when used in the singular, any one of CRISPR AG and CRISPR Inc. "**CRISPR Entities**" means, when used in the plural, CRISPR AG and CRISPR Inc.

1.31. "**CRISPR Indemnified Party**" has the meaning set forth in Section 8.1.

1.32. "**CRISPR In-License Agreements**" means agreements between CRISPR or CRISPR Affiliates and Third Party licensors or sellers pursuant to which CRISPR or CRISPR Affiliates Controls any CRISPR Technology. The CRISPR In-License Agreements as of the Effective Date are listed on Schedule 1.32.

1.33. "**CRISPR Know-How**" means (a) CRISPR Background Know-How, (b) CRISPR Program Know-How and (c) CRISPR's interest in the Joint Know-How.

1.34. "**CRISPR Patent Challenge**" has the meaning set forth in Section 9.2.2(a)(i).

1.35. "**CRISPR Patents**" means (a) CRISPR Background Patents, (b) CRISPR Program Patents, and (c) CRISPR's interest in the Joint Patents.

1.36. "**CRISPR Program Know-How**" has the meaning set forth in Section 6.1.2(a).

1.37. "**CRISPR Program Patents**" has the meaning set forth in Section 6.1.2(a).

1.38. "**CRISPR Program Technology**" has the meaning set forth in Section 6.1.2(a).

1.39. "**CRISPR/Cas System**" means one or more of the following components: (a) a guide RNA element, wherein said guide RNA element can be a guide RNA or a polynucleotide(s) encoding such guide RNA, that is complementary to a Target gene or safe harbor locus, and which is designed to be used with a naturally occurring or engineered clustered regularly interspaced short palindromic repeats (CRISPR)/CRISPR-associated (Cas) protein, (b) a naturally occurring or engineered CRISPR-associated nuclease element, wherein said nuclease element can be a nuclease protein (such as Cas protein) or a polynucleotide(s) encoding such protein, and which can be active or deactivated, and which can be complexed to an activation or repressor domain and (c) an HDR donor template, wherein said HDR donor template can be a single or double stranded polynucleotide(s), which is designed to be used with a nuclease and guide.

1.40. "**CRISPR Technology**" means (a) the CRISPR Background Technology, (b) the CRISPR Program Technology, and (c) CRISPR's interest in any Joint Technology.

1.41. "**Development**" means, with respect to a Product Candidate, all clinical and non-clinical research and development activities conducted after Establishment of POC for such Product Candidate, including toxicology, pharmacology test method development and stability

testing, process development, formulation development, delivery system development, quality assurance and quality control development, statistical analysis, Clinical Trials, regulatory affairs, pharmacovigilance, Clinical Trial regulatory activities and obtaining and maintaining Regulatory Approval. When used as a verb, "Develop" or "Developing" means to engage in Development.

1.42. "**Disclosing Party**" has the meaning set forth in Section 10.1.

1.43. "**Dispute**" has the meaning set forth in Section 11.1.

1.44. "**Distracted Party**" has the meaning set forth in Section 2.10.2.

1.45. "**Distracting Product**" means a product comprising or employing, in whole or in part, a cell therapy principally intended for use in the Field.

1.46. "**Divestiture**" means, with respect to a Distracting Product, the sale, exclusive license or other transfer by the applicable Party and its Affiliates of all of their development and commercialization rights with respect to such Distracting Product to a Third Party without the retention or reservation of any development or commercialization obligation, interest or participation rights (other than solely an economic interest or the right to enforce customary terms and conditions contained in the relevant agreements effectuating such transaction). When used as a verb, "Divest" means to engage in a Divestiture.

1.47. "**Edited Stem Cell Program Technology**" has the meaning set forth in Section 6.1.2(c).

1.48. "**Effective Date**" has the meaning set forth in the Preamble.

1.49. "**Enabling Joint Patent**" has the meaning set forth in Section 9.3.2(e).

1.50. "**Establishment of POC**" with respect to a Product Candidate, that data generated from the Research Program supports initiation of GLP toxicology studies for such Product Candidate as further described on Exhibit A attached hereto.

1.51. "**Executive Officer**" means an executive officer of a Party that is designated by such Party as its "Executive Officer" for purposes of this Agreement. The initial Executive Officer (i) with respect to CRISPR, shall be Tony Ho, M.D. the Executive Vice President and Head of Research and Development of CRISPR, and (ii) with respect to ViaCyte, shall be Paul Laikind, Ph.D., the President and Chief Executive Officer of ViaCyte. A Party may replace its then-current Executive Officer from time-to-time by written notice to the other Party.

1.52. "**Expert**" has the meaning set forth in Section 11.2.

1.53. "**FDA**" means the United States Food and Drug Administration and any successor entity thereto.

1.54. "**FD&C Act**" means the United States Federal Food, Drug, and Cosmetic Act, as amended, and the rules and regulations promulgated thereunder.

1.55. "**Field**" the treatment of Diabetes type 1, Diabetes type 2 or Insulin dependent/requiring Diabetes.

1.56. "**Financing Notice**" has the meaning set forth in Section 7.5.

1.57. "**Force Majeure**" means a condition, the occurrence and continuation of which is beyond the reasonable control of a Party and its Affiliates, including an act of God, voluntary or involuntary compliance with any regulation, law or order of any government, war, civil commotion, labor strike or lock-out, epidemic, flood, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe.

1.58. "**GAAP**" means United States generally accepted accounting principles, consistently applied.

1.59. "**GCP**" means good clinical practices, which are the then-current standards for Clinical Trials for pharmaceuticals, as set forth in the FD&C Act or other Applicable Law, and such standards of good clinical practice as are required by the regulatory authorities of the European Union and other Governmental Authorities in countries for which the applicable Product Candidate is intended to be Developed, to the extent such standards are not less stringent than United States standards.

1.60. "**Gene Editing Program Know-How**" has the meaning set forth in Section 6.1.2(d).

1.61. "**Gene Editing Program Patents**" has the meaning set forth in Section 6.1.2(d).

1.62. "**Gene Editing Program Technology**" has the meaning set forth in Section 6.1.2(d).

1.63. "**Gene Editing System**" means [***].

1.64. "**GLP**" means the then-current good laboratory practice standards promulgated or endorsed by the FDA as defined in 21 C.F.R. Part 58 or the successor thereto, or comparable regulatory standards in jurisdictions outside of the United States, to the extent such standards are not less stringent than United States standards.

1.65. "**Governmental Authority**" means any court, agency, department, authority or other instrumentality of any national, state, county, city or other political subdivision.

1.66. "**Granting Party**" has the meaning set forth in Section 9.3.2(a)(iii).

1.67. "**IND**" means any Investigational New Drug application, filed with the FDA pursuant to Part 312 of Title 21 of the U.S. Code of Federal Regulations, including any supplements or amendments thereto. References herein to IND will include, to the extent applicable, any comparable filings outside the United States.

1.68. "**Indemnified Party**" has the meaning set forth in Section 8.3.

1.69. "**Indemnifying Party**" has the meaning set forth in Section 8.3.

1.70. "**Insolvency Event**" has the meaning set forth in Section 9.2.3(a).

1.71. "**Joint Development & Commercialization Agreement**" has the meaning set forth in Section 4.1.

1.72. "**Joint Know-How**" has the meaning set forth in Section 6.1.2(c).

1.73. "**Joint Patents**" has the meaning set forth in Section 6.1.2(c).

1.74. "**Joint Technology**" has the meaning set forth in Section 6.1.2(c).

1.75. "**Joint Research Committee**" or "**JRC**" has the meaning set forth in Section 3.1.1.

1.76. "**Know-How**" means intellectual property, data, results, pre-clinical and clinical protocols and data from studies, chemical structures, chemical sequences, information, inventions, know-how, formulas, trade secrets, techniques, methods, processes, procedures and developments, whether or not patentable; *provided* that Know-How does not include Patents claiming any of the foregoing.

1.77. "**Knowledge**" means, (a) when used with respect to CRISPR: the actual knowledge of CRISPR personnel and advisors that would reasonably be anticipated to have knowledge of facts relating to the relevant subject matter after having made reasonable inquiries and (b) when used with respect to ViaCyte: the actual knowledge of ViaCyte personnel and advisors that would reasonably be anticipated to have knowledge of facts relating to the relevant subject matter after having made reasonable inquiries.

1.78. "**Liability**" has the meaning set forth in Section 8.1.

1.79. "**Licensed CRISPR Technology**" has the meaning set forth in Section 5.1.2.

1.80. "**Licensed ViaCyte Technology**" has the meaning set forth in Section 5.2.2.

1.81. "**Licensee Party**" has the meaning set forth in Section 9.2.3(b).

1.82. "**Licensor Party**" has the meaning set forth in Section 9.2.3(b).

1.83. "**Manufacture**" or "**Manufactured**" or "**Manufacturing**" means activities directed to making, having made, producing, manufacturing, processing, filling, finishing, packaging, labeling, quality control testing and quality assurance release, shipping or storage of a product.

1.84. "**Marketing Approval**" means, with respect to a Product in a particular jurisdiction, all approvals, licenses, registrations or authorizations necessary for the Commercialization of such Product in such jurisdiction, including, with respect to the United States, approval of an Approval Application for such Product by the FDA and with respect to the European Union, approval of an Approval Application for such Product by the European Commission.

1.85. "**Materials**" means all biological materials or chemical compounds arising out of a Party's activities under this Agreement or otherwise provided by a Party for use by the other Party to conduct activities pursuant to this Agreement, including Product Candidates, Clinical Trial samples, cell lines, assays, viruses and vectors.

1.86. "**NDA**" means a new drug application that is submitted to the FDA for marketing approval for a Product Candidate or Product, pursuant to 21 C.F.R. § 314.3.

1.87. "**New CRISPR In-License**" has the meaning set forth in Section 6.1.3(a).

1.88. "**New ViaCyte In-License**" has the meaning set forth in Section 6.1.3(a).

1.89. "**Non-Breaching Party**" means the Party that believes the other Party is in material breach of this Agreement.

1.90. "**Non-Disclosing Party**" has the meaning set forth in Section 10.4.2.

1.91. "**Open JDCA Terms**" has the meaning set forth in Section 4.1.1.

1.92. "**Party**" or "**Parties**" has the meaning set forth in the Preamble.

1.93. "**Patent Coordinator**" has the meaning set forth in Section 6.3.

1.94. "**Patents**" means the rights and interests in and to issued patents and pending patent applications in any country, jurisdiction or region (including inventor's certificates and utility models), including all provisionals, non-provisionals, substitutions, continuations, continuations-in-part, divisionals, renewals and all patents granted thereon, and all reissues, reexaminations, extensions, confirmations, revalidations, registrations and patents of addition thereof, including patent term extensions and supplementary protection certificates, international patent applications filed under the Patent Cooperation Treaty (PCT) and any foreign equivalents to any of the foregoing.

1.95. "**Person**" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, incorporated association, joint venture or similar entity or organization, including a government or political subdivision or department or agency of a government.

1.96. "**Price Approval**" means, in any country where a Governmental Authority authorizes reimbursement for, or approves or determines pricing for, pharmaceutical products, receipt (or, if required to make such authorization, approval or determination effective, publication) of such reimbursement authorization or pricing approval or determination.

1.97. "**Proceeding**" means an action, suit or proceeding.

1.98. "**Product Candidate**" means an allogeneic cell therapy derived from gene edited human stem cells for use in the Field. References in this Agreement to stem cells include embryonic stem cells or induced pluripotent stem cells.

1.99. "**Product**" means any pharmaceutical product, medical therapy, preparation, substance, or formulation comprising or employing, in whole or in part, a Product Candidate.

1.100. "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" means, with regard to a Patent, the preparing, filing, prosecuting and maintenance of such Patent, as well as handling re-examinations and reissues with respect to such Patent, together with the conduct of interferences, the defense of oppositions and other similar proceedings with respect to the particular Patent. For clarification, "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" will not include any other enforcement actions taken with respect to a Patent.

1.101. "**Receiving Party**" has the meaning set forth in Section 10.1.

1.102. "**Regulatory Approval**" means all approvals necessary for the manufacture, marketing, importation and sale of a Product for one or more indications in the Field and in a country or regulatory jurisdiction, which may include satisfaction of all applicable regulatory and notification requirements, but which shall exclude any pricing and reimbursement approvals.

1.103. "**Regulatory Authority**" means, in a particular country or regulatory jurisdiction, any applicable Governmental Authority involved in granting Regulatory Approval or, to the extent required in such country or regulatory jurisdiction, pricing or reimbursement approval of a Product in such country or regulatory jurisdiction.

1.104. "**Research**" means conducting research activities to discover and advance Product Candidates and Products, including pre-clinical studies and optimization, but specifically excluding Development and Commercialization. When used as a verb, "**Researching**" means to engage in Research.

1.105. "**Research Activities**" means the CRISPR Activities and the ViaCyte Activities, collectively, which will be focused on achieving Establishment of POC.

1.106. "**Research Data Package**" has the meaning set forth in Section 2.6.

1.107. "**Research Plan**" means a written plan describing the Research activities to be conducted by each Party with the objective to design and optimize Product Candidates and Products and to generate the data and information required to prepare the applicable Research Data Package, as may be amended by written agreement of the Parties.

1.108. "**Research Program**" means a program dedicated to the design, optimization and Research of a Product Candidate through to Establishment of POC pursuant to the Research Plan.

1.109. "**Research Term**" has the meaning set forth in Section 2.3.

1.110. "**Research Term Expiration Date**" has the meaning set forth in Section 2.3.

1.111. "**Research Term Mutual Termination**" has the meaning set forth in Section 2.3.

1.112. "**Selected JRC Dispute**" has the meaning set forth in Section 11.2.3.

1.113. "**Stem Cell Program Know-How**" has the meaning set forth in Section 6.1.2(e).

1.114. "**Stem Cell Program Patents**" has the meaning set forth in Section 6.1.2(e).

1.115. "**Stem Cell Program Technology**" has the meaning set forth in Section 6.1.2(e).

1.116. "**Stem Cell Technology**" means [***].

1.117. "**Subcontractor**" has the meaning set forth in Section 2.6.

1.118. "**Territory**" means all countries of the world.

1.119. "**Third Party**" means any Person other than ViaCyte, CRISPR and their respective Affiliates.

1.120. "**United States**" or "**U.S.**" means the fifty (50) states of the United States of America and all of its territories and possessions and the District of Columbia.

1.121. "**Valid Claim**" means a claim (a) of any issued, unexpired United States or foreign Patent, which will not, in the country of issuance, have been donated to the public, disclaimed, nor held invalid or unenforceable by a court of competent jurisdiction in an unappealed or unappealable decision, or (b) of any United States or foreign patent application, which will not, in the country in question, have been cancelled, withdrawn or abandoned. Notwithstanding the foregoing, on a country-by-country basis, a patent application pending for more than seven (7) years will not be considered to have any Valid Claim for purposes of this Agreement unless and until a patent meeting the criteria set forth in clause (a) above with respect to such application issues.

1.122. "**ViaCyte**" has the meaning set forth in the Preamble.

1.123. "**ViaCyte Activities**" means any and all Research Program activities conducted by ViaCyte, including those Research activities for which ViaCyte is designated as the responsible Party under the Research Plan.

1.124. "**ViaCyte Background Know-How**" means any Know-How, other than Joint Know-How and ViaCyte Program Know-How, that (a) ViaCyte or any of its Affiliates Control as of the Effective Date or that comes into the Control of ViaCyte or any of its Affiliates during the Agreement Term and (b) is reasonably necessary or reasonably useful for the Research, Development, Manufacture, Commercialization or use of Product Candidates or Products.

1.125. "**ViaCyte Background Patents**" means any Patent, other than a Joint Patent or ViaCyte Program Patent that (a) ViaCyte or any of its Affiliates Control as of the Effective Date or that comes into the Control of ViaCyte or any of its Affiliates during the Agreement Term and (b) claims or discloses any ViaCyte Background Know-How or is otherwise reasonably necessary or reasonably useful for the Research, Development, Manufacture, Commercialization or use of Product Candidates or Products.

1.126. "**ViaCyte Background Technology**" means the ViaCyte Background Know-How and the ViaCyte Background Patents.

1.127. "**ViaCyte Indemnified Party**" has the meaning set forth in Section 8.2.

1.128. "**ViaCyte In-License Agreements**" means agreements between ViaCyte or ViaCyte Affiliates and Third Party licensors or sellers pursuant to which ViaCyte or ViaCyte Affiliates Controls any ViaCyte Technology. The ViaCyte In-License Agreements as of the Effective Date are listed on Schedule 1.128.

1.129. "**ViaCyte Know-How**" means (a) ViaCyte Background Know-How, (b) ViaCyte Program Know-How and (c) ViaCyte's interest in the Joint Know-How.

1.130. "**ViaCyte Patent Challenge**" has the meaning set forth in Section 9.2.2(b)(i).

1.131. "**ViaCyte Patents**" means (a) ViaCyte Background Patents, (b) ViaCyte Program Patents, and (c) ViaCyte's interest in the Joint Patents.

1.132. "**ViaCyte Program Know-How**" has the meaning set forth in Section 6.1.2(b).

1.133. "**ViaCyte Program Patents**" has the meaning set forth in Section 6.1.2(b).

1.134. "**ViaCyte Program Technology**" has the meaning set forth in Section 6.1.2(b).

1.135. "**ViaCyte Technology**" means (a) the ViaCyte Background Technology, (b) the ViaCyte Program Technology, and (c) ViaCyte's interest in any Joint Technology.

ARTICLE 2.
RESEARCH

2.1. **Collaboration Overview**. The Parties will collaborate by performing the activities set forth in the Research Plan for the purpose of designing and advancing a Product Candidate to Establishment of POC.

2.2. **Research Plan; Periodic Update**. Exhibit B sets forth the Research Plan as of the Effective Date. During the Research Term, CRISPR and ViaCyte will together periodically (no less than quarterly) review the Research Plan and, through the JRC, agree upon and make the necessary changes thereto to maximize the potential that the Research Activities will achieve the Establishment of POC.

2.3. **Research Term**. The term for the conduct of the Research Program (the "**Research Term**") will begin on the Effective Date and will end on the first to occur of (a) the Establishment of POC or (b) the [***] anniversary of the Effective Date; provided, however, that if the Research Term ends pursuant to the foregoing clause (b) and any activities under the Research Plan are incomplete at such time, the Parties will complete such activities in accordance with the Research Plan, and the Research Term will be extended with respect to such Research Plan(s) for up to twelve (12) additional months to complete such activities or longer period as may be agreed upon by the Parties in writing (the "**Research Term Expiration Date**"), unless earlier terminated upon written agreement of the Parties that Establishment of POC is not reasonably likely to be achieved (the "**Research Term Mutual Termination**") or upon early termination of this Agreement pursuant to Section 9.2.

2.4. **Research Activities**. Each Party will use Commercially Reasonable Efforts to perform Research Activities for which such Party is responsible under such Research Plan in accordance with the timelines set forth therein. Without limiting the generality of the foregoing, each Party will, and will require its Affiliates and Subcontractors to, perform such Party's Research Activities in a professional manner and in accordance with (i) all Applicable Laws, including where appropriate cGMP, GCP and GLP (or similar standards); (ii) that level of care and skill ordinarily exercised in similar circumstances by providers of the same or similar services; (iii) good scientific standards; and (iv) the terms of this Agreement, in each case, using such Party's most advanced and appropriate technology (CRISPR Technology or ViaCyte Technology, as the case may be), scientific expertise and resources.

2.5. **Briefing the JRC**. At each regularly scheduled meeting of the JRC, which shall be no less frequent than quarterly, each Party will provide detailed progress updates on Research

Activities along with a summary of data associated with such Research Activities, which updates and summaries will be provided to JRC members at least ten (10) days in advance of any JRC meeting. The agenda for meetings of the JRC will be set by the JRC representatives.

2.6. **Research Data Package**. Within forty-five (45) days after completion of Research Activities, the JRC will prepare a final written report of the data generated, analysis performed and conclusions reached in connection with the performance of the Research Program and a conclusion whether or not Establishment of POC has been achieved (the "**Research Data Package**").

2.7. **Subcontractors**. Each Party may engage consultants, subcontractors, or other vendors (each, a "**Subcontractor**") to perform any Research Activities. Each contract between a Party and a Subcontractor for Research Activities will be consistent with the provisions of this Agreement (including ARTICLE 6 and ARTICLE 10). Each Party will be responsible for the effective and timely management of and payment of its Subcontractors. The engagement of any Subcontractor in compliance with this Section will not relieve the applicable Party of its obligations under this Agreement or the Research Plan. The Parties will each be solely responsible for any taxes, including income, withholding, payroll, VAT, sales tax or the like, that arise from their respective use of a Subcontractor.

2.8. **Research Costs**. All costs incurred by ViaCyte in connection with ViaCyte Activities will be borne solely by ViaCyte. All costs incurred by CRISPR in connection with CRISPR Activities will be borne solely by CRISPR.

2.9. **Transfer of Materials**. To facilitate the conduct of Research Activities, each Party will provide any Materials required by the Research Plan to be transferred to the other Party, and each Party may provide to the other Party certain other Materials. Except as otherwise expressly set forth herein, all Materials (including any progeny, unmodified derivatives and modifications thereof) (a) will remain the sole property of the supplying Party, (b) will be used only in the fulfillment of the receiving Party's obligations or exercise of rights under this Agreement, (c) will remain solely under the control of the receiving Party, (d) will not be used or delivered by the receiving Party to or for the benefit of any Third Party (other than a permitted Subcontractor) without the prior written consent of the supplying Party, and, (e) will not be used in research or testing involving human subjects, unless expressly agreed in writing. [***] Subject to Sections 7.1 and 7.2, as applicable, all Materials supplied under this Section 2.9 are supplied "as is", with no warranties of fitness for a particular purpose and must be used with prudence and appropriate caution in any experimental work, since not all of their characteristics may be known.

2.10. **Exclusivity Covenant; Distracting Product; Change of Control**.

2.10.1. **Exclusivity Covenant**. Subject to Section 2.10.2 and Section 2.10.3, each Party agrees that during the Research Term, except in the performance of its obligations or exercise of its rights under this Agreement, neither it nor any of its Affiliates will work for their own account or with any Third Party (including the grant of any license to any Third Party) with respect to the discovery, research, development, manufacture or commercialization of a Product principally intended for use in the Field.

2.10.2. **Acquisition of Distracting Product**. If a Party or, subject to Section 2.10.3, any of its Affiliates (such Party, the "**Distracted Party**") acquires rights to research, develop or commercialize a Distracting Product as the result of a merger, acquisition or combination with or of a Third Party other than a Change of Control (each, an "**Acquisition Transaction**") and, on the date of the completion of such Acquisition Transaction, the research, development or commercialization of the Distracting Product would, but for the provisions of this Section 2.10.2, constitute a breach of Section 2.10.1, then [***]:

(a) [***];

(b) [***]; or

(c) [***].

[***].

2.10.3. **Change of Control**. Subject to Section 2.10.4, if there is a Change of Control of a Party, the obligations of Sections 2.10.1 will not apply to any Distracting Product that exists prior to the closing of such Change of Control (as such product may thereafter be improved); *provided* [***].

2.10.4. **Deemed Termination for Convenience upon Certain Change of Control Events**. If a Party enters into a binding agreement for a Change of Control in which the Third Party acquirer (or its Affiliate) is any of the entities listed on Schedule 2.10.4 under the name of the other Party, then such Party shall so notify the other Party in writing within five (5) Business Days after the execution of such agreement. If the other Party provides written notice to the Party subject to such Change of Control within ten (10) days after receipt of notice pursuant to the preceding sentence that such other Party considers consummation of such Change of Control an election by the Party subject to such Change of Control to terminate this Agreement for convenience, then this Agreement will be deemed terminated pursuant to Section 9.2.1 by the Party subject to such Change of Control effective automatically upon consummation of such Change of Control.

ARTICLE 3.
GOVERNANCE

3.1. **Joint Research Committee**.

3.1.1. **Formation**. Within thirty (30) days after the Effective Date, the Parties will establish a joint research committee (the "**Joint Research Committee**" or "**JRC**") to oversee and coordinate activities under this Agreement. The JRC will be comprised of three (3) representatives from each Party. The JRC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JRC will meet in person or by other means (e.g., videoconference or teleconference) mutually acceptable to the Parties at least once each Calendar Quarter on such dates and at such times and places as agreed to by the members of the JRC. The purpose of the JRC will be to

provide the members periodic updates regarding progress of activities pursuant to this Agreement and to address the matters set forth in Section 3.1.2. The JRC shall have one of its members prepare and circulate agendas to JRC members at least five (5) days prior to each JRC meeting and prepare reasonably detailed minutes for each JRC meeting, which shall be circulated to JRC members within thirty (30) days of such meeting. Each Party will be responsible for its own expenses relating to attendance at or participation in JRC meetings.

3.1.2. **Responsibilities**. The JRC will:

(a) review and approve any proposed amendment to the Research Plan;
(b) prioritize the performance of activities under the Research Plan;
(c) provide comments and recommendations to each Party with respect to the conduct of activities under the Research Plan;
(d) provide a forum for the Parties to discuss the objectives and progress under the Research Plan and to exchange and review scientific information and data relating to the activities being conducted under the Research Plan; and
(e) perform such other duties as are specifically assigned to the JRC under this Agreement.

3.1.3. **Decision-Making**. The JRC members will use reasonable efforts to reach agreement on any and all matters that the JRC has the authority to decide and endeavor to reach consensus on all such matters, taking into consideration the views of each Party. If the JRC is unable to reach consensus (with the CRISPR JRC members collectively having one (1) vote and the ViaCyte JRC members collectively having one (1) vote) with respect to any such matter within ten (10) Business Days, the matter will be referred to the dispute resolution procedures set forth in ARTICLE 11. In resolving any matter that the JRC has authority to decide, the JRC will not (and the Expert resolving any dispute regarding a JRC decision will not) have the right to: (a) amend, modify or waive compliance with any term or condition of this Agreement; (b) make any decision that is expressly stated to require the mutual agreement of the Parties; (c) resolve any claim or dispute regarding whether or in what amount a payment is owed under this Agreement; (d) exercise its final decision-making authority in a manner that would (i) require the other Party to perform any act that such other Party reasonably believes would constitute a violation of an Applicable Law or (ii) require such other Party to expend funding on activities in excess of its budget if such other Party does not have reasonable access to alternative funding for such activities; or (e) make a determination that a Party is in material breach of any obligation under this Agreement.

3.2. **Other Committees**. The Parties may, by mutual agreement, form such other committees as may be necessary or desirable to facilitate the activities under this Agreement. Any dispute arising from such committees or working groups will be escalated to the JRC for resolution.

3.3. **Alliance Managers**.

3.3.1. **Appointment**. Within thirty (30) days following the Effective Date each Party will appoint (and notify the other Party of the identity of) a representative of such Party to act as its alliance manager under this Agreement (each an "**Alliance Manager**"). Each Party may replace its Alliance Manager at any time by written notice to the other Party.

3.3.2. **Specific Responsibilities**. The Alliance Managers may be, but will not be required to be, members of the JRC. The Alliance Managers will serve as the primary contact point between the Parties for the purpose of providing each Party with information regarding the other Parties' activities pursuant to this Agreement and will have the following responsibilities:

(a) schedule meetings of the JRC and circulate draft written minutes from each meeting within fourteen (14) days after each such meeting;
(b) facilitate the flow of information and otherwise promoting communication, coordination and collaboration between the Parties;
(c) provide a single point of communication for seeking consensus both internally within the respective Party's organization and between the Parties regarding key strategy and planning issues; and
(d) perform such other functions as requested by the JRC.

ARTICLE 4.
MUTUAL DEVELOPMENT AND COMMERCIALIZATION

4.1. **Development and Commercialization Terms**.

4.1.1. **Negotiation of Joint Development and Commercialization Agreement**. Commencing promptly after the Effective Date, the Parties shall negotiate towards an agreement pursuant to which the Parties would jointly develop and commercialize Product Candidates and Products for use in the Field throughout the Territory (the "**Joint Development and Commercialization Agreement**"). The Joint Development and Commercialization Agreement will be consistent with the principal terms set forth in Exhibit C attached hereto and incorporated herein by reference and include such other terms as mutually agreed to by the Parties. If the Parties are unable to agree to a final form of Joint Development and Commercialization Agreement on or prior to [***] (or such later date as agreed in writing by the Parties), then the Parties will submit any principal terms of such Joint Development and Commercialization Agreement that have not been mutually agreed to by the Parties (the "**Open JDCA Terms**") for resolution pursuant to ARTICLE 11.

4.1.2. **Establishment of POC**. If the JRC determines that the Parties have achieved Establishment of POC with respect to a Product Candidate as described in Section 2.6, then the Joint Development and Commercialization Agreement in the final form determined pursuant to Section 4.1.1 shall automatically become effective, without further action by either Party. The Parties will concurrently execute and deliver signature pages to the Joint

Development and Commercialization Agreement at that time, but failure to do so will not impact the effectiveness of the Joint Development and Commercialization Agreement.

ARTICLE 5.
LICENSE GRANTS

5.1. **License from CRISPR to ViaCyte**.

5.1.1. **Research License**. Subject to the terms and conditions of this Agreement, CRISPR hereby grants to ViaCyte and its Affiliates a non-exclusive, royalty-free, fully paid-up, worldwide license, with no right to grant sublicenses except to Subcontractors as provided in Section 2.7, to use the CRISPR Technology solely to perform the ViaCyte Activities during the Research Term.

5.1.2. **Commercialization License**. Subject to the terms and conditions of this Agreement including Section 5.1.3 and Section 9.3.2, CRISPR hereby grants to ViaCyte a non-exclusive license under Licensed CRISPR Technology (as defined below) to Research, Develop, Manufacture and Commercialize Product Candidates and Products, whether such Product Candidates and Products are conceived, discovered or advanced in the Research Program or in continued research and development by or on behalf of ViaCyte after termination of this Agreement, for use in the Field, which license shall be exercisable only if and when CRISPR becomes the Granting Party under Section 9.3.2(a) and shall terminate automatically if and when ViaCyte becomes the Granting Party under Section 9.3.2(a). Except as otherwise provided in Section 9.3.2(f), such license shall be royalty-free and fully-paid. After the license becomes exercisable, such license shall be sublicenseable solely to the recipient of a license by ViaCyte of intellectual property Controlled by ViaCyte that pertains to such Product Candidates and Products. Notwithstanding anything to the contrary herein, to the extent that any CRISPR Technology is Controlled by CRISPR pursuant to the terms of any Third Party agreement, any such license shall be subject to any applicable terms and conditions of such Third Party agreement, including any payment obligations to such Third Party that would arise from ViaCyte's exercise of a license under such CRISPR Technology. "**Licensed CRISPR Technology**" means such CRISPR Technology as is reasonably necessary or useful to Research, Develop, Manufacture and Commercialize Product Candidates and Products in the Field.

5.1.3. **Restrictive Covenants**. ViaCyte shall not exercise any rights granted to it under Section 5.1.2 unless and until CRISPR is the Granting Party under Section 9.3.2(a). If this Agreement is rejected by or on behalf of CRISPR pursuant to the U.S. Bankruptcy Code or is repudiated by or on behalf of CRISPR under the U.S. Bankruptcy Code or other Applicable Laws, it is the intention of the Parties that any exercise of rights hereunder by ViaCyte after such a rejection or repudiation will be subject to and in accordance with the U.S. Bankruptcy Code including Section 365(n) thereof.

5.2. **License from ViaCyte to CRISPR**.

5.2.1. **Research License**. Subject to the terms and conditions of this Agreement, ViaCyte hereby grants to CRISPR a non-exclusive, royalty-free, fully paid-up, worldwide license, with no right to grant sublicenses except to Subcontractors as provided under section 2.7, to use the ViaCyte Technology solely to perform the CRISPR Activities during the Research Term.

5.2.2. **Commercialization License**. Subject to the terms and conditions of this Agreement, including Section 5.2.3 and Section 9.3.2, ViaCyte hereby grants to CRISPR a non-exclusive license under Licensed ViaCyte Technology (as defined below) to Research, Develop, Manufacture and Commercialize Product Candidates and Products, whether such Product Candidates and Products are conceived, discovered or advanced in the Research Program or in continued research and development by or on behalf of CRISPR after termination of this Agreement, for use in the Field, which license shall be exercisable only if and when ViaCyte becomes the Granting Party under Section 9.3.2(a) and shall terminate automatically if and when CRISPR becomes the Granting Party under Section 9.3.2(a). Except as otherwise provided in Section 9.3.2(f), such license shall be royalty-free and fully-paid. After the license becomes exercisable, such license shall be sublicenseable solely to the recipient of a sublicense by CRISPR of intellectual property Controlled by CRISPR that pertains to such Product Candidates and Products. Notwithstanding anything to the contrary herein, to the extent that any ViaCyte Technology is Controlled by ViaCyte pursuant to the terms of any Third Party agreement, any such license shall be subject to any applicable terms and conditions of such Third Party agreement, including any payment obligations to such Third Party that would arise from CRISPR's exercise of a license under such ViaCyte Technology. "**Licensed ViaCyte Technology**" means such ViaCyte Technology as is reasonably necessary or useful to Research, Develop, Manufacture and Commercialize Product Candidates and Products in the Field.

5.2.3. **Restrictive Covenant**. CRISPR shall not exercise any rights granted to it under Section 5.2.2 unless and until ViaCyte is the Granting Party under Section 9.3.2(a). If this Agreement is rejected by or on behalf of ViaCyte pursuant to the U.S. Bankruptcy Code or is repudiated by or on behalf of ViaCyte under the U.S. Bankruptcy Code or other Applicable Laws, it is the intention of the Parties that any exercise of rights hereunder by CRISPR after such a rejection or repudiation will be subject to and in accordance with the U.S. Bankruptcy Code including Section 365(n) thereof.

5.3. **No Implied Licenses**. All rights in and to CRISPR Technology not expressly licensed or assigned to ViaCyte under this Agreement are hereby retained by CRISPR or its Affiliates, and ViaCyte agrees not to practice or use CRISPR Technology except as expressly permitted by this Agreement or any other written agreement between the Parties. All rights in and to any ViaCyte Technology not expressly licensed to CRISPR under this Agreement, are hereby retained by ViaCyte or its Affiliates, and CRISPR agrees not to practice or use ViaCyte Technology except as expressly permitted by this Agreement or any other written agreement between the Parties. Except as expressly provided in this Agreement, no Party will be deemed by estoppel or implication to have granted the other Party any licenses or other right with respect to any intellectual property.

ARTICLE 6.
INTELLECTUAL PROPERTY

6.1. **Ownership; Assignment**.

6.1.1. **CRISPR Background Technology and ViaCyte Background Technology**. As between the Parties, CRISPR will own and retain all of its rights, title and interest in and to the CRISPR Background Know-How and CRISPR Background Patents and ViaCyte will own and retain all of its rights, title and interest in and to any ViaCyte Background Know-How and ViaCyte Background Patents, subject, in each case, to any rights or licenses expressly granted by one Party to the other Party under this Agreement.

6.1.2. **Program Technology**.

(a) Subject to Sections 6.1.2(d) and (e), as between the Parties, CRISPR will be the sole owner of any Know-How conceived, discovered, developed, invented or created solely by CRISPR or its Affiliates or Third Parties acting on their behalf while conducting CRISPR Activities under this Agreement ("**CRISPR Program Know-How**") and any Patents that Cover or claim such Know-How ("**CRISPR Program Patents**" and together with the CRISPR Program Know-How, the "**CRISPR Program Technology**"), and will retain all of its rights, title and interest thereto, subject to any assignment, rights or licenses expressly granted by CRISPR to ViaCyte under this Agreement.

(b) Subject to Sections 6.1.2(d) and (e), as between the Parties, ViaCyte will be the sole owner of any Know-How conceived, discovered, developed, invented or created solely by ViaCyte or its Affiliates or Third Parties acting on their behalf while conducting ViaCyte Activities under this Agreement ("**ViaCyte Program Know-How**") and any Patents that Cover or claim ViaCyte Program Know-How ("**ViaCyte Program Patents**" and together with the ViaCyte Program Know-How, the "**ViaCyte Program Technology**"), and will retain all of its rights, title and interest thereto, subject to any rights or licenses expressly granted by ViaCyte to CRISPR under this Agreement.

(c) Subject to Sections 6.1.2(d) and (e), any Know-How conceived, discovered, developed, invented or created under this Agreement jointly by ViaCyte, its Affiliates or Third Parties acting on ViaCyte's behalf, on the one hand, and CRISPR, its Affiliates or Third Parties acting on CRISPR's behalf, on the other hand, in each case, while conducting Research Activities under this Agreement ("**Joint Know-How**") and any Patents that Cover or claim Joint Know-How ("**Joint Patents**" and together with the Joint Know-How, the "**Joint Technology**"), will be owned jointly by the Parties on an equal and undivided basis, including all rights, title and interest thereto, subject to any assignment, rights or licenses expressly granted by one Party to the other Party under this Agreement. [***] (such Joint Know-How and Joint Patents referred to collectively as "**Edited Stem Cell Program Technology**"). For clarification, in no event will any Gene-Editing Program Technology or Stem Cell Program Technology be included in the Edited Stem Cell Program Technology. Each Party will, and hereby does, and will cause its Affiliates to, make such assignment to the other Party or one or more of its designated Affiliates, as necessary to vest ownership of all Edited Stem Cell Program Technology jointly in the Parties, will take, and will cause its Affiliates to take, all actions and provide all reasonably requested assistance to effect such assignment and will execute any and all documents necessary to perfect such assignment. Each Party will promptly disclose to the other Party in writing, and will cause its Affiliates to so disclose, the discovery, development, invention or creation of any Joint Technology. Except as expressly provided in this Agreement, neither Party will have any obligation to account to the other Party for profits with respect to, or to obtain any consent of the other Party to license or exploit, Joint Technology by reason of joint ownership thereof, and each Party hereby waives any right it may have under the laws of any jurisdiction to require any such consent or accounting. Notwithstanding the foregoing, and notwithstanding the rights afforded the Parties as joint owners of the Edited Stem Cell Program Technologies under Applicable Law, each Party agrees that it shall not directly or indirectly, make, use, sell, offer for sale, have offered for sale, import, export or otherwise exploit products or services claimed or Covered by Edited Stem Cell Program Technology outside of the Field. [***] The Parties acknowledge and agree that the provisions of this Section 6.1.2(c) shall survive any expiration or termination of this Agreement.

(d) Any Joint Know-How that pertains to a Gene-Editing System (but excluding any Know-How that pertains to the composition or use of any edited stem cell line), including any CRISPR Background Technology ("**Gene-Editing Program Know-How**"), and any Patents that claim or Cover such Gene-Editing Program Know-How ("**Gene-Editing Program Patents**," and together with the Gene-Editing Program Know-How, the "**Gene-Editing Program Technology**"), will be owned by CRISPR. ViaCyte will, and hereby does, and will cause its Affiliates to, assign to CRISPR or one or more of its designated Affiliates, ViaCyte's ownership interest in all Gene-Editing Program Technology. ViaCyte will promptly disclose to CRISPR in writing, and will cause its Affiliates to so disclose, the discovery, development, invention or creation of any Gene-Editing Program Technology. Within thirty (30) days, ViaCyte will take, and will cause its Affiliates to take, all actions and provide CRISPR with all reasonably requested assistance to effect such assignment and will execute any and all documents necessary to perfect such assignment. The Parties acknowledge and agree that Gene-Editing Program Technology (i) [***]; and (ii) shall be part of CRISPR Background Technology and shall not be part of Joint Technology.

(e) Any Joint Know-How that pertains to a Stem Cell Technology (but excluding any Know-How that pertains to the composition or use of any edited stem cell line), including any ViaCyte Background Technology ("**Stem Cell Program Know-How**"), and any Patents that claim or Cover such Stem Cell Program Know-How ("**Stem Cell Program Patents**," and together with the Stem Cell Program Know-How, the "**Stem Cell Program Technology**"), will be owned by ViaCyte. CRISPR will promptly disclose to ViaCyte in writing, and will cause its Affiliates to so disclose, the discovery, development, invention or creation of any Stem Cell Program Technology. Within thirty (30) days, CRISPR will take, and will cause its Affiliates to take, all actions and provide ViaCyte with all reasonably requested assistance to effect such assignment and will execute any and all documents necessary to perfect such assignment. The Parties acknowledge and agree that Stem Cell Program Technology (i) [***]; and (ii) shall be part of ViaCyte Background Technology and shall not be part of Joint Technology.

6.1.3. **New In-Licenses**.

(a) The Parties shall be free to in-license or otherwise acquire rights to intellectual property from any Third Party that, if so acquired by CRISPR would constitute part of the CRISPR Background Technology, or that, if so acquired by ViaCyte, would constitute part of the ViaCyte Background Technology, and that may, in either case, become subject to the licenses granted under this Agreement (each such agreement as is entered into by CRISPR is a "**New CRISPR In-License**" and each such agreement as is entered into by ViaCyte is a "**New ViaCyte In-License**").

(b) ViaCyte hereby agrees that it will provide notice to CRISPR of any intellectual property rights that are available for acquisition or in-license that relate primarily to Gene-Editing Systems (but, for avoidance of doubt, excluding intellectual property rights that pertain to Stem Cell Technology). ViaCyte will provide CRISPR with such available information as ViaCyte possesses regarding such intellectual property rights, subject to any confidentiality obligations. If CRISPR notifies ViaCyte that CRISPR will pursue an acquisition or in-license of such intellectual property rights then: (i) CRISPR will negotiate in good faith towards such an acquisition or in-license on commercially reasonable terms that result in CRISPR Controlling such intellectual property rights for purposes of the licenses granted by CRISPR hereunder and under the Joint Development and Commercialization Agreement and (ii) during such negotiation or the term of any such acquisition or in-license agreement, ViaCyte will not pursue, directly or indirectly, an acquisition or in-license of such intellectual property rights without CRISPR's prior written consent, not to be unreasonably withheld, delayed or conditioned. Nothing will prevent ViaCyte from acquiring or in-licensing such intellectual property rights, at its sole discretion, for any use other than research, development, manufacture or commercialization of any allogeneic cell therapy derived from gene edited human stem cells in the Field.

(c) CRISPR hereby agrees that it will provide notice to ViaCyte of any intellectual property rights that are available for acquisition or in-license and that relate primarily to Stem Cell Technology (but, for avoidance of doubt, excluding intellectual property rights that pertain to Gene Editing Systems). CRISPR will provide ViaCyte with such available information as CRISPR possesses regarding such intellectual property rights, subject to any confidentiality obligations. If ViaCyte notifies CRISPR that ViaCyte will pursue an acquisition or in-license of such intellectual property rights then: (i) ViaCyte will negotiate in good faith towards such an acquisition or in-license on commercially reasonable terms that result in ViaCyte Controlling such intellectual property rights for purposes of the licenses granted by ViaCyte hereunder and under the Joint Development and Commercialization Agreement and (ii) during such negotiation or the term of any such acquisition or in-license agreement, CRISPR will not pursue, directly or indirectly, an acquisition or in-license of such intellectual property rights without ViaCyte's prior written consent, not to be unreasonably withheld, delayed or conditioned. Nothing will prevent CRISPR from acquiring or in-licensing such intellectual property rights, at its sole discretion, for any use other than research, development, manufacture or commercialization of any allogeneic cell therapy derived from gene edited human stem cells in the Field.

6.2. **Prosecution and Maintenance of Patents**. The Parties hereby agree as follows with respect to the Prosecution and Maintenance of certain Patents.

6.2.1. **CRISPR Patents.** As between the Parties, CRISPR will control and be responsible for all aspects of the Prosecution and Maintenance of CRISPR Patents (excluding Joint Patents).

6.2.2. **ViaCyte Patents**. As between the Parties, ViaCyte will control and be responsible for all aspects of the Prosecution and Maintenance of all ViaCyte Patents (excluding Joint Patents).

6.2.3. **Joint Patents**.

(a) CRISPR will have the first right, but not the obligation, to control and be responsible for all aspects of the Prosecution and Maintenance of all Joint Patents, at its own expense and using a patent counsel selected by CRISPR and reasonably acceptable to ViaCyte. CRISPR will keep ViaCyte informed and consult with ViaCyte through their respective Patent Coordinators as to material developments with respect to the Prosecution and Maintenance of the Joint Patents, including by providing copies of any office actions or office action responses or other correspondence that CRISPR provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings, and by providing ViaCyte the timely opportunity to have reasonable input into the strategic aspects of such Prosecution and Maintenance.

(b) If, during the Agreement Term, CRISPR intends not to file or to abandon any Joint Patent, CRISPR will notify ViaCyte of such intention at least sixty (60) days before the deadline for filing such Joint Patent or the date such Joint Patent will become abandoned, and ViaCyte will have the right, but not the obligation, to assume responsibility for the Prosecution and Maintenance thereof at its own expense with counsel of its own choice.

(c) Neither Party will make any Patent submission (including the filing of patent applications) with respect to any Joint Patent, to the extent that it could reasonably be expected to prejudice or adversely affect the potential patentability of any claimed subject matter of a CRISPR Background Patent (in the case of ViaCyte) or ViaCyte Background Patent (in the case of CRISPR), except with the other Party's prior written consent (such consent not to be unreasonably withheld and such consent to be negotiated in good faith with all due consideration to any deadlines).

6.3. **Patent Coordinators**. Each Party will appoint a patent coordinator reasonably acceptable to the other Party (each, a "**Patent Coordinator**") to serve as such Party's primary liaison with the other Party on matters relating to the Prosecution and Maintenance and enforcement of Licensed Patents and Joint Patents. The Patent Coordinators will meet in person or by means of telephone or video conference at least once each Calendar Quarter during the Agreement Term. Each Party may replace its Patent Coordinator at any time by providing notice in writing to the other Party. The initial Patent Coordinators will be:

For ViaCyte: Liz Bui, Ph.D.

For CRISPR: Shelby Walker

6.4. **Defense of Claims Brought by Third Parties**. If a Third Party initiates a Proceeding against either Party claiming a Patent owned by or licensed to such Third Party is infringed by the Research Activities, each Party that is named as a defendant in such Proceeding will have the right to defend itself in such Proceeding, including settlement of any such Proceeding. The other Party will reasonably assist the defending Party in defending such Proceeding and cooperate in any such litigation [***]. The defending Party will provide the other Party with prompt written notice of the commencement of any such Proceeding and will keep the other Party apprised of the progress of such Proceeding and will promptly furnish the other Party with a copy of each communication relating to the alleged infringement that is received by such Party. If both Parties are named as defendants in any Proceeding, both Parties may defend such Proceeding and the Parties will reasonably cooperate with respect to such defense.

6.5. **Enforcement Patents**.

6.5.1. **Joint Patents**. [***] shall be subject to written agreement by the Parties.

6.5.2. **Patents Solely Owned by CRISPR**. CRISPR will retain all rights to pursue an infringement of any Patent solely owned by CRISPR and CRISPR will retain all recoveries with respect thereto.

6.5.3. **Patents Solely Owned by ViaCyte.** ViaCyte will retain all rights to pursue an infringement of any Patent solely owned by ViaCyte and ViaCyte will retain all recoveries with respect thereto.

6.6. **CREATE Act**. Notwithstanding anything to the contrary in this ARTICLE 6, neither Party will have the right to make an election under the CREATE Act when exercising its rights under this ARTICLE 6 without the prior written consent of the other Party, which will not be unreasonably withheld, conditioned or delayed. With respect to any such permitted election, the Parties will use reasonable efforts to cooperate and coordinate their activities with respect to any submissions, filings or other activities in support thereof. The Parties acknowledge and agree that this Agreement is a "joint research agreement" as defined in the CREATE Act.

ARTICLE 7.
REPRESENTATIONS AND WARRANTIES

7.1. **Representations and Warranties of ViaCyte**. ViaCyte hereby represents and warrants to CRISPR, as of the Effective Date, that, except as otherwise set forth on Schedule 7.1:

7.1.1. ViaCyte is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

7.1.2. ViaCyte (a) has the requisite corporate power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder and (b) has taken all requisite corporate action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

7.1.3. ViaCyte has the requisite resources and expertise to perform its obligations hereunder;

7.1.4. this Agreement has been duly executed and delivered on behalf of ViaCyte, and constitutes a legal, valid and binding obligation, enforceable against ViaCyte in accordance with the terms hereof;

7.1.5. the execution, delivery and performance of this Agreement by ViaCyte does not and will not constitute a default under or conflict with any agreement, instrument or understanding, oral or written, to which ViaCyte is a party or by which ViaCyte is bound, or violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over ViaCyte;

7.1.6. ViaCyte has obtained all necessary consents, approvals and authorizations of all Governmental Authorities and other Persons or entities required to be obtained by it in connection with the execution and delivery of this Agreement;

7.1.7. the ViaCyte Technology constitutes all of the Patents and Know-How Controlled by ViaCyte that are necessary to conduct the Research Program;

7.1.8. ViaCyte is the sole and exclusive owner or exclusive licensee of the ViaCyte Background Patents, free and clear of any liens, charges and encumbrances (other than encumbrances under the terms of any agreement pursuant to which any such Patents are licensed to ViaCyte), and neither any license granted by ViaCyte to any Third Party, nor any license granted by any Third Party to ViaCyte conflicts with the license grants to CRISPR under Section 5.2 and ViaCyte is entitled to grant all rights and licenses (or sublicenses, as the case may be) under such ViaCyte Background Patents it purports to grant to CRISPR under this Agreement;

7.1.9. Schedule 7.1.9 sets forth a true, correct and complete list of all ViaCyte Background Patents as of the Effective Date and indicates whether such Patent is owned by ViaCyte or licensed by ViaCyte from a Third Party and if so, identifies the licensor or sublicensor from which the Patent is licensed;

7.1.10. to its Knowledge, no Third Party (a) is infringing any ViaCyte Background Patents or (b) has challenged the extent, validity or enforceability of ViaCyte Background Patents (including by way of example through the institution or written threat of institution of interference, nullity or similar invalidity proceedings before the United States Patent and Trademark Office or any analogous foreign Governmental Authority);

7.1.11. there are no judgments or settlements against or owed by ViaCyte or, to ViaCyte's Knowledge, pending or threatened claims or litigation, in either case relating to the ViaCyte Background Technology;

7.1.12. there is no action, claim, demand, suit, proceeding, arbitration, grievance, citation, summons, subpoena, inquiry or investigation of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending or, to ViaCyte's Knowledge, threatened against ViaCyte, any of its Affiliates or any Third Party, in each case in connection with the ViaCyte Background

Technology or relating to the transactions contemplated by this Agreement; and

7.1.13. ViaCyte has not employed (and, to ViaCyte's Knowledge, ViaCyte has not used a contractor or consultant that has employed) any Person debarred by the FDA (or subject to a similar sanction of EMA or foreign equivalent), or any Person that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA or foreign equivalent), in any capacity in connection with this Agreement.

7.2. **Representations and Warranties of CRISPR**. CRISPR hereby represents and warrants to ViaCyte, as of the Effective Date, that, except as otherwise set forth on Schedule 7.2:

7.2.1. CRISPR is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

7.2.2. CRISPR (a) has the requisite corporate power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder and (b) has taken all requisite corporate action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

7.2.3. CRISPR has the requisite resources and expertise to perform its obligations hereunder;

7.2.4. this Agreement has been duly executed and delivered on behalf of CRISPR, and constitutes a legal, valid and binding obligation, enforceable against it in accordance with the terms hereof;

7.2.5. the execution, delivery and performance of this Agreement by CRISPR does not and will not constitute a default under or conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it is bound, or violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it;

7.2.6. CRISPR has obtained all necessary consents, approvals and authorizations of all Governmental Authorities and other Persons or entities required to be obtained by CRISPR in connection with the execution and delivery of this Agreement;

7.2.7. the CRISPR Technology constitutes all of the Patents and Know-How Controlled by CRISPR that are necessary to conduct the Research Program;

7.2.8. CRISPR is the sole and exclusive owner or exclusive licensee of the CRISPR Background Patents, free and clear of any liens, charges and encumbrances (other than encumbrances under the terms of any agreement pursuant to which any such Patents are licensed to CRISPR), and neither any license granted by CRISPR to any Third Party, nor any license granted by any Third Party to CRISPR conflicts with the license grants to ViaCyte under Section 5.1 and CRISPR is entitled to grant all rights and licenses (or sublicenses, as the case may be) under CRISPR Background Patents it purports to grant to ViaCyte under this Agreement;

7.2.9. Schedule 7.2.9 sets forth a true, correct and complete list of all CRISPR Background Patents as of the Effective Date and indicates whether such Patent is owned by CRISPR or licensed by CRISPR from a Third Party and if so, identifies the licensor or sublicensor from which the Patent is licensed;

7.2.10. [***] no Third Party [***]

7.2.11. there are no judgments or settlements against or [***] pending or threatened claims or litigation, in either case relating to the CRISPR Background Technology;

7.2.12. [***]; and

7.2.13. CRISPR has not employed (and, to CRISPR's Knowledge, CRISPR has not used a contractor or consultant that has employed) any Person debarred by the FDA (or subject to a similar sanction of EMA or foreign equivalent), or any Person that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA or foreign equivalent), in any capacity in connection with this Agreement.

7.3. **CRISPR Covenants**. CRISPR hereby covenants to ViaCyte that, except as expressly permitted under this Agreement:

7.3.1. CRISPR will maintain and not breach any CRISPR In-License Agreements that provide a grant of rights from such Third Party to CRISPR that are Controlled by CRISPR and are licensed from CRISPR to ViaCyte for a Product Candidate or Product under this Agreement;

7.3.2. CRISPR will promptly notify ViaCyte of any material breach by one or more CRISPR Entities or a Third Party of any CRISPR In-License Agreements (including any New CRISPR In-License) that provides a grant of rights from such Third Party to one or more CRISPR Entities and are licensed or may become subject to a license from CRISPR to ViaCyte to conduct ViaCyte Activities or for a Product Candidate or Product under this Agreement;

7.3.3. it will not, and will cause its Affiliates not to license, sell, assign or otherwise transfer to any Person any CRISPR Technology (or agree to do any of the foregoing), except as will not adversely restrict, limit or encumber the rights granted to ViaCyte under Section 5.2 of this Agreement;

7.3.4. it will notify ViaCyte of any intellectual property rights of any Third Party that relate primarily to Gene-Editing Systems and CRISPR determines are necessary for the practice of any CRISPR Background Technology and are not subject to a CRISPR In-License Agreement;

7.3.5. it will use Commercially Reasonable Efforts to obtain and maintain the requisite resources and expertise to perform its obligations hereunder;

7.3.6. it will notify CRISPR of any intellectual property rights of any Third Party that all employees and Subcontractors of CRISPR performing CRISPR Activities hereunder on behalf of CRISPR will be obligated to assign to CRISPR all right, title and interest in and to any inventions developed by them, whether or not patentable, or, solely with respect to Subcontractors,

grant exclusive license rights to CRISPR with a right to grant sublicenses through multiple tiers;

7.3.7. it will not engage, in any capacity in connection with this Agreement any Person who either has been debarred by the FDA, is the subject of a conviction described in Section 306 of the FD&C Act or is subject to any such similar sanction; and

7.3.8. CRISPR will inform ViaCyte in writing promptly if it or any Person engaged by CRISPR or any of its Affiliates who is performing CRISPR Activities under this Agreement is debarred or is the subject of a conviction described in Section 306 of the FD&C Act, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to CRISPR's Knowledge, is threatened, relating to the debarment or conviction of CRISPR, any of its Affiliates or any such Person performing CRISPR Activities hereunder.

7.4. **ViaCyte Covenants**. ViaCyte hereby covenants to CRISPR that, except as expressly permitted under this Agreement:

7.4.1. ViaCyte will maintain and not breach any ViaCyte In-License Agreements that provide a grant of rights from such Third Party to ViaCyte that are Controlled by ViaCyte and are licensed or may become subject to a license from ViaCyte to CRISPR for a Product Candidate or Product under this Agreement;

7.4.2. ViaCyte will promptly notify CRISPR of any material breach by ViaCyte or a Third Party of any ViaCyte In-License Agreements (including any New ViaCyte In-License) that provides a grant of rights from such Third Party to ViaCyte and are licensed or may become subject to a license from ViaCyte to CRISPR to conduct CRISPR Activities or for a Product Candidate or Product under this Agreement;

7.4.3. it will not, and will cause its Affiliates not to license, sell, assign or otherwise transfer to any Person any ViaCyte Technology (or agree to do any of the foregoing), except as will not adversely restrict, limit or encumber the rights granted to CRISPR under Section 5.1 of this Agreement;

7.4.4. it will notify CRISPR of any intellectual property rights of any Third Party that relate primarily to Stem Cell Technology, are necessary for the practice of any ViaCyte Background Technology and are not subject to a ViaCyte In-License Agreement;

7.4.5. it will use Commercially Reasonable Efforts to obtain and maintain the requisite resources and expertise to perform its obligations hereunder;

7.4.6. it will notify CRISPR of any intellectual property rights of any Third Party that all employees and Subcontractors of ViaCyte performing ViaCyte Activities hereunder on behalf of ViaCyte will be obligated to assign to ViaCyte all right, title and interest in and to any inventions developed by them, whether or not patentable, or, solely with respect to Subcontractors, grant exclusive license rights to ViaCyte with a right to grant sublicenses through multiple tiers;

7.4.7. ViaCyte will not engage, in any capacity in connection with this Agreement any Person who either has been debarred by the FDA, is the subject of a conviction described in Section 306 of the FD&C Act or is subject to any such similar sanction; and

7.4.8. ViaCyte will inform CRISPR in writing promptly if it or any Person engaged by ViaCyte or any of its Affiliates who is performing ViaCyte Activities under this Agreement or any ancillary agreements is debarred or is the subject of a conviction described in Section 306 of the FD&C Act, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to ViaCyte's Knowledge, is threatened, relating to the debarment or conviction of CRISPR, any of its Affiliates or any such Person performing ViaCyte Activities hereunder.

7.5. **Financing Option**. If ViaCyte has not consummated a bona fide preferred stock financing (in either a single transaction or a series of related transactions) by January 15, 2019 resulting in ViaCyte receiving (or providing that ViaCyte will receive) at least $25 million in total proceeds (excluding the conversion of any convertible notes), then ViaCyte shall have the option, which it may exercise, in its sole discretion, at any time after January 15, 2019 and prior to February 1, 2019, to obtain $10,000,000 in financing from CRISPR through ViaCyte's issuance of a convertible promissory note (the "**Convertible Note Financing**") by giving written notice (the "**Financing Notice**") to CRISPR, indicating the decision to proceed with the Convertible Note Financing and providing drafts of (i) a convertible note purchase agreement for the Convertible Note Financing containing customary representations, warranties and covenants and (ii) a convertible promissory note containing customary terms such as interest rate and maturity date (the documents described in clauses (i) and (ii), together with any document, agreement or instrument contemplated thereby or referenced therein, are collectively referred to as the "**Convertible Note Financing Documents**"). The Parties acknowledge and agree that the material terms and conditions of the Convertible Note Financing Documents will be consistent with the terms and conditions of the convertible note financing consummated by ViaCyte and attached hereto, with redactions, as Exhibit E. Upon receipt of the Financing Notice and the draft Convertible Note Financing Documents, ViaCyte and CRISPR shall negotiate in good faith the terms and conditions of the Convertible Note Financing Documents. The Parties acknowledge and agree that the (x) Parties intend that the convertible note issued in connection with the Convertible Note Financing will convert at the same price and other terms and conditions as other investors in connection with the first bona fide equity financing of ViaCyte that occurs after the Effective Date in which the total proceeds thereof is not less than $25 million (excluding the conversion of such convertible note) (in either a single transaction or series of related transactions, a "**Qualified Financing**") and provided that if the Qualified Financing is to take place over multiple tranches, that the conversion of the note will similarly occur in pro rata portions at the closing of each tranche; and (y) rights and obligations set forth in this Section 7.5 shall be automatically null and void and without any further force or effect upon the earlier of (A) February 1, 2019, if CRISPR has not received a Financing Notice by such date; or (B) the date on which ViaCyte consummates a Qualified Financing.

7.6. **Disclaimer**. Except as otherwise expressly set forth in this Agreement, neither Party nor its Affiliates makes any representation or extends any warranty of any kind, either express or implied, including any warranty of merchantability or fitness for a particular purpose. ViaCyte and CRISPR understand that each Product is the subject of ongoing Research and

Development and that neither Party can assure the safety, usefulness or commercial or technical viability of any Product or the results of the Research Program.

ARTICLE 8.
INDEMNIFICATION; INSURANCE

8.1. **Indemnification by ViaCyte**. ViaCyte will indemnify, defend and hold harmless CRISPR, each of its Affiliates, and each of its and its Affiliates' employees, officers, directors and agents (each, an "**CRISPR Indemnified Party**") from and against any and all liability, loss, damage, expense (including reasonable attorneys' fees and expenses) and cost (collectively, a "**Liability**") that any CRISPR Indemnified Party may be required to pay to one or more Third Parties to the extent resulting from or arising out of any claim by any Third Party based on:

8.1.1. [***]

8.1.2. [***].

8.2. **Indemnification by CRISPR**. Each CRISPR Entity will jointly and severally indemnify, defend and hold harmless ViaCyte and its Affiliates, and each of its and their respective employees, officers, directors and agents (each, a "**ViaCyte Indemnified Party**") from and against any and all Liabilities that any ViaCyte Indemnified Party may be required to pay to one or more Third Parties to the extent resulting from or arising out of:

8.2.1. [***]

8.2.2. [***].

8.3. **Procedure**. Each Party will notify the other Party in writing if it becomes aware of a claim for which indemnification may be sought hereunder. In case any proceeding (including any governmental investigation) will be instituted involving any Party in respect of which indemnity may be sought pursuant to this ARTICLE 8, such Party (the "**Indemnified Party**") will give prompt written notice of the indemnity claim to the other Party (the "**Indemnifying Party**") and provide a copy to the Indemnifying Party of any complaint, summons or other written or verbal notice that the Indemnified Party receives in connection with any such claim. An Indemnified Party's failure to deliver written notice will relieve the Indemnifying Party of liability to the Indemnified Party under this ARTICLE 8 only to the extent such delay is prejudicial to the Indemnifying Party's ability to defend such claim. Provided that the Indemnifying Party is not contesting the indemnity obligation, the Indemnified Party will permit the Indemnifying Party to control any litigation relating to such claim and the disposition of such claim by negotiated settlement or otherwise and any failure to contest prior to assuming control will be deemed to be an admission of the obligation to indemnify. The Indemnifying Party will act reasonably and in good faith with respect to all matters relating to such claim and will not settle or otherwise resolve such claim without the Indemnified Party's prior written consent which will not be withheld, delayed or conditioned unreasonably other than settlements only involving the payment of monetary awards for which the Indemnifying Party will be fully-responsible. The Indemnified Party will cooperate with the Indemnifying Party in such Party's defense of any claim for which indemnity is sought under this Agreement, at the Indemnifying Party's sole cost and expense.

8.4. **Insurance**. Each Party will maintain, at its cost, reasonable insurance against liability and other risks associated with its activities contemplated by this Agreement and will furnish to the other Party evidence of such insurance upon request. Notwithstanding the foregoing, either Party may self-insure to the extent that it self-insures for its other activities.

8.5. **Limitation of Consequential Damages**. Except for (a) claims of a Third Party that are subject to indemnification under this ARTICLE 8, (b) claims arising out of a Party's willful misconduct, or (c) a Party's breach of ARTICLE 10, neither Party nor any of its Affiliates will be liable to the other Party or its Affiliates for any incidental, consequential, special, punitive or other indirect damages or lost or imputed profits or royalties, lost data or cost of procurement of substitute goods or services, whether liability is asserted in contract, tort (including negligence and strict product liability), indemnity or contribution, and irrespective of whether that Party or any representative of that Party has been advised of, or otherwise might have anticipated the possibility of, any such loss or damage.

ARTICLE 9.
TERM; TERMINATION

9.1. **Agreement Term; Expiration**. This Agreement is effective as of the Effective Date and, unless earlier terminated pursuant to the other provisions of this ARTICLE 9, will continue in full force and effect until the earliest to occur of (a) the Research Term Expiration Date or Research Term Mutual Termination, or (b) the date that the Joint Development and Commercialization Agreement becomes effective in accordance with Section 4.1.2, and the consequences of such expiration are set forth in Section 9.3.1 (and, for the avoidance of doubt, no other subsections of Section 9.3 below).

9.2. **Termination of the Agreement**.

9.2.1. **Termination for Convenience**. Prior to the end of the Research Term, each Party will be entitled to terminate this Agreement for convenience by providing the other Party with sixty (60) days' written notice of such termination. This provision shall also apply to a deemed termination for convenience by a Party subject to a Change of Control to the extent provided in Section 2.10.4.

9.2.2. **Termination for Material Breach**.

(a) **ViaCyte's Right to Terminate**.

(i) If CRISPR is in material breach of this Agreement, then ViaCyte may deliver written notice of such material breach to CRISPR. If the breach is curable, CRISPR will have [***] days from the receipt of such notice to cure such breach. If either CRISPR fails to cure such breach within such [***] day period or the breach is not subject to cure, ViaCyte, in its sole discretion, may terminate this Agreement by providing written notice to CRISPR.

(ii) If CRISPR (A) commences or actively and voluntarily participates in any action or proceeding (including any patent opposition or re-examination proceeding), or otherwise asserts any claim, challenging or denying the validity or enforceability of any claim of any ViaCyte Patent or (B) actively and voluntarily assists any other Person in bringing or prosecuting any action or proceeding (including any patent opposition or re-examination proceeding) challenging or denying the validity or enforceability of any claim of any ViaCyte Patent (each of (A) and (B), a "**CRISPR Patent Challenge**"), then, to the extent permitted by Applicable Law, ViaCyte shall have the right, in its sole discretion, to give notice to CRISPR that ViaCyte may terminate the license(s) granted under such Patent to CRISPR [***] days following such notice, and, unless CRISPR withdraws or causes to be withdrawn all such challenge(s) (or in the case of *ex-parte* proceedings, multi-party proceedings, or other CRISPR Patent Challenges that CRISPR does not have the power to unilaterally withdraw or cause to be withdrawn), CRISPR ceases assisting any other party to such CRISPR Patent Challenge and, to the extent CRISPR is a party to such CRISPR Patent Challenge, it withdraws from such CRISPR Patent Challenge within such [***] day period, ViaCyte shall have the right to terminate this Agreement by providing written notice thereof to CRISPR. The foregoing right to terminate shall not apply with respect to any CRISPR Patent Challenge where the CRISPR Patent Challenge is made in defense of an assertion of the relevant Patent that is first brought by ViaCyte against CRISPR. For the avoidance of doubt, any participation by CRISPR or its employees in any claim, challenge or proceeding in response to a subpoena or as required under a pre-existing agreement between CRISPR's employee(s) or consultant(s) and their prior employer(s) shall not constitute active and voluntary participation or assistance and shall not give rise to ViaCyte's right to terminate any license hereunder.

(b) **CRISPR's Right to Terminate.**

(i) If ViaCyte is in material breach of this Agreement, then CRISPR may deliver written notice of such material breach to ViaCyte. If the breach is curable, ViaCyte will have [***] days following receipt of such notice to cure such breach. If either ViaCyte fails to cure such breach within such [***] day period, or the breach is not subject to cure, CRISPR, in its sole discretion, may terminate this Agreement by providing written notice to ViaCyte.

(ii) If ViaCyte (A) commences or actively and voluntarily participates in any action or proceeding (including any patent opposition or re-examination proceeding), or otherwise asserts any claim, challenging or denying the validity or enforceability of any claim of any CRISPR Patent or (B) actively and voluntarily assists any other Person in bringing or prosecuting any action or proceeding (including any patent opposition or re-examination proceeding) challenging or denying the validity or enforceability of any claim of any CRISPR Patent (each of (A) and (B), a "**ViaCyte Patent Challenge**"), then, to the extent permitted by Applicable Law, CRISPR shall have the right, in its sole discretion, to give notice to ViaCyte that CRISPR may terminate the license(s) granted under such Patent to ViaCyte [***] days following such notice, and, unless ViaCyte withdraws or causes to be withdrawn all such challenge(s) (or in the case of *ex-parte* proceedings, multi-party proceedings, or other ViaCyte Patent Challenges that ViaCyte does not have the power to unilaterally withdraw or cause to be withdrawn), ViaCyte ceases assisting any other party to such ViaCyte Patent Challenge and, to the extent ViaCyte is a party to such ViaCyte Patent Challenge, it withdraws from such ViaCyte Patent Challenge within such [***] day period, CRISPR shall have the right to terminate this Agreement by providing written notice thereof to ViaCyte. The foregoing right to terminate shall not apply with respect to any ViaCyte Patent Challenge where the ViaCyte Patent Challenge is made in defense of an assertion of the relevant Patent that is first brought by CRISPR against ViaCyte. For the avoidance of doubt, any participation by ViaCyte or its employees in any claim, challenge or proceeding in response to a subpoena or as required under a pre-existing agreement between ViaCyte's employee(s) or consultant(s) and their prior employer(s) shall not constitute active and voluntary participation or assistance and shall not give rise to CRISPR's right to terminate any license hereunder.

9.2.3. **Termination for Insolvency**.

(a) If either Party makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over all or substantially all of its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it that is not discharged within sixty (60) days of the filing thereof (each, an "**Insolvency Event**"), then the other Party may terminate this Agreement in its entirety effective immediately upon written notice.

(b) All rights and licenses now or hereafter granted by a Party under or pursuant to this Agreement are, for all purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of rights to "intellectual property" as defined in the U.S. Bankruptcy Code. Upon the occurrence of any Insolvency Event with respect to a Party (the "**Licensor Party**"), the Granting Party agrees that the other Party (the "**Licensee Party**"), as licensee of such rights under Section 5.1 or 5.2 of this Agreement, as applicable, will retain and may fully exercise all of its rights and elections under the U.S. Bankruptcy Code. The Licensor Party will, during the Agreement Term, create and maintain current copies or, if not amenable to copying, detailed descriptions or other appropriate embodiments, to the extent feasible, of all intellectual property licensed under this Agreement. Each Party acknowledges and agrees that "embodiments" of intellectual property within the meaning of Section 365(n) include laboratory notebooks, cell lines, product samples and inventory, research studies and data, all Regulatory Approvals (and all applications for Regulatory Approval) and rights of reference therein. If (x) a case under the U.S. Bankruptcy Code is commenced by or against a Licensor Party, (y) this Agreement is rejected as provided in the U.S. Bankruptcy Code, and (z) the Licensee Party elects to retain its rights hereunder as provided in Section 365(n) of the U.S. Bankruptcy Code, the Licensor Party (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) will:

(i) provide to the Licensee Party all such intellectual property licensed to the Licensee Party under Section 5.1 or 5.2 of this Agreement, as applicable (including all embodiments thereof), held by the Licensor Party and such successors and assigns, or otherwise available to them, immediately upon the Licensee Party's written request. Whenever the Licensor Party or any of its successors or assigns provides to the Licensee Party any of the intellectual property licensed hereunder (or any embodiment thereof) pursuant to this Section, the Licensee Party will have the right to perform the Licensor Party's obligations hereunder with respect to such intellectual property, but neither such provision nor such performance by the Licensee Party will release the Licensor Party from liability resulting from rejection of the license or the failure to perform such obligations; and

(ii) not interfere with the Licensee Party's rights under this Agreement, to such intellectual property licensed to the Licensee Party under Section 5.1 or 5.2 of this Agreement, as applicable (including such embodiments), including any right to obtain such intellectual property (or such embodiments) from another entity, to the extent provided in Section 365(n) of the U.S. Bankruptcy Code.

(c) All rights, powers and remedies of the Licensee Party provided herein are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including the U.S. Bankruptcy Code) in the event of the commencement of a case under the U.S. Bankruptcy Code with respect to the Licensor Party. The Parties agree that they intend the following rights to extend to the maximum extent permitted by Applicable Law, and to be enforceable under U.S. Bankruptcy Code Section 365(n):

(i) the right of access to any intellectual property rights licensed to the Licensee Party under Section 5.1 or 5.2 of this Agreement, as applicable (including all embodiments thereof), by the Licensor Party, or any Third Party with whom the Licensor Party contracts to perform an obligation of the Licensor Party under this Agreement, and, in the case of any such Third Party, which is necessary for the Research Activities; and

(ii) the right to contract directly with any Third Party to complete the Research Activities.

9.3. **Consequences of Expiration or Termination of the Agreement**.

9.3.1. **In General**. If this Agreement expires or is terminated by a Party in accordance with this ARTICLE 9 at any time and for any reason or upon Research Term Mutual Termination, the following terms will apply:

(a) The Parties will return (or destroy, as directed by the other Party) all data, files, records and other materials containing or comprising the other Party's Confidential Information, except to the extent such Confidential Information is subject to a license or similar grant of rights that survives such termination. Notwithstanding the foregoing, the Parties will be permitted to retain one copy of such data, files, records, and other materials for archival and legal compliance purposes subject to an ongoing obligation of confidentiality.

(b) Termination or expiration of this Agreement for any reason will be without prejudice to any rights or financial compensation that will have accrued to the benefit of a Party prior to such termination or expiration. Such termination or expiration will not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement.

(c) The following provisions of this Agreement will survive any expiration or termination of this Agreement: Sections 2.7 (last sentence thereof), 2.9, 5.3, 6.1.1, 6.1.2, 6.2, 6.4, 6.5, 6.6, 7.5, 7.6 and 9.3 and ARTICLE 1, ARTICLE 8, ARTICLE 10, ARTICLE 11 and ARTICLE 12. In addition, Sections 5.1.2 and 5.1.3 (only if CRISPR is the Granting Party under Section 9.3.2(a)) or Sections 5.2.2 and 5.2.3 (only if ViaCyte is the Granting Party under Section 9.3.2(a)) will survive any termination of this Agreement for the reasons described under Section 9.3.2(a).

9.3.2. **Specific Consequences of Termination**.

(a) The following terms shall have the following meanings for purposes of this Section 9.3.2:

(i) If (1) CRISPR terminates this Agreement (A) pursuant to Section 9.2.2(b) because of an uncured material breach by ViaCyte or ViaCyte Patent Challenge, or (B) under Section 9.2.3 because ViaCyte suffers an Insolvency Event, or (2) ViaCyte terminates this Agreement for convenience under Section 9.2.1 (including any such deemed termination for convenience), then, in either case (clause (1) or (2)), for

purposes of this Section 9.3.2, CRISPR shall be deemed the Continuing Party and ViaCyte shall be deemed to be the Granting Party.

(ii) If (1) ViaCyte terminates this Agreement (A) pursuant to Section 9.2.2(a) because of an uncured material breach by CRISPR or CRISPR Patent Challenge, or (B) under Section 9.2.3 because CRISPR suffers an Insolvency Event, or (2) after the second (2nd) anniversary of the Effective Date, CRISPR terminates this Agreement for convenience under Section 9.2.1 (including any such deemed termination for convenience), then, in either case (clause (1) or (2)), for purposes of this Section 9.3.2, ViaCyte shall be deemed the Continuing Party and CRISPR shall be deemed to be the Granting Party.

(iii) The identification of the Granting Party shall be determined by reference to Section 9.3.2(a)(i) or Section 9.3.2(a)(ii), as applicable (the "**Granting Party**"), and the identification of the Continuing Party shall be determined by reference to Section 9.3.2(a)(i) or Section 9.3.2(a)(ii), as applicable (the "**Continuing Party**").

(b) In the case of termination of this Agreement for the reasons described under Section 9.3.2(a), except as otherwise set forth in this Agreement, or for terminations arising from, relating to, or otherwise in connection with fraud or willful misconduct on behalf of the Granting Party, the Continuing Party shall either (i) elect the remedies set forth in this Section 9.3.2, in which case the Continuing Party shall not pursue remedies available under Applicable Law, or (ii) elect to pursue remedies available under Applicable Law, in which case the remedies set forth in this Section 9.3.2 (other than remedies available under Applicable Law) shall not be available, and the Continuing Party shall make such election by written notice to the Granting Party concurrently with the notice of termination. If the Continuing Party elects the remedies set forth in this Section 9.3.2, such remedies shall be the Continuing Party's sole and exclusive remedy for the termination reasons described under Section 9.3.2(a). Notwithstanding the foregoing, nothing in this Section 9.3.2(b) will preclude either Party from seeking equitable relief or interim or provisional relief from a court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief to protect the interests of such Party.

(c) Upon termination of this Agreement for the reasons described in Section 9.3.2(a), (x) the license granted in Section 5.1.2 (only if CRISPR is the Granting Party) or Section 5.2.2 (only if ViaCyte is the Granting Party) shall become exercisable and the license granted by the Continuing Party shall automatically terminate, and (y) the Granting Party shall do the following to allow the Continuing Party to continue researching, developing, commercializing and manufacturing Products and Product Candidates in the Field (it being agreed that the Parties intend to use reasonable efforts to minimize any material business interruptions):

(i) The Granting Party shall as promptly as practicable transfer to the Continuing Party copies of all data, reports, records and information in the Granting Party's Control to the extent that such data, reports, records or other information relate to the Research Program (from which the Granting Party may redact or remove any information that does not relate to the Research Program).

(ii) If the Continuing Party so requests prior to such termination, and to the extent permitted under the Granting Party's obligations to Third Parties on the effective date of termination, the Granting Party shall transfer to the Continuing Party any Third Party agreements relating to the Research, Development, Manufacture or Commercialization of the Product Candidate (excluding any Third Party agreement pursuant to which the Granting Party Controls any intellectual property rights), subject to any required consents of such Third Party, which the Granting Party shall use Commercially Reasonable Efforts to obtain promptly (provided that the Granting Party shall not be required to make any payment to any Third Party to obtain such consent unless the Continuing Party agrees to make such payment on behalf of the Granting Party); provided, however that, if any such Third Party agreement does not relate solely to the Product Candidate but also relates to any other program or product candidate of the Granting Party, the Granting Party shall not be obligated to transfer such Third Party agreement but shall use Commercially Reasonable Efforts to cause the Third Party to amend such agreement so that such agreement to the extent it relates solely to the Product Candidate may be transferred to the Continuing Party hereunder and such agreement to the extent it relates to any other program or product of the Granting Party may be retained by the Granting Party (provided that the Granting Party shall not be required to make any payment to any Third Party to obtain such amendment unless the Continuing Party agrees to make such payment on behalf of the Granting Party).

(iii) If the Granting Party was responsible for Manufacturing the Product Candidate as of the effective date of termination, at the Continuing Party's option and request made prior to such termination, the Granting Party shall supply such Product to the Continuing Party at the Granting Party's fully burdened cost of manufacture plus ten percent (10%), until the Continuing Party has obtained all necessary manufacturing approvals and the Continuing Party has procured or developed its own source of such Product Candidate supply but in no event more than six (6) months after the effective date of termination or such later date as agreed in writing by the Granting Party in its sole discretion.

(iv) If the Continuing Party so requests prior to such termination, the Granting Party shall transfer to the Continuing Party any inventory of all Product Candidates Controlled by the Granting Party as of the termination date at the actual price paid by the Granting Party for such supply.

(v) The Granting Party shall provide any other assistance reasonably requested by the Continuing Party, at the expense of the Continuing Party for the purpose of allowing and enabling the Continuing Party to proceed expeditiously with the research, development, manufacture and commercialization of the Products and the Product Candidates in the Field; provided that the Granting Party's obligations under this clause shall expire twelve (12) months after the effective date of termination (such period to be tolled automatically if the Granting Party fails to provide such assistance in any material respect until such assistance is provided).

(vi) The Granting Party shall execute all documents and take all such further actions as may be reasonably necessary and requested by the Continuing Party in order to give effect to the foregoing clauses.

(d) Upon termination of this Agreement for the reasons described in Section 9.3.2(a), the Granting Party shall not, itself or with or through any Affiliates or Third Parties, use or reference any Joint Technology to research, develop, manufacture or commercialize Product Candidates or Products for use in the Field on or prior to the second (2nd) anniversary of the effective date of termination of this Agreement.

(e) Notwithstanding anything to the contrary set forth in this Agreement, if CRISPR terminates this Agreement for convenience under Section 9.2.1 on or before the second (2nd) anniversary of the Effective Date then (i) the consequences of such termination shall be as set forth in Section 9.3.1 (and, for the avoidance of doubt, no subsections of this Section 9.3.2 other than this Section 9.3.2(e)) and (ii) CRISPR shall not, itself or with or through any Affiliates or Third Parties, use or reference (A) any ViaCyte Technology for any purpose or (B) any Joint Technology, including any Edited Stem Cell Program Technology, for any purpose; provided however that, to the extent that any Joint Patent would prevent the use of any stem cell line edited using CRISPR Technology (excluding CRISPR's interest in any Joint Technology) to research, develop, make, have made, use, offer for sale or sell an edited stem cell line or product comprising or employing such edited stem cell line (an "**Enabling Joint Patent**"), CRISPR shall retain the right, itself or with or through any Affiliates or Third Parties, under such Enabling Joint Patent only for the purpose of researching, developing, making, having made, using, offering for sale or selling any edited stem cell line created outside the Research Activities or product comprising or employing such edited stem cell line, and expressly excluding any edited stem cell line, Product Candidate or Product, in each case, arising from the Research Activities, including the stem cell line provided by ViaCyte, whether unmodified or modified. Any such retained right shall be sublicensable through multiple tiers.

(f) Upon termination of this Agreement for the reasons described in Section 9.3.2(a), the Continuing Party shall pay the Granting Party (i) royalties of no greater than [***] (as calculated and paid in accordance with Section 11.3 of Exhibit C) and (ii) payments not to exceed $[***] in the aggregate based on research, development and commercialization milestones

(the economics described in clauses (i) and (ii) hereof are collectively referred to as the "**Continuing Payments**"), with the amount of each element of the Continuing Payments taking into consideration the status of the Research Program at the time of such termination, the value of the funding provided by CRISPR to ViaCyte in connection with this Agreement, and the reasons for such termination; provided that, if the Parties have not mutually agreed upon each element of the Continuing Payments within ninety (90) days after the effective date of termination (or such longer period as agreed by the Parties in writing), either Party may submit the matter for resolution pursuant to ARTICLE 11.

ARTICLE 10.
CONFIDENTIALITY

10.1. **Confidentiality**. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing, the Parties agree that, during the Agreement Term and for five years thereafter, each Party (the "**Receiving Party**") receiving any Confidential Information of the other Party (the "**Disclosing Party**") hereunder will: (a) keep the Disclosing Party's Confidential Information confidential; (b) not publish, or allow to be published, and will not otherwise disclose, or permit the disclosure of, the Disclosing Party's Confidential Information in any manner not expressly authorized pursuant to the terms of this Agreement; and (c) not use, or permit to be used, the Disclosing Party's Confidential Information for any purpose other than as expressly authorized pursuant to the terms of this Agreement. Without limiting the generality of the foregoing, to the extent that ViaCyte provides to CRISPR (or any CRISPR Entity(ies)) any Confidential Information owned by any Third Party, CRISPR will handle such Confidential Information in accordance with the terms and conditions of this ARTICLE 10 applicable to a Receiving Party.

10.2. **Authorized Disclosure**. Notwithstanding the foregoing provisions of Section 10.1, each Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is reasonably necessary to:

10.2.1. engage in Prosecution and Maintenance activities as contemplated by this Agreement;

10.2.2. prosecute or defend litigation;

10.2.3. exercise its rights and perform its obligations hereunder; or

10.2.4. comply with Applicable Law.

If a Party deems it reasonably necessary to disclose Confidential Information belonging to the other Party pursuant to this Section 10.2, the Disclosing Party will to the extent possible give reasonable advance written notice of such disclosure to the other Party and take reasonable measures to ensure confidential treatment of such information.

10.3. **SEC Filings and Other Disclosures**. Either Party may disclose the terms of this Agreement as permitted by Section 10.2 or (i) to the extent required to comply with Applicable Law, including the rules and regulations promulgated by the United States Securities and Exchange Commission or any equivalent governmental agency in any

country in the Territory; *provided*, that such Party will reasonably consider the comments of the other Party regarding confidential treatment sought for such disclosure and (ii) to its advisors (including financial advisors, attorneys and accountants), Third Parties conducting due diligence or similar investigations, including actual or potential acquisition or collaboration partners, financing sources or investors and underwriters, on a need to know basis; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein (which may include professional ethical obligations).

10.4. **Public Announcements; Publications**.

10.4.1. **Announcements**. The Parties will jointly issue a press release, in the form attached hereto as Exhibit D, regarding the signing of this Agreement on a date to be determined by the Parties within four (4) days following the Effective Date. Except as set forth in the preceding sentence and as may be expressly permitted under Section 10.3, or as required to comply with Applicable Law (including the rules and regulations promulgated by the United States Securities and Exchange Commission or any equivalent governmental agency in any country in the Territory), neither Party will make any public announcement regarding this Agreement without the prior written approval of the other Party.

10.4.2. **Publications**. During the Agreement Term, each Party will submit to the other Party (the "**Non-Disclosing Party**") for review and approval any proposed academic, scientific and medical publication or public presentation related to any Product Candidate or Product or any Research Activities. In each such instance, such review and approval will be conducted for the purposes of preserving the value of the CRISPR Technology and the ViaCyte Technology, the rights granted to the Parties hereunder and determining whether any portion of the proposed publication or presentation containing the Non-Disclosing Party's Confidential Information should be modified or deleted. Written copies of such proposed publication or presentation required to be submitted hereunder will be submitted to the Non-Disclosing Party no later than thirty (30) days before submission for publication or presentation (or five (5) Business Days in advance in the case of an abstract). The Non-Disclosing Party will provide its comments with respect to such publications and presentations within ten (10) Business Days of its receipt of such written copy (or five (5) Business Days in the case of an abstract). The review period may be extended for an additional thirty (30) days if the Non-Disclosing Party reasonably requests such extension including for the preparation and filing of patent applications. Notwithstanding anything to the contrary, the Non-Disclosing Party may require that the other Party redact the Non-Disclosing Party's Confidential Information from any such proposed publication or presentation. CRISPR and ViaCyte will each comply with standard academic practice regarding authorship of scientific publications and recognition of contribution of other Party in any publication.

ARTICLE 11.
DISPUTE RESOLUTION

11.1. **Disputes; Executive Officers.** It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. In the event of any dispute, controversy, claim or difference which may arise between the Parties out of or in relation to or in connection with this Agreement, including any dispute arising out of the JRC, any alleged failure to perform, or breach, of this Agreement, or any issue relating to the interpretation or application of this Agreement ("**Dispute**"), then upon the request of either Party by written notice, the Parties agree to meet and discuss in good faith a possible resolution thereof, which good faith efforts shall include at least one in-person meeting between the Executive Officers of each Party. If the Dispute is not resolved within thirty (30) days following the written request for discussions, either Party may then invoke the provisions of Section 11.2 or Section 11.7, as appropriate.

11.2. **Arbitration**. Any Dispute that is not resolved pursuant to Section 11.1, except for a Dispute described in Section 11.7, shall be settled by binding arbitration as follows. Either Party, following the end of the thirty (30) day period referenced in Section 11.1, may refer such issue to arbitration by submitting a written notice of such request to the other Party.

11.2.1. **Selection of Expert and Submission of Positions**. Promptly following receipt of such notice, the Parties will select and agree upon a mutually acceptable independent Third Party arbitrator who is (a) neutral, disinterested and impartial, and (b) has experience in the pharmaceutical and biotechnology industries and, in the case of a Selected JRC Dispute, scientific expertise appropriate for understanding and resolving such Dispute (the "**Expert**"). If the Parties are unable to mutually agree upon an Expert within thirty (30) days following the delivery of the request for arbitration (or such longer period as agreed by the Parties), one individual who would qualify as an Expert selected by ViaCyte and one individual who would qualify as an Expert selected by CRISPR shall together select one individual who would qualify as an Expert, who shall be appointed as the Expert for purposes of such Dispute. Once the Expert has been selected, each Party will within ten (10) days following selection of the Expert provide the Expert and the other Party with a written report setting forth its position with respect to the substance of the dispute and may submit a revised or updated report and position to the Expert within ten (10) days of receiving the other Party's report. If so requested by the Expert, each Party will make oral submissions to the Expert based on such Party's written report, and each Party will have the right to be present during any such oral submissions.

11.2.2. **Rules for Proceedings**. The proceedings will be conducted as a binding arbitration in accordance with AAA procedures, as modified by this Section 11.2 (including that the Expert will adopt as his or her decision the position of one Party or the other in the case of a Selected JRC Dispute, a Dispute regarding Open JDCA Terms under Section 4.1.1, or a Dispute regarding any element of the Continuing Payments, as applicable, as described in Section 11.2.3). The Expert may retain a Third Party expert to assist the Expert in analyzing the Dispute, and the expenses of any such expert will be shared by the Parties as costs of the arbitration as provided in

Section 11.2.4. All proceedings and communications shall be in English. Either Party may apply to the Expert for interim injunctive relief. The Parties shall have the right to be represented by counsel. The Parties acknowledge and agree that any Dispute involving the Continuing Payments shall be limited solely to the amounts thereof (as limited by the provisions of Section 9.3.2(f)) and the associated performance milestone(s), and shall not involve the negotiation of any other provision of this Agreement or the transactions contemplated hereby.

11.2.3. **Determination by the Expert**. The Expert will render his or her final decision, including any award, if applicable, with respect to the Dispute. In the case of (a) any Dispute arising out of the JRC inability to reach agreement on (i) any proposed amendment to the Research Plan or (ii) whether Establishment of POC has been achieved (each, a "**Selected JRC Dispute**"), (b) a Dispute regarding Open JDCA Terms under Section 4.1.1, or (c) a Dispute regarding any element of the Continuing Payments, as applicable, the Expert will select one of the Party's positions as his or her final decision, and will not have the authority to modify either Party's position or render any substantive decision other than to so select the position of either Party as set forth in its respective written report (as initially submitted, or as revised in accordance with Section 11.2.1, as applicable). The decision of the Expert will be the sole, exclusive and binding remedy between the Parties regarding the Dispute submitted to such Expert, and shall be governed by the terms and conditions hereof, including the limitation on damages set forth in Section 8.5. The Parties agree that such a judgment or award may be enforced in any court of competent jurisdiction. The statute of limitations of the Commonwealth of Massachusetts applicable to the commencement of a lawsuit shall apply to the commencement of arbitration under this Section 11.2.

11.2.4. **Location; Costs**. Unless otherwise mutually agreed upon by the Parties, the arbitration will be conducted in Chicago, Illinois. The Parties agree that they will share equally the costs and fees of the Expert in connection with any proceeding under this ARTICLE 11, including the cost of the arbitration filing and hearing fees, the cost of any independent expert retained by the Expert and the cost of the Expert and administrative fees of AAA, if applicable. Each Party will bear its own costs and attorneys' and witnesses' fees and associated costs and expenses incurred in connection with any proceeding under this ARTICLE 11.

11.2.5. **Timetable for Completion**. The Parties will use, and will direct the Expert to use, commercially reasonable efforts to resolve a dispute within forty-five (45) days after the selection of the Expert or, if resolution within forty-five (45) days is not reasonably achievable, as determined by the Expert, then as soon thereafter as is reasonably practicable.

11.3. **Award**. Any award to be paid by one Party to the other Party as determined by the Expert as set forth above under Section 11.2 shall be promptly paid in U.S. Dollars free of any tax, deduction or offset; and any costs, fees or taxes incident to enforcing the award shall, to the maximum extent permitted by law, be charged against the Party resisting enforcement.

11.4. **Governing Law**. This Agreement, and all claims arising under or in connection therewith, will be governed by and interpreted in accordance with the substantive laws of The Commonwealth of Massachusetts, without regard to conflict of law principles thereof.

11.5. **Injunctive Relief**. Nothing in this ARTICLE 11will preclude either Party from seeking equitable relief or interim or provisional relief from a court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief, concerning a dispute either prior to or during any arbitration if necessary to protect the interests of such Party or to preserve the status quo pending the arbitration proceeding. For the avoidance of doubt, nothing in this Section 11.5 shall otherwise limit a breaching Party's opportunity to cure a material breach as permitted in accordance with Section 9.2.2.

11.6. **Confidentiality**. The arbitration proceeding shall be confidential and the Expert shall issue appropriate protective orders to safeguard each Party's Confidential Information. Except as required by Applicable Law, no Party shall make (or instruct the Expert to make) any public announcement with respect to the proceedings or decision of the Expert without prior written consent of the other Party. The existence of any Dispute submitted to arbitration, and the award, shall be kept in confidence by the Parties and the Expert, except as required in connection with the enforcement of such award or as otherwise required by Applicable Law.

11.7. **Patent and Trademark Dispute**. Notwithstanding Section 11.2, any Dispute relating to the scope, validity, enforceability or infringement of any CRISPR Patents, ViaCyte Patents or trademarks covering the manufacture, use, importation, offer for sale or sale of Products shall be submitted to a court of competent jurisdiction in the country in which such patent or trademark rights were granted or arose.

ARTICLE 12.
MISCELLANEOUS

12.1. **Assignment**. Neither this Agreement nor any interest hereunder will be assignable by either Party without the prior written consent of the other Party, except as follows: (a) either Party may, subject to the terms of this Agreement, assign its rights and obligations under this Agreement by way of sale of itself or the sale of the portion of such Party's business to which this Agreement relates, through merger, sale of assets or sale of stock or ownership interest; *provided* that such sale is not primarily for the benefit of its creditors; and (b) either Party may assign its rights and obligations under this Agreement to any of its Affiliates; *provided* that such Party will remain liable for all of its rights and obligations under this Agreement. An assigning Party will promptly notify the other Party of any assignment or transfer under the provisions of this Section 12.1. This Agreement will be binding upon the successors and permitted assigns of the Parties and the name of a Party appearing herein will be deemed to include the names of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Agreement. Any assignment not in accordance with this Section 12.1 will be void.

12.2. **Force Majeure**. Each Party will be excused from the performance of its obligations under this Agreement to the extent that such performance is prevented by Force Majeure and the nonperforming Party promptly provides notice of the prevention to the other Party. Such excuse will be continued so long as the condition constituting force majeure continues and the nonperforming Party uses Commercially Reasonable Efforts to remove the condition.

12.3. **Representation by Legal Counsel**. Each Party hereto represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and

provisions of this Agreement, the Parties agree that no presumption will exist or be implied against the Party that drafted such terms and provisions.

12.4. **Notices**. All notices which are required or permitted hereunder will be in writing and sufficient if delivered personally or sent by nationally-recognized overnight courier, addressed as follows:

If to ViaCyte:

ViaCyte, Inc.
3550 General Atomics Court
San Diego, CA 92121
Attn: President and Chief Executive Officer

with a copy to:

Cooley LLP
Attn: Kay Chandler
4401 Eastgate Mall
San Diego, CA 92121

and:

If to CRISPR:

CRISPR Therapeutics AG
Baarerstrasse 14
6300 Zug
Switzerland
Attn: each of Chief Executive Officer and General Counsel

with copies to:

CRISPR Therapeutics, Inc.
610 Main Street
Cambridge, MA 02139
Attn: General Counsel

email to legal@crisprtx.com

with a copy to:

Goodwin Procter LLP
Attn: Christopher Denn
100 Northern Avenue
Boston, Massachusetts 02210

or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith.

12.5. **Amendment**. No amendment, modification or supplement of any provision of this Agreement will be valid or effective unless made in writing and signed by a duly authorized officer of each of Party.

12.6. **Waiver**. No provision of this Agreement will be waived by any act, omission or knowledge of a Party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving Party. The waiver by either of ViaCyte or CRISPR of any breach of any provision hereof by the other Party will not be construed to be a waiver of any succeeding breach of such provision or a waiver of the provision itself.

12.7. **Severability**. If any clause or portion thereof in this Agreement is for any reason held to be invalid, illegal or unenforceable, the same will not affect any other portion of this Agreement, as it is the intent of the Parties that this Agreement will be construed in such fashion as to maintain its existence, validity and enforceability to the greatest extent possible. In any such event, this Agreement will be construed as if such clause of portion thereof had never been contained in this Agreement, and there will be deemed substituted therefor such provision as will most nearly carry out the intent of the Parties as expressed in this Agreement to the fullest extent permitted by Applicable Law.

12.8. **Descriptive Headings**. The descriptive headings of this Agreement are for convenience only and will be of no force or effect in construing or interpreting any of the provisions of this Agreement.

12.9. **Export Control**. This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States of America or other countries that may be imposed upon or related to CRISPR or ViaCyte from time to time. Each Party agrees that it will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate Governmental Authority.

12.10. **Entire Agreement**. This Agreement constitutes and contains the complete, final and exclusive understanding and agreement of the Parties and cancels and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether oral or written, between the Parties respecting the subject matter hereof and thereof, including that certain Confidentiality Agreement between ViaCyte and CRISPR dated October 5, 2017, which is hereby superseded and replaced in its entirety as of the Effective Date, and any Confidential Information disclosed by the Parties under such agreement will be treated in accordance with the provisions of ARTICLE 10.

12.11. **Independent Contractors**. Both Parties are independent contractors under this Agreement. Nothing herein contained will be deemed to create an employment, agency, joint venture or partnership relationship between the Parties hereto or any of their agents or employees, or any other legal arrangement that would impose liability upon one Party for the act or failure to act of the other Party. Neither Party will have any express or implied power to enter into any contracts or commitments or to incur any liabilities in the name of, or on behalf of, the other Party, or to bind the other Party in any respect whatsoever.

12.12. **Interpretation**. Except where the context expressly requires otherwise, (a) the use of any gender herein will be deemed to encompass references to either or both genders, and the use of the singular will be deemed to include the plural (and vice versa), (b) the words "include," "includes" and "including" will be deemed to be followed by the phrase "without limitation," (c) the word "will" will be construed to have the same meaning and effect as the word "shall," (d) any definition of or reference to any agreement, instrument or other document herein will be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (e) any reference herein to any Person will be construed to include the Person's successors and assigns, (f) the words "herein," "hereof" and "hereunder," and words of similar import, will be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (g) all references herein to Sections, Schedules or Exhibits will be construed to refer to Sections, Schedules or Exhibits of this Agreement, and references to this Agreement include all Schedules and Exhibits hereto, (h) the word "notice" will mean notice in writing (whether or not specifically stated) and will include notices, consents, approvals and other written communications contemplated under this Agreement, (i) provisions that require that a Party, the Parties or any committee hereunder "agree," "consent" or "approve" or the like will require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise (but excluding e-mail and instant messaging), (j) references to any specific law, rule or regulation, or article, section or other division thereof, will be deemed to include the then-current amendments thereto or any replacement or successor law, rule or regulation thereof, (k) any definition of or reference to any agreement, instrument or other document herein will be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), and (l) the term "or" will be interpreted in the inclusive sense commonly associated with the term "and/or."

12.13. **No Third Party Rights or Obligations**. No provision of this Agreement will be deemed or construed in any way to result in the creation of any rights or obligations in any Person not a Party to this Agreement.

12.14. **Further Actions**. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

12.15. **Counterparts**. This Agreement may be executed in two counterparts, each of which will be an original and both of which will constitute together the same document. Counterparts may be signed and delivered by facsimile or digital transmission (.pdf), each of which will be binding when received by the applicable Party.

[SIGNATURE PAGE FOLLOWS]

* - * - * - *

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their representatives thereunto duly authorized as of the Effective Date.

VIACYTE, INC.		**CRISPR THERAPEUTICS AG**	
By:	/s/ Paul K. Laikind, Ph.D.	By:	/s/ Rodger Novak
Name:	Paul K. Laikind, Ph.D.	Name:	Rodger Novak
Title:	President and Chief Executive Officer	Title:	President

EXHIBIT A

Establishment of POC

[***]

[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

EXHIBIT B

Research Plan

[***]

Exhibit C

Terms of Joint Development & Commercialization Agreement

The Parties shall negotiate towards a Joint Development and Commercialization Agreement pursuant to which the Parties would jointly develop and commercialize Product Candidates and Products for use in the Field throughout the Territory, which will be consistent with the principal terms set forth in this Exhibit C and include such other terms as mutually agreed to by the Parties. There shall be no final and binding Joint Development and Commercialization Agreement until a final agreement is reached pursuant to Section 4.1.1 of the Research Collaboration Agreement and the Parties execute and deliver such final agreement.

ARTICLE 1
DEFINITIONS.

1.1. "**Accounting Standards**" means generally accepted accounting principles in the United States or internationally the international financial reporting standards, as appropriate, as generally and consistently applied in compliance with Applicable Law throughout the relevant company's organization at the relevant time in the United States or internationally, as appropriate, and means the international financial reporting standards ("***IFRS***") at such time as IFRS becomes the generally accepted accounting standard and Applicable Law require that such company use IFRS.

1.2. "**Arbitration**" means arbitration in accordance with the arbitration procedure set forth on Schedule 2.2 to this Exhibit C.

1.3. "**Audited Party**" has the meaning set forth in Section 7.6.

1.4. "**Auditing Party**" has the meaning set forth in Section 7.6.

1.5. "**CMC**" means chemistry, manufacturing and controls in support of Development.

1.6. "**Commercialization Budget**" has the meaning set forth in Section 5.1.

1.7. "**Commercialization Costs**" means the sum of the following costs and expenses incurred by the Parties or their respective Affiliates, for the purpose of, and directly and specifically attributable to, Commercializing the Products (and related Manufacturing activities) in the Field in the Territory, in each case, to the extent incurred in accordance with the Commercialization Plan and Commercialization Budget:

[***]

All Commercialization Costs shall be as determined from the books and records of the applicable Party and its Affiliates maintained in accordance with the Accounting Standards. Notwithstanding anything in this definition to the contrary, only those Commercialization Costs that are contemplated by, and materially consistent with, the Commercialization Plan and Commercialization Budget for the Product shall be chargeable as Commercialization Costs. For purposes of clarity, no general corporate overhead or fixed charges, such as depreciation, shall constitute Commercialization Costs (except as expressly provided under the definition of Manufacturing Costs).

1.8. "**Commercialization Plan**" has the meaning set forth in Section 5.1.

1.9. "**Cost of Goods Sold**" means, to the extent that a Party or its Affiliate, licensee or sublicensee performs all or any part of the Manufacturing of a Product, [***].

1.10. "**CRISPR JDCA Background Technology**" means CRISPR JDCA Background Know-How and CRISPR JDCA Background Patents.

1.11. "**CRISPR JDCA Background Know-How**" means any Know-How, other than Joint Know-How and CRISPR Program Know-How, that (a) CRISPR or any of its Affiliates Controls as of the Effective Date, during the term of the Research Collaboration Agreement or as of the effective date of the Joint Development & Commercialization Agreement, or that comes into the Control of CRISPR or any of its Affiliates during the term of the Joint Development & Commercialization Agreement and (b) is reasonably necessary or useful for the Development, Manufacture, Commercialization or use of the Products.

1.12. "**CRISPR JDCA Background Patents**" means any Patent, other than a Joint Patent or CRISPR Program Patent that (a) CRISPR or any of its Affiliates Controls as of the Effective Date, during the term of the Research Collaboration Agreement or as of the effective date of the Joint Development & Commercialization Agreement or that comes into the Control of CRISPR or any of its Affiliates during the term of the Joint Development & Commercialization Agreement and (b) claims or discloses any CRISPR JDCA Background Know-How or is otherwise necessary or useful for the Development, Manufacture, Commercialization or use of the Products.

1.13. "**CRISPR JDCA Patents**" means CRISPR JDCA Background Patents, CRISPR Program Patents, and CRISPR's interest in Joint Patents.

1.14. "**Development Budget**" has the meaning set forth in Section 3.1.

1.15. "**Development Costs**" means the sum of the following costs and expenses incurred by the Parties and their respective Affiliates in Developing the Product (and related Manufacturing activities) in the Field in the Territory, in each case, to the extent incurred in accordance with the Global Development Plan and the Development Budget subject to Section 7.5, including:

[***]

All of such Commercialization Costs shall be as determined from the books and records of the applicable Party and its Affiliates maintained in accordance with the Accounting Standards. Notwithstanding anything in this definition to the contrary, only those Development Costs that are contemplated by, and materially consistent (as provided in Section 7.5) with, the Global Development Plan and Development Budget for the Product shall be chargeable as Development Costs. For purposes of clarity, no general corporate overhead or fixed charges, such as depreciation, shall constitute Development Costs (except as expressly provided under the definition of Manufacturing Costs).

1.16. "**Establishment of hPOC**" means, with respect to a Product, that data generated from the Global Development Program for such Product meets the criteria on Schedule 1.16 to this Exhibit C.

1.17. "**Expenses**" means Out-of-Pocket Costs and FTE Costs.

1.18. "**FTE Costs**" means, for a given period, the product of (a) the number of FTEs (proportionately, on a per-FTE basis) used by a Party or its Affiliates in directly performing activities assigned to such Party under and in accordance with the Global Development Plan, Commercialization Plan or Medical Affairs Plan, as applicable, and (b) the FTE Rate.

1.19. "**FTE**" means one employee full-time for one year or more than one person working the equivalent of a full-time person, working directly on performing activities under the Global Development Plan, Medical Affairs Plan or Commercialization Plan, as applicable, where "full-time" is considered [***] hours (based upon a total of [***] weeks for one Calendar Year). No additional payment will be made with respect to any individual who works more than [***] hours per Calendar Year and any individual who devotes less than [***] hours per Calendar Year will be treated as an FTE on a pro rata basis based upon the actual number of hours worked divided by [***].

1.20. "**FTE Rate**" means (a) for scientific or technical personnel, [***] per one (1) full scientific or technical FTE per full twelve (12) month Calendar Year, which rate includes all direct and indirect costs of a Party's FTE, including personnel and travel expenses, and (b) for all distribution, sales and marketing, and other non-scientific and nontechnical personnel, a rate or rates to be negotiated between the Parties in good faith at least one hundred eighty (180) days prior to the date on which a Party begins to incur such costs. Starting January 1, 2019, the foregoing rate will adjust on January 1 of each Calendar Year by an amount equal to the change, if any, in the Consumer Price Index for All Urban Consumers (CPI-U) for the U.S. City Average, calculated by the Bureau of Labor Statistics during the immediately preceding Calendar Year. Notwithstanding the foregoing, for any Calendar Year during the Term that is less than a full year, the above referenced rate will be proportionately reduced to reflect such portion of FTEs for such full Calendar Year.

1.21. "**Global Development Plan**" has the meaning set forth in Section 3.1.

1.22. "**Global Branding Strategy**" has the meaning set forth in Section 5.2.2.

1.23. "**Initiation**" shall mean, with respect to any Phase II Clinical Trial or Phase III Clinical Trial, [***].

1.24. "**JCC**" has the meaning set forth in Section 2.1.

1.25. "**JDC**" has the meaning set forth in Section 2.1.

1.26. "**JSC**" has the meaning set forth in Section 2.1.

1.27. "**Lead Commercialization Party**" has the meaning set forth in Section 5.1.

1.28. ["**Licensed Know-How**" means _____.

1.29. "**Licensed Patents**" means _____.][1]

[1] Note to draft: Definitions to be addressed later in negotiation of the Joint Development & Commercialization Agreement when commercialization strategy and license grants in Article 10 are determined.

1.30. "**Manufacturing Costs**" means the costs of Manufacturing Product (including any delivery device used to deliver the Product), which (a) to the extent such Product is Manufactured by a Party or its Affiliates, will be Cost of Goods Sold for such Product with no markup and (b) to the extent such Product is Manufactured by a Third Party in an arms-length transaction, the Out-of-Pocket Costs directly associated with the Manufacture of such Product that are invoiced from such Third Party.

1.31. "**Manufacturing Working Group**" has the meaning set forth in Section 6.1.

1.32. "**Medical Affairs Activities**" means responding to external inquiries or complaints, the planning for and conduct of investigator sponsored Clinical Trials not included in the Global Development Plan, medical education, speaker programs, advisory boards, thought leader activities, educational grants and fellowships, local country government affairs, Phase 3b Clinical Trials, phase IV/post-Regulatory Approval Clinical Trials, generating health economics and outcomes research data from patient reported outcomes, prospective observational studies and retrospective observational studies, and economic models and reimbursement dossiers, deployment of MSLs, medical affairs clinical trial management, doctors in field (other than MSLs), scientific publications and medical communications.

1.33. "**Medical Affairs Budget**" has the meaning set forth in ARTICLE 4.

1.34. "**Medical Affairs Costs**" means all Expenses incurred by the Parties in connection with the conduct of Medical Affairs Activities in accordance with the Medical Affairs Plan and the Medical Affairs Budget.

1.35. "**Medical Affairs Plan**" has the meaning set forth in ARTICLE 4.

1.36. "**MSL**" means medical science liaisons.

1.37. "**Net Sales**" means with respect to any Product, the gross amounts billed or invoiced, and if any amount is not billed or invoiced, the gross amounts received, by a Party, its Affiliates and sublicensees (for clarity, excluding any Third Party that functions as a distributor that does not receive a license or sublicense under Patents or Know-How) (each, a "**Selling Party**") from Third Party customers for sales or other dispositions of such Product, less the following deductions actually incurred, allowed, paid, accrued or specifically allocated in its financial statements in accordance with the Accounting Standards applied by such Selling Party, for:

[***]. There shall be no double counting in determining the foregoing deductions from gross amounts invoiced to calculate Net Sales. The calculations set forth in this Section 1.37 shall be determined in accordance with applicable Accounting Standards, as consistently applied by the applicable Selling Party. Transfers of the Product between a Party or its Affiliates and another Selling Party for the purpose of subsequent resale to Third Parties will not generate Net Sales; with respect to such transfers, only the gross amounts invoiced in connection with the subsequent resale of the Product to Third Parties will be included in the calculation of Net Sales. [***]

In the event that the Product is sold as part of a Combination Product (where "**Combination Product**" means any pharmaceutical product which comprises a Product and any other active compound(s), whether combined in a single formulation or package, as applicable, or formulated separately but packaged under a single label approved by a Regulatory Authority and sold together for a single price), the Net Sales of the Product, for the purposes of determining royalty payments, shall be determined by multiplying the Net Sales of the Combination Product by the fraction, [***] In no event will a Product (as the only active component) sold with a delivery device be considered a Combination Product.

In the event that the list price of the Product can be determined but the list price of the other active compound(s) cannot be determined, Net Sales for purposes of determining royalty payments shall be calculated by multiplying the Net Sales of the Combination Product by the fraction A / C where A is the list price of the Product when sold separately in finished form and C is the list price of the Combination Product.

In the event that a Selling Party does not sell the Product included in a Combination Product as a separate product in the country where such sale of Combination Product occurs, but does separately sell all of the other active compound(s) included in the sale of such Combination Product in such country, the calculation of Net Sales resulting from such sale shall be determined by multiplying the actual Net Sales of such Combination Product by the fraction (C-D)/C, where C is the invoice price charged by the Selling Party, in the country where such sale occurs, of the entire Combination Product, and D is the aggregate of invoice price charged by such Selling Party, in such country, of such other active compound(s) included in the Combination Product if sold separately in such country by the Selling Party.

1.38. "**Out-of-Pocket Costs**" means, with respect to certain activities for a Product hereunder, specifically identifiable direct expenses paid or payable by either Party or its Affiliates to Third Parties and specifically documented and incurred to conduct such activities, including payments to any Subcontractors pursuant to any Global Development Plan, Medical Affairs Plan or Commercialization Plan, as well as to Third Parties for the Manufacture of Product.

1.39. "**Opt-Out Royalties**" has the meaning set forth in Section 11.3.

1.40. "**Other Out-of-Pocket Costs**" means: [***]

1.41. "**Patent Costs**" means all Expenses reasonably allocated to the Products for the prosecution, maintenance and enforcement of CRISPR JDCA Patents, CRISPR Program Patents, ViaCyte JDCA Patents, ViaCyte Program Patents and Joint Patents that Cover the Products.

1.42. "**Pharmacovigilance Agreement**" has the meaning set forth in Section 8.1.

1.43. "**Phase III Clinical Trial**" means a human clinical trial of a Product in the Field, the principal purpose of which is to gather safety and efficacy data of one or more particular doses in patients being studied that is needed to evaluate the overall benefit and risk relationship of the Product and to provide adequate basis for labeling, as more fully defined in 21 C.F.R. §312(c) or comparable regulations in any country or jurisdiction outside the U.S. (and any amended or successor regulations).

1.44. "**Program Expenses**" means Development Costs, Commercialization Costs, Medical Affairs Costs, Patent Costs and Other Out-of-Pocket Costs.

1.45. "**Project Leader**" has the meaning set forth in Section 3.1.

1.46. "**Project Team**" has the meaning set forth in Section 3.1.

1.47. "**Research Collaboration Agreement**" means the Research Collaboration Agreement dated as of September 17, 2018 between the Parties, as the same may be amended, restated, modified or supplemented from time to time in accordance with its terms.

1.48. "**Reconciliation Report**" has the meaning set forth in Section 7.4.

1.49. "**Subcontract**" has the meaning set forth in ARTICLE 9.

1.50. "**Subcontractor**" has the meaning set forth in ARTICLE 9.

1.51. "**Summary Statement**" has the meaning set forth in Section 7.3.

1.52. "**Trademark**" means all trademarks, service marks, trade names, brand names, sub-brand names, trade dress rights, product configuration rights, certification marks, collective marks, logos, taglines, slogans, designs or business symbols and all words, names, symbols, colors, shapes, designations or any combination thereof that function as an identifier of source or origin or quality, whether or not registered, and all statutory and common law rights therein, and all registrations and applications therefor, together with all goodwill associated with, or symbolized by, any of the foregoing.

1.53. "**ViaCyte JDCA Background Know-How**" means any Know-How, other than Joint Know-How and ViaCyte Program Know-How, that (i) ViaCyte or any of its Affiliates Controls as of the Effective Date, during the term of the Research Collaboration Agreement or as of the effective date of the Joint Development & Commercialization Agreement or that comes into the Control of ViaCyte or any of its Affiliates during the term of the Joint Development & Commercialization Agreement and (ii) is reasonably necessary or useful for the Development, Manufacture, Commercialization or use of Products.

1.54. "**ViaCyte JDCA Background Patents**" means any Patent, other than a Joint Patent or ViaCyte Program Patent that (i) ViaCyte or any of its Affiliates Controls as of the Effective Date, during the term of the Research Collaboration Agreement or as of the effective date of the Joint Development & Commercialization Agreement or that comes into the Control of ViaCyte or any of its Affiliates during the term of the Joint Development & Commercialization Agreement and (ii) claims or discloses any ViaCyte JDCA Background Know-How or is otherwise necessary or useful for the Development, Manufacture, Commercialization or use of Products.

1.55. "**ViaCyte JDCA Background Technology**" means ViaCyte JDCA Background Know-How and ViaCyte JDCA Background Patents.

1.56. "**ViaCyte JDCA Patents**" means ViaCyte JDCA Background Patents, ViaCyte Program Patents, and ViaCyte's interest in Joint Patents.

All capitalized terms used but not otherwise defined in this Exhibit C shall have the meaning set forth in the Research Collaboration Agreement.

ARTICLE 2
GOVERNANCE.

2.1. **Committees**. As soon as practicable (but not later than 10 Business Days after execution of the Joint Development & Commercialization Agreement, the Parties will establish a joint steering committee (the "**JSC**") to provide high-level oversight and decision-making regarding the activities of the Parties under the Joint Development & Commercialization Agreement. The JSC shall be comprised of three (3) representatives (or such other number of representatives as the Parties may agree) from each of ViaCyte and CRISPR. Each Party shall provide the other with a list of its initial members of the JSC on the Effective Date. Each Party may replace any or all of its representatives on the JSC at any time upon written notice to the other Party. Each representative of each Party shall have appropriate expertise in the pharmaceutical business or drug discovery and development. Any member of the JSC may designate a substitute to attend and perform the functions of that member at any meeting of the JSC. Each Party may, in its reasonable discretion, invite non-member representatives of such Party to attend meetings of the JSC as a non-voting participant, subject to the confidentiality obligations described in Article 12 below. The Parties shall designate a chairperson (each, a "**Chairperson**") to oversee the operation of the JSC, each such Chairperson to serve a [***]. The right to name the Chairperson shall alternate between the Parties, with CRISPR designating the first such Chairperson. The JSC's responsibilities will include (a) reviewing and overseeing the overall global Development, Manufacture and Commercialization of the Products in the Field, (b) overseeing the joint development committee (the "**JDC**") and a joint commercialization committee (the "**JCC**") and any other committees and working groups established with respect to the Product and resolving matters on which the JDC, JCC or such committees and working groups are unable to reach consensus and (c) performing such other functions as may be established in the Joint Development & Commercialization Agreement.

2.2. **Decision-Making**. The JSC, JDC, JCC and all other committees and working groups will use reasonable efforts to reach agreement on any and all matters that such committee has the authority to decide and endeavor to reach consensus on all such matters, taking into consideration the views of each Party. JDCA Disputes arising out of the JDC, JCC or any other committee or working group will be escalated to the JSC for resolution. If the JSC is unable to reach consensus (with the CRISPR JSC members collectively having one vote and the ViaCyte JSC members collectively having one vote) with respect to any such matter within ten (10) Business Days, the matter will be referred to the dispute resolution procedures set forth in Schedule 2.2. In resolving any matter that the JSC has authority to decide, the JSC will not (and the Expert resolving any dispute regarding a JSC decision will not) have the right to: (a) amend, modify or waive compliance with any term or condition of this Agreement; (b) make any decision that is expressly stated to require the mutual agreement of the Parties; (c) resolve any claim or dispute regarding whether or in what amount a payment is owed under this Agreement; (d) exercise its final decision-making authority in a manner that would (i) require the other Party to perform any act that such other Party reasonably believes would constitute a violation of an Applicable Law or (ii) require such other Party to expend funding on activities in excess of its budget if such other Party does not have reasonable access to alternative funding for such activities; or (e) make a determination that a Party is in material breach of any obligation under this Agreement.

2.3. **Meetings**. During the term of performance of the Global Development Plan, the JSC shall meet in person or otherwise at least once each Calendar Quarter, and more frequently as the Parties deem appropriate, on such dates, and at such places and times, as provided herein or as the Parties shall agree. Upon the conclusion of the performance of the Global Development Plan, the JSC shall meet, in person or otherwise, at least once every two Calendar Quarters. Meetings of the JSC that are held in person shall alternate between the offices of the Parties, or such other place as the Parties may agree. The members of the JSC also may convene or be polled or consulted from time to time by means of telecommunications, video conferences, electronic mail or correspondence, as deemed necessary or appropriate. Each Party will be responsible for all of its own expenses of participating in the meetings. Meetings of the JSC will be effective only if at least one representative of each Party is present or participating.

2.4. **Minutes**. The Parties will alternate in preparing written minutes of such meeting, and the preparing Party will circulate such minutes no later than 15 days after such meeting setting forth a description, in reasonable detail, of the discussions at the meeting and a list of any actions, decisions or determinations approved by the JSC and a list of any issues to be resolved pursuant to Section 2.2. Such minutes shall be effective only after approved by both Parties. The Parties will agree on the minutes of each meeting promptly, but in no event later than the next meeting of the JSC. If at any time during the preparation and finalization of the JSC minutes, the Parties do not agree on any issue with respect to the minutes, such issue shall be resolved by the process provided in Section 2.2. The decision resulting from the process shall be recorded in amended finalized minutes for said meeting.

2.5. **Limits on JSC Authority**. Each Party will retain the rights, powers and discretion granted to it under this Agreement and no such rights, powers, or discretion will be delegated to or vested in the JSC unless such delegation or vesting of rights is expressly provided for in this Agreement or the Parties expressly so agree in writing.

2.6. **Withdrawal**. A Party's representation on the JSC, JDC, JCC and all other committees and working groups shall be at its sole discretion, as a matter of right and not obligation, for the sole purpose of participation in governance, decision-making, and information exchange with respect to activities within the authority of any such committee. A Party shall have the right to withdraw, at any time, from participation on any or all of such committees upon 30 days' prior written notice to the other Party, which notice shall be effective upon the expiration of such 30-day period. Following the issuance of such notice: (a) the withdrawing Party's participation on the applicable committees shall be suspended and (b) each Party shall have the obligation to provide and the right to continue to receive the information it would otherwise be required to provide and entitled to receive under the Agreement and to participate directly with the other Party in discussions, reviews and approvals currently allocated to the relevant committees pursuant to the Joint Development & Commercialization Agreement. If, at any time, following issuance of such a notice, the withdrawing Party wishes to resume participation in the relevant committee, the withdrawing Party shall notify the other Party in writing and, thereafter, the withdrawing Party's representatives to the relevant committee shall be entitled to attend any subsequent meeting of such committee and to participate in the activities of, and decision-making by, such committee as provided in this Agreement as if such notice had not been issued by the withdrawing Party. If a committee is disbanded, then any data and information of the nature intended to be shared within such committee shall be provided by each Party directly to the other Party.

ARTICLE 3
DEVELOPMENT.

3.1. **Global Development Plan**. The JDC will establish the required form and contents of the global development plan (as may be amended, the "**Global Development Plan**") and will oversee the Development of Products by the Parties in the Field in the Territory. Each Product will be Developed in accordance with the Global Development Plan. The Global Development Plan will include a plan for the Development of a Product in the Field in the Territory through Regulatory Approval, including a regulatory strategy, high-level study design criteria, an allocation of responsibilities between the Parties, timelines and a budget for activities conducted under the Global Development Plan (the "**Development Budget**"). The Parties shall cooperate to prepare the initial Development Budget, which shall be reviewed and approved by the JDC as part of the Global Development Plan. The JDC will update the Global Development Plan on an annual basis (or more frequently as needed) and submit it to the JSC for approval. The Parties will establish a project team (the "**Project Team**") to oversee and coordinate activities under the Global Development Plan. The Project Team will be formed with an experienced team leader selected by mutual agreement of the Parties ("**Project Leader**"), and the composition of the Project Team will be determined by the Project Leader based on available personnel from each Party across functions. The Project Team will conduct its responsibilities under the Global Development Plan in good faith and with reasonable care and diligence. The Project Team will provide the JDC with periodic updates regarding the progress of activities pursuant to the Global Development Plan.

3.2. **Development Activities**.

3.2.1. **Regulatory Matters**. Regulatory activities with respect to Products in the Field in the Territory will be jointly carried out by the Project Team under the guidance of the JDC. All regulatory submissions and Regulatory Approvals that relate to Products shall be filed by and held in the name of a designated Party or its relevant Affiliate ("**Regulatory Lead**"). The Regulatory Lead shall be CRISPR or its relevant Affiliate unless otherwise agreed to by the Parties after holding good faith discussions regarding which Party is best positioned to serve in the function during the negotiation of the Joint Development & Commercialization Agreement as set forth in Section 4.1.1 of the Research Collaboration Agreement. The Regulatory Lead shall use Commercially Reasonable Efforts, in consultation with the other Party to seek to obtain and maintain Regulatory Approval for the Product in the Field. Regulatory Lead will oversee, monitor and manage all regulatory interactions, communications and filings with, and submissions to, Regulatory Authorities with respect to the Products in the Field. Regulatory Lead will control all regulatory activities with respect to the Products, including determining the labeling strategy and the content of submissions. Regulatory Lead will prepare all regulatory submissions and provide the other Party with advance drafts of any material documents or other material correspondence pertaining to the Products, including any proposed labeling, that Regulatory Lead plans to submit to any Regulatory Authority. The other Party may provide comments regarding such documents and other correspondence prior to their submission, which comments Regulatory Lead will consider in good faith. Regulatory Lead will provide the other Party with copies of all material submissions it makes to, and all material correspondence it receives from, a Regulatory Authority pertaining to a Regulatory Approval of a Product in the Field. Regulatory Lead will provide the other Party with reasonable advance notice of any meeting or teleconference with any Regulatory Authority with respect to the Products in the Field. Subject to Applicable Law, the other Party will have the right to participate as an observer in all material meetings, conferences and discussions by Regulatory Lead

with Regulatory Authorities pertaining to Development of the Products in the Field or Regulatory Approval of the Products in the Field.

3.2.2. **Clinical Trials**. The JDC will allocate responsibility between the Parties for the conduct of Clinical Trials and the various other Development activities addressed in the Global Development Plan. The JDC will have final decision-making authority with respect to the protocol for any Clinical Trial conducted under the Global Development Plan and the statistical analysis plan for any such Clinical Trial. The Party that has responsibility for conducting the Clinical Trial will have the responsibility for the packaging and labeling of clinical drug supplies, unless otherwise agreed by the Parties.

3.2.3. **Independent Activities**. The Joint Development & Commercialization Agreement will include a mechanism for each Party to propose additional Clinical Trials for inclusion in the Global Development Plan. If the other Party does not agree to include such additional Clinical Trial in the Global Development Plan, the requesting Party may conduct such Clinical Trial at its sole expense *(i.e.* such expenses will not be included as Development Costs); *provided* that neither Party may conduct any Clinical Trial that the other Party in good faith reasonably believes will have a material adverse effect on the Development and Commercialization of the Product in the Field in the Territory. The non-requesting Party will have the right to elect by written notice to use the Clinical Trial data, provided the non-requesting Party will not have the right to use the data resulting from such Clinical Trial in a substantive manner as the basis for obtaining new or expanded Regulatory Approval for a Product in the Field or for commercial purposes for a Product in the Field unless and until such Party reimburses the requesting Party for 75% of the Development Costs.

3.3. **Diligence**. Each Party will use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, the activities assigned to it in the Global Development Plan, and to cooperate with the other Party in carrying out the Global Development Plan in accordance with the timelines therein. Each Party and its Affiliates will conduct its Development activities in good scientific manner and in compliance with Applicable Law. Notwithstanding anything to the contrary contained herein, a Party or its Affiliates will not be obligated to undertake or continue any Development activities with respect to the Products if such Party (or any of its Affiliates) reasonably determines that performance of such Development activity would violate Applicable Law or infringe or misappropriate a Third Party's intellectual property.

ARTICLE 4
MEDICAL AFFAIRS ACTIVITIES.

The Parties, acting through the JSC, will develop and agree upon a global medical affairs plan for the Product in the Field that describes the Medical Affairs Activities to be conducted in the Territory, key tactics and strategies for implementing those activities, the relative responsibilities of the Parties and the associated budget for such activities (such plan, the "**Medical Affairs Plan**" and such budget, the "**Medical Affairs Budget**"). The Regulatory Lead will lead and manage Medical Affairs Activities in accordance with the Medical Affairs Plan. The number of MSLs to be deployed in each jurisdiction will be determined by the JSC at least 18 months prior to potential launch.

ARTICLE 5
COMMERCIALIZATION.

5.1. **Commercialization Plan**. The JCC will oversee the Commercialization of Products in the Field in the Territory. A designated Party or its relevant Affiliate shall be the lead Commercializing Party for Products in the Field in the Territory (the "**Lead Commercialization Party**")[2]. The Lead Commercialization Party shall be agreed to by the Parties after holding good faith discussions regarding which Party is best positioned to serve in the function during the negotiation of the Joint Development & Commercialization Agreement as set forth in Section 4.1.1 of the Research Collaboration Agreement. No later than twelve months prior to the anticipated first commercial launch of a Product in the first country in the Territory, the JCC, will develop and submit to the JSC for approval, a Commercialization plan (as may be amended, the "**Commercialization Plan**") that sets forth the Commercialization activities to be undertaken by the Parties with respect to the Commercialization of such Product in the Field in the Territory. In allocating responsibilities between the Parties, the JCC will take into consideration each Party's expertise, capabilities, staffing and available resources to take on such activities. The Commercialization Plan may include activities on a region-by-region or country-by-country basis, as determined by the JCC. The JCC will update the Commercialization Plan on an annual basis (or more frequently as needed) and submit it to the JSC for approval. The Commercialization Plan will include (a) the Global Branding Strategy, (b) a marketing strategy, (c) a communications strategy that includes plans for public relations, conferences and exhibitions and other external meetings, internal meetings and communications, publications and symposia, internet activities and core brand package, (d) a high level operating plan for the implementation of such strategies on an annual basis, including information related to Product positioning, core messages to be communicated and pricing strategies, (e) a detailing strategy, (f) a pricing strategy, (g) all other material activities to be conducted in connection with the Commercialization of the Product in the Field in the Territory and (h) a budget for activities conducted under the Commercialization Plan (the "**Commercialization Budget**").

5.2. **Commercialization Activities.**

5.1.1. **Training**. The Lead Commercialization Party will prepare training programs and materials for employees and sales representatives with respect to the Product in the Field, with the goal of ensuring compliance with all Applicable Laws and such Party's compliance policies.

5.1.2. **Global Branding Strategy**. The JCC will develop a global branding strategy for the Products in the Field in the Territory, including, with respect to each Product, a life cycle plan, brand vision, positioning, key messaging, concept and imagery, Trademarks (including name and logos), brand public relations and supporting market research (the **"Global Branding Strategy")** and submit such strategy to the JSC for approval.

[2] Note to draft: The commercialization strategy in various countries in the Territory (including whether one Party or both Parties would commercialize in given countries or commercialization would occur through out-license or distributorship model in given countries) to be addressed later in connection with negotiation and execution of the Joint Development & Commercialization Agreement.

5.1.3. **Trademarks**. The JCC will select a product Trademark for each Product throughout the world consistent with the Global Branding Strategy. Each Product will be promoted and sold in the Territory under the applicable Trademarks.

5.1.4. **Marketing**. The JCC will agree upon a marketing strategy for the Product, including Product positioning, messaging, appearance and launch sequencing, consistent with the Global Branding Strategy. Marketing activities and responsibilities will be determined for each Party by the Lead Commercialization Party.

5.1.5. **Managed Markets and Market Access**. The JCC will agree upon a strategy for the managed markets and market access for the Product, including payer strategy and account management. Such activities and responsibilities will be determined by the Lead Commercialization Party.

5.1.6. **Pricing**. The JCC will establish a global pricing strategy for each Product (including list price, targeted net pricing, sales-weighted average discounts and rebates, the approach to pricing with different types of accounts and plans, types of discounts and rebates) in the Territory. The responsibility for implementation of such global pricing strategy, including negotiating pricing and reimbursement with governments and private payers will be determined by the Lead Commercialization Party.

5.1.7. **Field Sales**. The promotion each Product in the Field (including performing sales calls) in the Territory will be determined by the Lead Commercialization Party in accordance with the Commercialization Plan.

5.1.8. **Distribution and Patient Services**. The Lead Commercialization Party will be responsible for distribution and patient services for the Product in the Field in the Territory, including contracting with applicable service providers, such activities to be determined by the JCC one (1) year prior to launch of such Product.

5.1.9. **Booking Sales; Distribution**. The Lead Commercialization Party will invoice, sell and book all sales of Products in the Territory, and the Lead Commercialization Party will be responsible for warehousing and distributing such Products in the Territory.

5.2. **Diligence**. Each Party will use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, the activities assigned to it under the Commercialization Plan, including reasonable adherence to any budget(s) and timeframe(s) set for them therein. Each Party and its Affiliates will conduct its Commercialization activities in compliance with Applicable Law. Notwithstanding anything to the contrary contained herein, a Party or its Affiliates will not be obligated to undertake or continue any Commercialization activities with respect to the Products under the Commercialization Plan if such Party (or any of its Affiliates) reasonably determines that performance of such Commercialization activity would violate Applicable Law or infringe or misappropriate a Third Party's intellectual property. Each Party shall be responsible for day-to-day implementation of the Development, Manufacturing and Commercialization activities for which it (or its Affiliate) has or otherwise is assigned responsibility under this Agreement or the applicable Development Plan or Commercialization Plan and shall keep the other Party reasonably informed as to the progress of such activities, as determined by the JDC and JCC.

ARTICLE 6
MANUFACTURING.

6.1. **Quality Agreement**. The Parties will negotiate in good faith and agree on quality analysis and control criteria for the Manufacture of a Product no later than 90 days after the effective date of the Joint Development & Commercialization Agreement. The agreed upon criteria will be set forth in a quality agreement containing mutually agreed terms and conditions that are customary for agreements of this type.

6.2. **Working Group**. The Parties will establish a manufacturing working group (the "**Manufacturing Working Group**") to oversee matters relating to the Manufacture of the Product. The Manufacturing Working Group will report to the JDC for Development-related Manufacturing matters and will report to the JCC for Commercialization-related Manufacturing matters. The Manufacturing Working Group's responsibilities will include: (a) developing plans to transfer Manufacturing-related Know-How between the Parties as needed to facilitate the Manufacture of the Product; (b) establishing standards applicable to each Party's Manufacturing activities and reviewing each Party's performance against such standards; conducting technical reviews, and (c) sharing planning and budgeting information with the JDC and JCC.

6.3. **Responsibility**. A designated Party or its relevant Affiliate will be responsible for (a) Manufacturing clinical supplies of a Product as determined by the Manufacturing Working Group and (b) Manufacturing commercial supplies of a Product. The designated Party shall be ViaCyte or its relevant Affiliate unless otherwise agreed to by the Parties after holding good faith discussions regarding which Party is best positioned to serve in the function during the negotiation of the Joint Development & Commercialization Agreement as set forth in Section 4.1.1 of the Research Collaboration Agreement.

ARTICLE 7
ALLOCATION OF NET SALES AND PROGRAM EXPENSES.

7.1. **Allocation**.[3] Each Party will be entitled to 50% of the Net Sales during the term of the Joint Development & Commercialization Agreement. If either Party elects to Opt-Out (as defined below), the other Party shall pay royalties in accordance with Section 11.3. Subject to either Party's election to Opt-Out, Program Expenses with respect to each Product shall be allocated as follows: (i) from the effective date of the Joint Development & Commercialization Agreement through the date of the first commercial sale of such Product, CRISPR shall be allocated 60% of such Program Expenses and ViaCyte will be allocated 40% of such Program Expenses; and (ii) after the date of the first commercial sale of such Product, each Party will be allocated 50% of such Program Expenses.

7.2. **Calculation**. Net Sales and Program Expenses will be calculated for each Calendar Quarter.

[3] Note to draft: Other possible scenarios, including sharing of proceeds from out-licensing or distribution arrangements in various countries, to be addressed later in connection with negotiation and execution of the Joint Development & Commercialization Agreement.

7.3. **Payment of Expenses; Summary Statements**. Subject to reconciliation as provided in Section 7.4, the Party initially incurring Program Expenses will be responsible for and pay for all such Program Expenses so incurred. Each Party will maintain the books and records referred to in Section 7.6 and will accrue all Program Expenses and Net Sales) in accordance with the terms and conditions hereof and in accordance with GAAP. No later than five Business Days after the end of each calendar month, each Party will submit to the other a non-binding, good faith estimate of the Program Expenses accrued and Net Sales during the just-ended calendar month. No later than 30 days after the end of each Calendar Quarter, each Party will submit to the other a written report reflecting the accrual of Program Expenses and Net Sales during the just-ended Calendar Quarter, except that each Party's submission for the last month of such Calendar Quarter will be a good faith estimate and not actual amounts (each, a "**Summary Statement**"). Each Summary Statement (after the initial Summary Statement) will reflect an adjustment for the actual amount of the previous Calendar Quarter as needed. Any reporting and reconciliation of variances between estimated and actual costs and expenses may be delayed by a Calendar Quarter as reasonably necessary in light of a Party's internal reporting procedures. The Parties' respective Summary Statements will serve as the basis of the Reconciliation Reports prepared by the Parties pursuant to Section 7.4. Upon the request of either Party from time to time, the Parties' respective finance departments, coordinated by the JDC, or JCC, as appropriate, will discuss any questions or issues arising from the Summary Statements, including the basis for the accrual of specific Program Expenses.

7.4. **Reconciliation**. The Lead Commercialization Party will prepare a reconciliation report, as soon as practicable after the receipt of the other Party's Summary Statement, but in any event no later than 60 days after the end of each Calendar Quarter, accompanied by reasonable supporting documents and calculations sufficient to support each Party's financial reporting obligations, independent auditor requirements and obligations under the Sarbanes-Oxley Act, which reconciles the amounts accrued and reported in each Party's Summary Statement during such Calendar Quarter and the share of the Net Sales and Program Expenses to be allocated to each of the Parties for such Calendar Quarter in accordance with Section 7.1 (such report, the "**Reconciliation Report**"). Payment to reconcile Net Sales and Program Expenses shall be made by the owing Party to the other Party no later than 30 days after such Reconciliation Report is complete.

7.5. **Cost Overruns**. If a Party's aggregate Development Costs, Medical Affairs Costs or Commercialization Costs in any Calendar Year are likely to exceed or exceed those set forth in the Development Budget, Medical Affairs Budget or Commercialization Budget, as applicable, for all of its activities under the Development Plan, Medical Affairs Plan or Commercialization Plan, as applicable, in such Calendar Year by up to 10% of the aggregate amount set forth in the Development Budget, Medical Affairs Budget or Commercialization Budget, as applicable, such Party will provide the other Party with a detailed, itemized explanation for such excess costs and expenses, and such excess costs and expenses will be included in the Development Costs, Medical Affairs Cost or Commercialization Costs, as applicable, and shared by the Parties as provided herein. To the extent a Party's aggregate Development Costs, Medical Affairs Costs or Commercialization Costs, as applicable, exceed those set forth in the Development Budget, Medical Affairs Budget or Commercialization Budget, as applicable, by more than 10%, unless otherwise agreed by the Parties, such Expenses will not be shared by the Parties and the Party incurring such Expenses will be solely responsible for such Expenses.

7.6. **Books and Records**. Each Party will keep and maintain accurate and complete records regarding Program Expenses and Net Sales, during the three preceding Calendar Years. Upon 15 days prior written notice from the other Party (the "**Auditing Party**"), the Party required to maintain such records (as applicable, the "**Audited Party**") will permit an independent certified public accounting firm of internationally recognized standing, selected by the Auditing Party and reasonably acceptable to the Audited Party, to examine the relevant books and records of the Audited Party and its Affiliates, as may be reasonably necessary to verify the Summary Statements and Reconciliation Reports. An examination by the Auditing Party under this Section 7.6 will occur not more than once in any Calendar Year and will be limited to the pertinent books and records for any Calendar Year ending not more than 36 months before the date of the request. The accounting firm will be provided access to such books and records at the Audited Party's facility or facilities where such books and records are normally kept and such examination will be conducted during the Audited Party's normal business hours. The Audited Party may require the accounting firm to sign a customary non-disclosure agreement before providing the accounting firm access to its facilities or records. Upon completion of the audit, the accounting firm will provide both the Auditing Party and the Audited Party a written report disclosing whether the applicable Summary Statements and Reconciliation Reports are correct or incorrect and the specific details concerning any discrepancies. No other information will be provided to the Auditing Party. If the report or information submitted by the Audited Party results in an underpayment or overpayment, the Party owing underpaid or overpaid amount will promptly pay such amount to the other Party, and, if, as a result of such inaccurate report or information, such amount is more than five percent of the amount that was owed the Audited Party will reimburse the Auditing Party for the reasonable expense incurred by the Auditing Party in connection with the audit.

ARTICLE 8
ADVERSE EVENTS.

8.1. **Pharmacovigilance Agreement**. The Parties will negotiate in good faith and agree on processes and procedures for sharing safety information no later than 90 days after the effective date of the Joint Development & Commercialization Agreement. The agreed upon processes and procedures will be set forth in a pharmacovigilance agreement (the "**Pharmacovigilance Agreement**") containing mutually agreed terms and conditions that are customary for agreements of this type. The Pharmacovigilance Agreement will include provisions establishing a joint safety oversight working group to oversee the conduct of the Parties' activities under the Pharmacovigilance Agreement and to coordinate the Parties' interactions with respect to pharmacovigilance activities.

8.2. **Global Safety Database**. The JCC will establish pharmacovigilance and safety strategy for a Product. Pursuant to such strategy, the Lead Commercialization Party will establish the global safety database for such Product. The Lead Commercialization Party will maintain a global database of safety information including, but not limited to, adverse events and pregnancy reports for such Product, which will be used for regulatory reporting and responses to safety queries from Regulatory Authorities by both Parties. The other Party will, and will cause its Affiliates to, transfer all adverse events information in its or their possession or control to the global safety database within a mutually agreed period of time that provides the Lead Commercialization Party with sufficient time to enter all of the data and to obtain validation of the database.

8.3. **Risk Management and Signal Detection Activities**. The Lead Commercialization Party shall be primarily responsible for all signal detection and risk management activities for Products. These signal detection activities shall include, but are not limited to, proactive review and evaluation of all safety information from the Global Safety Database (including by way of example, Individual Case Safety Reports, aggregate safety information, literature reports, and non-clinical data).

ARTICLE 9
SUBCONTRACTING

Each Party may subcontract the performance of any activities undertaken by such Party in accordance with the Global Development Plan, Medical Affairs Plan or Commercialization Plan to one or more Third Parties (each such Third Party, a "**Subcontractor**") pursuant to a written agreement (a "**Subcontract**"). Notwithstanding the foregoing, if either Party desires to subcontract any such activities, it will first discuss the matter with the other Party and reasonably consider using the other Party for such subcontracted activities, taking into account the capabilities of the other Party and potential impact on costs, as a potential alternative to subcontracting such activities to a Third Party. If, following such discussion a Party still desires to subcontract the performance of any such activity to one or more Third Parties, it may proceed to do so; *provided*, that prior to entering into any Subcontract which the subcontracting Party reasonably anticipates will entail payments to the Subcontractor in excess of $250,000 with respect to subcontracted activities under the Joint Development & Commercialization Agreement, the subcontracting Party will obtain the JSC's approval, not to be unreasonably withheld, of use of the proposed Subcontractor to conduct the activities proposed to be subcontracted prior to execution of the applicable Subcontract.

ARTICLE 10
LICENSES; IP; EXCLUSIVITY[4]

10.1. [**License Grants**.][5]

10.2. [**Sublicensing**.]

10.3. **New In-Licenses**.

10.3.1. The Parties shall be free to in-license or otherwise acquire rights to intellectual property that, if so acquired by CRISPR would constitute part of the CRISPR JDCA Background Technology, or that, if so acquired by ViaCyte, would constitute part of the ViaCyte JDCA Background Technology, and that may, in either case, become subject to the licenses granted under the Joint Development & Commercialization Agreement (each such agreement as is entered into by CRISPR is a "**New CRISPR In-License**" and each such agreement as is entered into by ViaCyte is a "**New ViaCyte In-License**").

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4 Note to draft: The Joint Development & Commercialization Agreement shall include the following: (i) with respect to ownership of intellectual property, the terms described relating thereto in the Research Collaboration Agreement shall govern the Joint Development and Collaboration Agreement; and (ii) with respect to exclusivity obligations, the matters described in Section 2.10 of the Research Collaboration Agreement shall apply with proper adjustment to reflect the transactions contemplated by the Joint Development & Commercialization Agreement.

5 Note to draft: License and sublicense provisions to be addressed later in negotiation of the Joint Development & Commercialization Agreement when commercialization strategy in various countries of the Territory is determined. It is expected that such licensing provisions shall be primarily on an exclusive basis but may be non-exclusive in certain circumstances where appropriate.

10.3.2. ViaCyte will provide notice to CRISPR of any intellectual property rights that are available for acquisition or in-license that relate primarily to Gene-Editing Systems (but, for avoidance of doubt, excluding intellectual property rights that pertain to Stem Cell Technology). ViaCyte will provide CRISPR with such available information as ViaCyte possesses regarding such intellectual property rights. If CRISPR notifies ViaCyte that CRISPR will pursue an acquisition or in-license of such intellectual property rights then: (i) CRISPR will negotiate in good faith towards such an acquisition or in-license on terms that result in CRISPR Controlling such intellectual property rights for purposes of the licenses granted by CRISPR hereunder; and (ii) during such negotiation or the term of any such acquisition or in-license agreement, ViaCyte will not pursue, directly or indirectly, an acquisition or in-license of such intellectual property rights without CRISPR's prior written consent, not to be unreasonably withheld, delayed or conditioned. Nothing will prevent ViaCyte from acquiring or in-licensing such intellectual property rights, at its sole discretion, for any use other than the Development and Commercialization of Products in the Field.

10.3.3. CRISPR will provide notice to ViaCyte of any intellectual property rights that are available for acquisition or in-license and that relate primarily to Stem Cell Technology (but, for avoidance of doubt, excluding intellectual property rights that pertain to Gene Editing Systems). CRISPR will provide ViaCyte with such available information as CRISPR possesses regarding such intellectual property rights. If ViaCyte notifies CRISPR that ViaCyte will pursue an acquisition or in-license of such intellectual property rights then: (i) ViaCyte will negotiate in good faith towards such an acquisition or in-license on terms that result in ViaCyte Controlling such intellectual property rights for purposes of the licenses granted by ViaCyte hereunder and (ii) during such negotiation or the term of any such acquisition or in-license agreement, CRISPR will not pursue, directly or indirectly, an acquisition or in-license of such intellectual property rights without ViaCyte's prior written consent, not to be unreasonably withheld, delayed or conditioned. Nothing will prevent CRISPR from acquiring or in-licensing such intellectual property rights, at its sole discretion, for any use other than the Development and Commercialization of Products in the Field.

10.4. **No Implied Licenses**. All rights in and to CRISPR JDCA Background Technology, CRISPR Program Technology and CRISPR's interest in any Joint Technology not expressly licensed or assigned to ViaCyte under this Agreement are hereby retained by CRISPR or its Affiliates, and ViaCyte agrees not to practice or use such technology except as expressly permitted by this Agreement or any other written agreement between the Parties. All rights in and to any ViaCyte JDCA Background Technology, ViaCyte Program Technology and ViaCyte's interest in any Joint Technology not expressly licensed to CRISPR under this Agreement, are hereby retained by ViaCyte or its Affiliates, and CRISPR agrees not to practice or use such technology except as expressly permitted by this Agreement or any other written agreement between the Parties. Except as expressly provided in this Agreement, no Party will be deemed by estoppel or implication to have granted the other Party any licenses or other right with respect to any intellectual property.

10.5. **Prosecution and Maintenance of Patents**.

10.5.1. **CRISPR JDCA Patents**. As between the Parties, CRISPR will control and be responsible for all aspects of the Prosecution and Maintenance of CRISPR JDCA Patents (excluding Joint Patents).

10.5.2. **ViaCyte JDCA Patents**. As between the Parties, ViaCyte will control and be responsible for all aspects of the Prosecution and Maintenance of all ViaCyte JDCA Patents (excluding Joint Patents).

10.5.3. [**Joint Patents**.[6]

(a) CRISPR will have the first right, but not the obligation, to control and be responsible for all aspects of the Prosecution and Maintenance of all Joint Patents, at its own expense and using a patent counsel selected by CRISPR and reasonably acceptable to ViaCyte. CRISPR will keep ViaCyte informed and consult with ViaCyte through their respective Patent Coordinators (as defined below) as to material developments with respect to the Prosecution and Maintenance of the Joint Patents, including by providing copies of any office actions or office action responses or other correspondence that CRISPR provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings, and by providing ViaCyte the timely opportunity to have reasonable input into the strategic aspects of such Prosecution and Maintenance.

(b) If, during the term of the Joint Development and Commercialization Agreement, CRISPR intends to abandon any Joint Patent, CRISPR will notify ViaCyte of such intention at least 60 days before such Joint Patent will become abandoned, and ViaCyte will have the right, but not the obligation, to assume responsibility for the Prosecution and Maintenance thereof at its own expense with counsel of its own choice.

(c) Neither Party will make any Patent submission (including the filing of patent applications) with respect to any Joint Patent, to the extent that it could reasonably be expected to prejudice or adversely affect the potential patentability of any claimed subject matter of a CRISPR JDCA Background Patent (in the case of ViaCyte) or ViaCyte JDCA Background Patent (in the case of CRISPR), except with the other Party's prior written consent (such consent not to be unreasonably withheld and such consent to be negotiated in good faith with all due consideration to any deadlines).]

10.5.4. **Patent Coordinators**. Each Party will appoint a patent coordinator reasonably acceptable to the other Party (each, a "**Patent Coordinator**") to serve as such Party's primary liaison with the other Party on matters relating to the Prosecution and Maintenance and enforcement of Licensed Patents and Joint Patents. The Patent Coordinators will meet in person or by means of telephone or video conference at least once each Calendar Quarter during the term of the Joint Development and Commercialization Agreement. Each Party may replace its Patent Coordinator at any time by providing notice in writing to the other Party. The initial Patent Coordinators will be:

6 Note to draft: May be revised later in negotiation of the Joint Development & Commercialization Agreement depending on the development and commercialization strategy agreed upon by the Parties.

For ViaCyte: Liz Bui, Ph.D.

For CRISPR: Shelby Walker

10.5.5. **Defense of Claims Brought by Third Parties**. If a Third Party initiates a Proceeding against either Party claiming a Patent owned by or licensed to such Third Party is infringed by the Development, Manufacture or Commercialization of a Product in the Field, each Party that is named as a defendant in such Proceeding will have the right to defend itself in such Proceeding. The other Party will reasonably assist the defending Party in defending such Proceeding and cooperate in any such litigation at the request and expense of the defending Party. The defending Party will provide the other Party with prompt written notice of the commencement of any such Proceeding and will keep the other Party apprised of the progress of such Proceeding and will promptly furnish the other Party with a copy of each communication relating to the alleged infringement that is received by such Party. If both Parties are named as defendants in any Proceeding, both Parties may defend such Proceeding and the Parties will reasonably cooperate with respect to such defense.

10.5.6. [**Enforcement of Joint Patents**.[7]

(a) **Duty to Notify**. If either Party learns of an infringement, unauthorized use, misappropriation or threatened infringement by a Third Party with respect to any Joint Patents, such Party will promptly notify the other Party in writing and will provide such other Party with available information regarding such infringement.

(b) **Enforcement**.

(i) CRISPR will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding with respect to enforcement of the Joint Patents in the Field. ViaCyte will have the right to engage counsel of its own choice in connection with such Proceeding at its own expense. CRISPR will provide ViaCyte with prompt written notice of the commencement of any such Proceeding, and CRISPR will keep ViaCyte apprised of the progress of such Proceeding.

(ii) If CRISPR fails to cause the termination of an infringement of the Joint Patents in the Field and fails to initiate a Proceeding with respect thereto no later than 90 days after receipt of notice thereof, ViaCyte will have the right, but not the obligation, to institute, prosecute, and control a Proceeding with respect to enforcement of the relevant Joint Patents in the Field. CRISPR will have the right to engage counsel of its own choice in connection with such Proceeding at its own expense. ViaCyte will provide CRISPR with prompt written notice of the commencement of any such Proceeding, and ViaCyte will keep CRISPR apprised of the progress of such Proceeding.]

[7] Note to draft: May be revised later in negotiation of the Joint Development & Commercialization Agreement depending on the development and commercialization strategy agreed upon by the Parties.

10.5.7. **Share of Recoveries**. Any damages or other monetary awards recovered with respect to a Proceeding brought pursuant to this Section 10.5.7 will be shared as follows: (a) the amount of such recovery will first be applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such Proceeding, including, as applicable, Patent Costs shared by the Parties as Program Expenses (which amounts will be allocated *pro rata* to each Party in accordance with Section 7.1, if insufficient to cover the totality of such expenses); then (b) any remaining proceeds will be treated as Net Sales and shared in accordance with Article 7.

10.5.8. **Patents Solely Owned by CRISPR**. CRISPR will retain all rights to pursue an infringement of any Patent solely owned by CRISPR and CRISPR will retain all recoveries with respect thereto, except that in any Proceedings regarding enforcement of any such Patent solely owned by CRISPR in which Patent Costs are shared by the Parties as Program Expenses, any recoveries from such Proceedings, after such recoveries are first applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such proceeding, will be treated as Net Sales and shared in accordance with Article 7.

10.5.9. **Patents Solely Owned by ViaCyte**. ViaCyte will retain all rights to pursue an infringement of any Patent solely owned by ViaCyte and ViaCyte will retain all recoveries with respect thereto, except that in any Proceedings regarding enforcement of any such Patent solely owned by ViaCyte in which Patent Costs are shared by the Parties as Program Expenses, any recoveries from such Proceedings, after such recoveries are first applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such proceeding, will be treated as Net Sales and shared in accordance with Article 7.

10.5.10. **CREATE Act**. Notwithstanding anything to the contrary in this Section 10.5.3, neither Party will have the right to make an election under the CREATE Act when exercising its rights under this Section 10.5.3 without the prior written consent of the other Party, which will not be unreasonably withheld, conditioned or delayed. With respect to any such permitted election, the Parties will use reasonable efforts to cooperate and coordinate their activities with respect to any submissions, filings or other activities in support thereof. The Parties acknowledge and agree that the Joint Development & Commercialization Agreement is a "joint research agreement" as defined in the CREATE Act.

10.6. **Trademarks**. The Lead Commercialization Party will own and retain all rights to Trademarks for Products in their respective jurisdiction, and all goodwill associated with or attached thereto arising out of the use thereof by the Parties, their Affiliates and sublicensees will inure to the benefit of such Lead Commercialization Party. The non-Lead Commercialization Party, on behalf of itself and its Affiliates, will assign to the Lead Commercialization Party or its relevant Affiliate all right, title and interest in and to such Product Trademarks and goodwill in the relevant jurisdiction. The non-Lead Commercialization Party will not contest, oppose or challenge the Lead Commercialization Party's ownership of such Product Trademarks in the relevant jurisdiction. The Lead Commercialization Party will own rights to any Internet domain names incorporating any Trademark for the Product, or any variation or part of any such Trademark, as its URL address or any part of such address in the applicable jurisdiction. The Lead Commercialization Party will use Commercially Reasonable Efforts to register, maintain and enforce the Trademarks for the Product in the relevant jurisdiction. In any Proceedings regarding enforcement of any such Trademarks for the Product in which Other Out-of-Pocket

Costs are shared by the Parties as Program Expenses, any recoveries from such Proceedings will be treated as Net Sales and shared in accordance with Article 7.

ARTICLE 11
TERM; TERMINATION.

11.1. **Term**. The term of the Joint Development & Commercialization Agreement will commence on the execution of the Joint Development & Commercialization Agreement and continue in full force and effect until there is no longer a Global Development Plan or Commercialization Plan contemplating Development or Commercialization of a Product in the Field in the Territory or the Parties mutually agree in writing to end the Joint Development & Commercialization Agreement, unless earlier terminated as provided below.

11.2. **Termination Generally**. The provisions of Sections 9.2.2, 9.2.3, 9.3.1, 9.3.2 (excluding reference to termination for convenience provisions and Sections 9.3.2(d) and 9.3.2(e)) of the Research Collaboration Agreement will apply to the Joint Development & Commercialization Agreement, *mutatis mutandis.*

11.3. **Opt-Out**. [***], either Party may opt out of the Joint Development & Commercialization Agreement for such Products upon 60 days' written notice to the other Party ("**Opt-Out**"). The Party that exercises the right to Opt-Out is referred to as the "**Opt-Out Party**" and the other Party is referred to as the "**Continuing Party**".

11.3.1. Upon the Continuing Party's receipt of such notice, [***].

11.3.2. **Opt-Out Royalties**. The Continuing Party shall pay the Opt-Out Party royalties ("**Opt-Out Royalties**") in accordance with this Section 11.3.2. The applicable royalty rates shall be determined in accordance with the table set forth below based on the timing of the Opt-Out notice. For the avoidance of doubt, the allocation of [***] and [***] pursuant to Article 7 shall terminate upon the Opt-Out.

(a) **Royalty Term; Royalty Rates**. Royalties payable under this Section 11.3.2 shall be paid by the Continuing Party to the Opt-Out Party on a Product-by- Product and country-by-country basis from the date of first commercial sale of each Product in a country with respect to which royalty payments are due, and until the latest of (a) expiration of the last Valid Claim of any Licensed Patent or Joint Patent, (b) expiration of all regulatory exclusivities for such Product in any such country or (c) the date that sales of one or more products approved by the applicable Regulatory Authority in such country as a substitutable generic for such Product for an indication in the Field result in a reduction by more than [***] in gross sales of the applicable Product by the Continuing Party and its Affiliates and sublicensees compared to sales of such Product in such country for [***] consecutive Calendar Quarters immediately prior to commercial launch of such generic product(s), as measured by reputable published marketing data for such country (e.g. by reference to sales data collected by IMS) ("**Royalty Term**").

Timing of Opt Out	Net Sales (in Dollars) for such Product in the Territory	Opt-Out Royalty Rates as a Percentage (%) of Net Sales of such Product
Opt-Out after Establishment of hPOC and before the Initiation of the first Phase III Clinical Trial	Portion of Calendar Year Net Sales up to and including $[***]	[***]
	Portion of Calendar Year Net Sales that exceeds $[***]	[***]
Opt-Out after Initiation of Phase III Clinical Trial	Portion of Calendar Year Net Sales up to and including $[***]	[***]
	Portion of Calendar Year Net Sales that exceeds $[***]	[***]

(b) **Adjustment to Royalties**. On a Product-by-Product and country-by-country basis, during any portion of the Royalty Term for a Product in a given country in which there is no Valid Claim of a Patent Covering such Product, the applicable royalty payable with respect to such Product and such country shall be reduced by [***].

(c) **Third Party Payment Credit**. The Continuing Party shall be responsible for all payments owed to any Third Party for any Patents or other intellectual property rights licensed or acquired after the Opt-Out date, which are necessary or useful to make, have made, use, sell, offer for sale or import any Product in the Field in the Territory. If the Continuing Party or its Affiliate, licensee or sublicensee is required or reasonably deems it necessary to obtain a license from a Third Party under any intellectual property rights of such Third Party that Cover a Product in a country, the Continuing Party shall have the right to deduct, from the royalties due to the Opt-Out Party with respect to such Product [***]% of the aggregate royalty payments or other payments based on sales made by the Continuing Party or its Affiliate, licensee or sublicensee to such Third Party(ies) in exchange for such license with respect to such Product during the applicable payment period; provided that in no event shall the deductions under this provision reduce royalties due to the Opt-Out Party in any payment period with respect to such Product to less than [***]% of the amount that would otherwise be due to the Opt-Out Party. Any amounts paid to such Third Party which is entitled to be deducted under this provision but is not deducted as a result of the foregoing proviso shall be carried over and applied against royalties payable to the Opt-Out Party in respect of such Product in such country in subsequent payment periods until the full deduction is taken.

(d) **Other Terms**. The Joint Development & Commercialization Agreement will include provisions for payment terms, royalty reports, manner and place of payment, withholding taxes, late payments, record-keeping, and audit of records that are typical of agreements of this type in the pharmaceutical industry.

ARTICLE 12
REPRESENTATIONS; COVENANTS; INDEMNITY

The provisions of Articles 7 and 10 of the Research Collaboration Agreement will apply to the Joint Development & Commercialization Agreement, *mutatis mutandis.* The Joint Development & Commercialization Agreement will include commercially reasonable indemnity provisions, which will include (but not be limited to) an obligation for each Party to indemnify the other Party from, against and in respect of any and all Liability incurred or suffered by the other Party to the extent resulting from any claim by any Third Party based on: (a) any breach of, or inaccuracy in, any representation or warranty made by the indemnifying Party, or any breach or violation by the indemnifying Party of any covenant or agreement in the Joint Development & Commercialization Agreement; or (b) the negligence or intentional misconduct of, or violation of Applicable Law (including off-label promotion) by, the indemnifying Party, any of its Affiliates or sublicensees, or any of their respective directors, officers, employees and agents, in performing its obligations or exercising its rights under the Joint Development & Commercialization Agreement. The Joint Development & Commercialization Agreement will also include insurance and limitation on consequential damages provisions.

Schedule 1.16

Establishment of hPOC

[***]

Schedule 2.2

Arbitration Procedures

JDCA Disputes; Executive Officers. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. In the event of any dispute, controversy, claim or difference which may arise between the Parties out of or in relation to or in connection with the Joint Development & Commercialization Agreement, including any dispute arising out of the JSC, any alleged failure to perform, or breach, of the Joint Development & Commercialization Agreement, or any issue relating to the interpretation or application of the Joint Development & Commercialization Agreement ("**JDCA Dispute**"), then upon the request of either Party by written notice, the Parties agree to meet and discuss in good faith a possible resolution thereof, which good faith efforts shall include at least one in-person meeting between the Executive Officers of each Party. If the JDCA Dispute is not resolved within 30 days following the written request for discussions (except with regard to patent and trademark disputes), either Party may then refer such issue to arbitration by submitting a written notice of such request to the other Party.

Selection of Expert and Submission of Positions. The Parties will select and agree upon a mutually acceptable independent Third Party arbitrator who is (a) neutral, disinterested and impartial, and (b) has experience in the pharmaceutical and biotechnology industries and, in the case of a JDCA Dispute of a matter within the authority of the JSC ("**JSC Dispute**"), scientific expertise appropriate for understanding and resolving the applicable dispute (the "**Expert**"). If the Parties are unable to mutually agree upon an Expert no later than 30 days following the delivery of the request for Arbitration (or such longer period as agreed by the Parties), one individual who would qualify as an Expert selected by ViaCyte and one individual who would qualify as an Expert selected by CRISPR shall together select one individual who would qualify as an Expert, who shall be appointed as the Expert for the purpose of such JDCA Dispute. Once the Expert has been selected, each Party will no later than 10 days following selection of the Expert provide the Expert and the other Party with a written report setting forth its position with respect to the substance of the dispute and may submit a revised or updated report and position to the Expert no later than 10 days of receiving the other Party's report. If so requested by the Expert, each Party will make oral submissions to the Expert based on such Party's written report, and each Party will have the right to be present during any such oral submissions.

Rules for Proceedings. The proceedings will be conducted as a binding arbitration in accordance with AAA procedures, as modified by this Schedule 2.2 (including that the Expert will adopt as his or her decision the position of one Party or the other in the case of a JDCA Dispute as described in clause (a) or (b) in the following paragraph). The Expert may retain a Third Party expert to assist the Expert in analyzing the JDCA Dispute, and the expenses of any such expert will be shared by the Parties as costs of the arbitration as provided in this Schedule 2.2. All proceedings and communications shall be in English. Either Party may apply to the Expert for interim injunctive relief or may seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending resolution of the Dispute pursuant to this Schedule 2.2. The Parties shall have the right to be represented by counsel.

Determination by the Expert. The Expert will render his or her final decision, including any award, if applicable, with respect to the JDCA Dispute. In the case of (a) any JSC Dispute or (b) a JDCA Dispute, the Expert will select one of the Party's positions as his or her final decision, and will not have the authority to modify either Party's position or render any substantive decision other than to so select the position of either Party as set forth in its respective written report (as initially submitted, or as revised in accordance with this Schedule 2.2, as applicable). The decision of the Expert will be the sole, exclusive and binding remedy between the Parties regarding the JDCA Dispute submitted to such Expert, and shall be governed by the terms and conditions hereof, including the limitation on consequential damages. The Parties agree that such a judgment or award may be enforced in any court of competent jurisdiction. The statute of limitations of the Commonwealth of Massachusetts applicable to the commencement of a lawsuit shall apply to the commencement of arbitration under this Schedule 2.2.

Location; Costs. Unless otherwise mutually agreed upon by the Parties, the arbitration will be conducted in Chicago, Illinois. The Parties agree that they will share equally the costs and fees of the Expert in connection with any proceeding under this Schedule 2.2, including the cost of the arbitration filing and hearing fees, the cost of any independent expert retained by the arbitrator and the cost of the arbitrator and administrative fees of AAA if applicable. Each Party will bear its own costs and attorneys' and witnesses' fees and associated costs and expenses incurred in connection with any proceeding under this Schedule 2.2.

Timetable for Completion. The Parties will use, and will direct the Expert to use, commercially reasonable efforts to resolve a dispute no later than forty-five (45) days after the selection of the Expert, or if resolution no later than forty-five (45) days is not reasonably achievable, as determined by the Expert, then as soon thereafter as is reasonably practicable.

EXHIBIT D

Press Release

CRISPR Therapeutics and ViaCyte Announce Strategic Collaboration to Develop Gene-Edited Stem Cell-Derived Therapy for Diabetes

- Aims to develop an immune-evasive stem cell therapy as a potentially curative treatment for diabetes -- Parties will collaborate through commercialization and share costs and profits worldwide -

ZUG, Switzerland and CAMBRIDGE, Mass., and SAN DIEGO, September 17, 2018 -- CRISPR Therapeutics (NASDAQ: CRSP), a biopharmaceutical company focused on developing transformative gene-based medicines for serious diseases, and ViaCyte, Inc., a privately held regenerative medicine company, today announced a collaboration focused on the discovery, development, and commercialization of gene-edited allogeneic stem cell therapies for the treatment of diabetes.

Decades of clinical data with islet transplants indicate that beta-cell replacement approaches may offer curative benefit to patients with insulin-requiring diabetes. ViaCyte has pioneered the approach of generating pancreatic-lineage cells from stem cells and delivering them safely and efficiently to patients. PEC-Direct, ViaCyte's lead product candidate currently being evaluated in the clinic, uses a non-immunoprotective delivery device that permits direct vascularization of the cell therapy. This approach has the potential to deliver durable benefit; however, because the patient's immune system will identify these cells as foreign, PEC-Direct will require long-term immunosuppression to avoid rejection. As a result, PEC-Direct is being developed as a therapy for the subset of patients with type 1 diabetes at high risk for acute complications.

CRISPR gene editing offers the potential to protect the transplanted cells from the patient's immune system by ex-vivo editing immune-modulatory genes within the stem cell line used to produce the pancreatic-lineage cells. The speed, specificity, and multiplexing efficiency of the CRISPR system make it ideally suited to this task. CRISPR Therapeutics is pursuing a similar approach for its allogeneic CAR-T programs and has established significant expertise in immune-evasive gene editing. The combination of ViaCyte's stem cell capabilities and CRISPR's gene editing capabilities has the potential to enable a beta-cell replacement product that may deliver durable benefit to patients without triggering an immune reaction.

"We believe the combination of regenerative medicine and gene editing has the potential to offer durable, curative therapies to patients in many different diseases, including common chronic disorders like insulin-requiring diabetes. ViaCyte is a pioneer in the regenerative medicine field, and has built a compelling clinical program, robust manufacturing capabilities, and assembled a strong intellectual property position. Partnering with ViaCyte will allow us to accelerate our efforts in regenerative medicine, an area that we believe will provide a variety of longer-term opportunities for our company," commented Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics.

Under the terms of the agreement, CRISPR and ViaCyte will jointly seek to develop an immune-evasive stem cell line as a first step on the path to an allogeneic stem-cell derived product. Upon successful completion of these studies and identification of a product candidate, the parties will jointly assume responsibility for further development and commercialization worldwide. Upon execution of the agreement ViaCyte will receive $15 million from CRISPR, which at CRISPR's election may be paid in either cash or CRISPR stock. ViaCyte also has the option, under certain circumstances, to receive an additional $10 million from CRISPR in the form of a convertible promissory note.

"Creating an immune-evasive gene-edited version of our technology would enable us to address a larger patient population than we could with a product requiring immunosuppression. CRISPR Therapeutics is the ideal partner for this program given their leading gene editing technology and expertise and focus on immune-evasive editing. We are thrilled to have the opportunity to partner with CRISPR Therapeutics on what we believe could be a transformational therapy for patients with insulin-requiring diabetes," commented Paul Laikind, Ph.D., Chief Executive Officer and President of ViaCyte. "We also believe that this approach may have many other applications which we and CRISPR may explore in the future."

About CRISPR Therapeutics

CRISPR Therapeutics is a leading gene editing company focused on developing transformative gene-based medicines for serious diseases using its proprietary CRISPR/Cas9 platform. CRISPR/Cas9 is a revolutionary gene editing technology that allows for precise, directed changes to genomic DNA. CRISPR Therapeutics has established a portfolio of therapeutic programs across a broad range of disease areas including hemoglobinopathies, oncology and rare diseases. To accelerate and expand its efforts, CRISPR Therapeutics has established strategic collaborations with leading companies including Bayer AG and Vertex Pharmaceuticals. CRISPR Therapeutics AG is headquartered in Zug, Switzerland, with its wholly-owned U.S. subsidiary, CRISPR Therapeutics, Inc., and R&D operations based in Cambridge, Massachusetts, and business offices in London, United Kingdom. For more information, please visit www.crisprtx.com.

About ViaCyte

ViaCyte is a privately-held regenerative medicine company developing novel cell replacement therapies as potential long-term diabetes treatments to achieve glucose control targets and reduce the risk of hypoglycemia and diabetes-related complications. ViaCyte's product candidates are based on the derivation of pancreatic progenitor cells from stem cells, which are then implanted in durable and retrievable cell delivery devices. Once implanted and matured, these cells are designed to secrete insulin and other pancreatic hormones in response to blood glucose levels. ViaCyte has two product candidates in clinical-stage development. The PEC-Direct™ product candidate delivers the pancreatic progenitor cells in a non-immunoprotective device and is being developed for type 1 diabetes patients who have hypoglycemia unawareness, extreme glycemic lability, and/or recurrent severe hypoglycemic episodes. The PEC-Encap™ (also known as VC-01) product candidate delivers the same pancreatic progenitor cells in an immunoprotective device and is being developed for all patients with diabetes, type 1 and type 2, who use insulin. ViaCyte is also seeking to develop immune-evasive 'universal donor' stem cell lines, from its proprietary CyT49 cell line, which are expected to further broaden the availability of cell therapy for diabetes and other potential indications. ViaCyte is headquartered in San Diego, California. ViaCyte is funded in part by the California Institute for Regenerative Medicine (CIRM) and JDRF. For more information, please visit www.viacyte.com.

CRISPR Forward-Looking Statement

Certain statements set forth in this press release constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of1995, as amended, including, but not limited to, statements concerning: the timing of filing of clinical trial applications and INDs, any approvals thereof and timing of commencement of clinical trials, the intellectual property coverage and positions of CRISPR Therapeutics, its licensors and third parties, the sufficiency of CRISPR Therapeutics' cash resources and the therapeutic value, development, and commercial potential of CRISPR/Cas9 gene editing technologies and therapies. You are cautioned that forward-looking statements are inherently uncertain. Although CRISPR Therapeutics believes that such statements are based on reasonable assumptions within the bounds of its knowledge of its business and operations, the forward-looking statements are neither promises nor guarantees and they are necessarily subject to a high degree of uncertainty and risk. Actual performance and results may differ materially from those projected or suggested in the forward-looking statements due to various risks and uncertainties. These risks and uncertainties include, among others: uncertainties regarding the intellectual property protection for our technology and intellectual property belonging to third parties; uncertainties inherent in the initiation and completion of preclinical studies for CRISPR Therapeutics' product candidates; availability and timing of results from preclinical studies; whether results from a preclinical trial will be predictive of future results of the future trials; expectations for regulatory approvals to conduct trials or to market products; and those risks and uncertainties described under the heading "Risk Factors" in CRISPR Therapeutics' most recent annual report on Form 10-K, and in any other subsequent filings made by CRISPR Therapeutics with the U.S. Securities and Exchange Commission (SEC), which are available on the SEC's website at www.sec.gov. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. CRISPR Therapeutics disclaims any obligation or undertaking to update or revise any forward-looking statements contained in this press release, other than to the extent required by law.

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Exhibit E

VIACYTE, INC.

CONVERTIBLE NOTE PURCHASE AGREEMENT

THIS CONVERTIBLE NOTE PURCHASE AGREEMENT (the "**Agreement**") is made on the ___th day of _____, by and between ViaCyte, Inc., a Delaware corporation (the "**Company**"), and _____ ("_____").

THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Purchase and Sale of Convertible Note

1.1 Authorization and Sale of Convertible Note

(a) The Company has authorized the issuance and sale to _____, pursuant to this Agreement, of a convertible promissory note for an aggregate principal amount of $_____ in the form attached hereto as Exhibit A (the "**Note**"). Any shares of the Company's capital stock issuable upon conversion of the Note in accordance with its terms shall be referred to herein as the "**Conversion Shares**". The Conversion Shares and the Note shall be collectively referred to herein as the "**Securities**." The Conversion Shares and the shares of the Company's common stock issuable upon conversion of the Conversion Shares, if applicable, shall be collectively referred to herein as the "**Underlying Stock**."

(b) Subject to the terms and conditions of this Agreement, _____ agrees to purchase at the Closing (as defined below), and the Company agrees to sell and issue to _____ at the Closing, the Note at a purchase price equal to the aggregate principal amount thereof.

1.2 Closing. The purchase and sale of the Note shall take place at the offices of Cooley LLP ("**Cooley**"), 4401 Eastgate Mall, San Diego, CA 92121, on the date hereof at 10:00 a.m. (which date, time and place are designated the "**Closing**"). At the Closing, the Company shall deliver to _____ the Note, against payment of the purchase price therefor by check payable to the Company, by wire transfer to the Company's bank account, or any combination of the foregoing.

2. Representations and Warranties of the Company. The Company hereby represents and warrants to _____ that, as of the Closing, except as set forth herein or on the Schedule of Exceptions attached hereto as Schedule A, which exceptions shall be deemed to be representations and warranties as if made hereunder:

2.1 Organization, Good Standing and Qualification. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and each of the Subsidiaries (as defined below) are corporations duly organized, validly existing and in good standing under the laws of the states of their jurisdiction. Each of the Company and the Subsidiaries are duly qualified to transact business and are in good standing in each jurisdiction in which the failure to so qualify could reasonably have a Material Adverse Effect. Each of the Company and the Subsidiaries have all requisite corporate power and authority necessary to own and operate their respective properties, to carry on their respective business as now conducted and presently proposed to be conducted and, in the case of the Company, to carry out the transactions contemplated by this Agreement.

2.2 Capitalization. The capital of the Company consists of:

(a) shares of Preferred Stock. ...

(b) Common Stock. _____ shares of Common Stock ...

(c) Except for the Note and the transactions contemplated by this Agreement, as described in the Schedule of Exceptions and (i) the conversion privileges of the ...

(d) Other than that certain Amended and Restated Voting Agreement Dated

(e) All outstanding shares of the Company's Common Stock and all shares of the Company's Common Stock underlying outstanding options are subject to ...

2.3 Subsidiaries. Other than _____ the Company does not presently own or control, directly or indirectly, or hold any rights to acquire, any interest in any other corporation, association or other business entity and the Company is not a participant in any joint venture, partnership or similar arrangement.

2.4 Authorization. All corporate action on the part of the Company and its officers, directors and stockholders necessary for the authorization, execution and delivery of this Agreement, and for the authorization, execution and delivery of the Note and _____ (collectively the "**Transaction Agreements**") and all other agreements contemplated hereby or thereby to which the Company is a party, the performance of all obligations of the Company hereunder and thereunder, and the authorization, sale and issuance (or reservation for issuance) of the Underlying Stock has been or will be taken. The Transaction Agreements and all other agreements contemplated hereby or thereby to which the Company is a party constitute valid and legally binding obligations of the Company, enforceable in accordance with their respective terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally and (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies.

2.5 Valid Issuance. The Note that is being purchased by _____ hereunder, when issued, sold and delivered in accordance with the terms of this Agreement for the consideration expressed herein, will be free of restrictions on transfer, other than restrictions on transfer under the Transaction Agreements and under applicable state and federal securities laws. The Conversion Shares issuable upon conversion of the Note have been duly and validly reserved for issuance and, when issued, sold and delivered in accordance with the terms of the Note, will be duly and validly issued, fully paid and nonassessable and will be free of restrictions on transfer, other than restrictions on transfer under the Transaction Agreements, and under applicable state and federal securities laws. The shares of Common Stock, if any, issuable upon conversion of the Conversion Shares will be duly and validly reserved for issuance and, upon issuance in accordance with the terms of the Company's then-current certificate of incorporation, will be duly and validly issued, fully paid and nonassessable and will be free of restrictions on transfer, other than restrictions on transfer under the Transaction Agreements, _____ and under applicable state and federal securities laws.

2.6 Governmental Consents. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state or local governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement, except for such filings as may be required pursuant to applicable federal and state securities laws, which filings will be effected within the required statutory period.

2.7 Offering. Subject in part to the truth and accuracy of _____'s representations set forth in Section 3 of this Agreement, the offer, sale and issuance of the Note as contemplated by this Agreement are exempt from the registration requirements of the Act, and the qualification requirements of the California Corporate Securities Law of 1968, as amended, pursuant to Sections 25100, 25102, 25102.1 or 25105 thereof (or the regulations promulgated thereunder) or other applicable state securities laws. Neither the Company nor any authorized agent acting on its behalf will take any action hereafter that would cause the loss of such exemptions.

2.8 Litigation. There is no claim, action, suit, proceeding or investigation pending or, to the Company's knowledge, currently threatened against the Company or any of its Subsidiaries that questions the validity of the Transaction Agreements or the right of the Company to enter into such agreements or to consummate the transactions contemplated thereby, or that might result, either individually or in the aggregate, in any Material Adverse Effect or any change in the current equity ownership of the Company. The foregoing includes, without limitation, actions, suits, proceedings or investigations pending or, to the Company's knowledge, threatened involving the prior employment of any of the Company's employees or their obligations under any agreements with prior employers or any employees of any of the Subsidiaries or their obligations under any agreements with prior employers. Neither the Company nor, to the Company's knowledge, any of its officers or directors or those of any of its Subsidiaries, is a party or is named as subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality. There is no action, suit, proceeding or investigation by the Company currently pending or that the Company intends to initiate.

2.9 Proprietary Information and Inventions Agreement. Each employee and consultant of the Company and the Subsidiaries has executed a Proprietary Information and Inventions Agreement (or similar agreement) or a consulting agreement, as applicable, with the Company or one of its Subsidiaries. The Company, after reasonable investigation, is not aware, nor does it have any reason to believe, that any of its employees, officers or consultants or those of the Subsidiaries are in violation thereof.

2.10 Patents and Trademarks.

(a) The Schedule of Exceptions contains a complete and accurate list of all (i) patents and registered trademarks, service marks, trade names and copyrights owned or used by the Company or the Subsidiaries, (ii) pending patent applications and applications for registrations of trademarks, service marks, trade names and copyrights filed by the Company or the Subsidiaries, (iii) unregistered trade names and corporate names owned or used by the Company and/or the Subsidiaries, and (iv) licenses and other rights granted by the Company or the Subsidiaries to any third party with respect to any of the items identified in the preceding clauses (i) through (iii).

(b) To the best of its knowledge, the Company or its Subsidiaries owns or possesses sufficient legal rights to all patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information and other proprietary rights and processes necessary for its business as now conducted and as presently proposed to be conducted, without any known infringement of the rights of others. There are no outstanding options, licenses or agreements of any kind relating to the foregoing proprietary rights, nor is the Company bound by or a party to any options, licenses or agreements of any kind with respect to the patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information and other proprietary rights and processes of any other person or entity other than such licenses or agreements arising from the purchase of "off the shelf or standard products.

(c) The Company has not received any communications alleging that the Company has violated or, by conducting its business as presently proposed to be conducted, would violate any of the patents, trademarks, service marks, trade names, copyrights or trade secrets or other proprietary rights of any other person or entity.

(d) The Company is not aware that any of its employees is obligated under any contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any court or administrative agency, that would interfere with their duties to the Company or that would conflict with the Company's business as proposed to be conducted. The Company does not believe it is or will be necessary to utilize any inventions of any of its employees or the employees of any Subsidiary made prior to their employment by the Company or such Subsidiary, as the case may be, except for inventions that have been assigned or licensed to the Company or such Subsidiary as of the date hereof or acquired by the Company or such Subsidiary.

2.11 Compliance with Other Instruments. Neither the execution and delivery of the Transaction Agreements nor the performance by the Company of its obligations under the Transaction Agreements (including the issuance of the Note and, upon conversion, the Underlying Stock) will: (i) violate any provisions of the certificate of incorporation or the bylaws of the Company; (ii) with or without the giving of notice or the passage of time, or both, violate, or be in conflict with, or constitute a default under, or cause or permit the termination or the acceleration of the maturity of, any debt or obligation of the Company or any Subsidiary; (iii) require notice to or the consent of any party to any agreement or commitment, including, without limitation, any lease or license to which the Company or any Subsidiary is a party, or by which it or its respective properties is bound or subject; (iv) result in the creation or imposition of any security interest, lien, or other encumbrance upon any property or assets of the Company or any Subsidiary under any agreement or commitment to which it is a party, or by which it or its respective properties is bound or subject; or (v) violate any statute or law or any judgment, decree, order, regulation or rule of any court or governmental authority to which the Company or any Subsidiary or its respective properties is bound or subject. The Company is not in violation of or default under any provision of its certificate of incorporation or bylaws which violations or defaults, individually or in the aggregate, would or could reasonably be likely to have a Material Adverse Effect. Neither the Company nor any of the Subsidiaries is in violation of or in default under any instrument, judgment, order, writ, decree or contract to which it or any Subsidiary is a party or by which it or any Subsidiary is bound, or, to the Company's knowledge, of any provision of any federal or state statute, rule or regulation applicable to the Company or any Subsidiary, which violations or defaults, individually or in the aggregate, would or could reasonably be likely to have a Material Adverse Effect. The execution, delivery and performance of the Transaction Agreements and the consummation of the transactions contemplated thereby will not result in any such violation, or be in conflict with or constitute, with or without the passage of time and giving of notice, either a default under any such provision, instrument, judgment, order, writ, decree or contract or an event that results in the creation of any lien, charge or encumbrance upon any assets of the Company or any assets of any of the Subsidiaries, which would or could reasonably be likely to have a Material Adverse Effect, or the suspension, revocation, impairment, forfeiture or nonrenewal of any material permit, license, authorization or approval applicable to the Company or any Subsidiary, its respective business or operations or any of its or any Subsidiary's respective assets or properties.

2.12 Agreements.

(a) Except for agreements explicitly contemplated hereby, there are no agreements, understandings or proposed transactions between the Company and/or any Subsidiary and any of its or their respective officers, directors, or affiliates.

(b) There are no agreements, understandings, instruments, contracts, proposed transactions, judgments, orders, writs or decrees to which the Company or any Subsidiary is a party or by which it is bound that (i) may involve obligations (contingent or otherwise) of, or payments to, the Company or such Subsidiary in excess of $100,000, (ii) may involve the license of any patent, copyright, trade secret or other proprietary right to or from the Company or such Subsidiary, other than licenses arising from the purchase of "off the shelf' or other standard products, (iii) may involve indemnification by the Company or such Subsidiary with respect to infringements of proprietary rights, other than indemnification obligations arising from purchase or sale agreements entered into in the ordinary course of business, or (iv) is reasonably likely to be materially adverse to the business, property or financial condition of the Company or its Subsidiaries.

(c) Neither the Company nor any Subsidiary has (i) declared or paid any dividends or authorized or made any distribution upon or with respect to any class or series of its capital stock, (ii) other than the issuance of the Note, incurred any indebtedness for money borrowed or any other liabilities individually in excess of $[***] or, in the case of indebtedness and/or liabilities individually less than $[***], in excess of $[***] in the aggregate, (iii) made any loans or advances to any person, other than ordinary advances for travel expenses, or (iv) sold, exchanged or otherwise disposed of any of its assets or rights, other than the sale of inventory in the ordinary course of business.

(d) For the purposes of subsections (b) and (c) above, all indebtedness, liabilities, agreements, understandings, instruments, contracts and proposed transactions involving the same person or entity (including persons or entities the Company has reason to believe are affiliated therewith) shall be aggregated for the purpose of meeting the individual minimum dollar amounts of such subsections.

(e) A true and correct copy of each of the written instruments, plans, contracts and agreements that are referred to on the Schedule of Exceptions pursuant to this Section 2.12, together with all amendments, waivers or other changes thereto, have been furnished or made available to _____.

(f) Neither the Company nor any Subsidiary is a guarantor or indemnitor of any indebtedness of any other person or entity.

2.13 Related-Party Transactions. Other than (i) standard employee benefits generally made available to all employees, (ii) standard director and officer indemnification agreements for the Company and/or the Subsidiaries approved by the Board of Directors of the Company, and (iii) the purchase of shares of the Company's capital stock and the issuance of options to purchase shares of the Company's Common Stock, in each instance, approved by the Board of Directors of the Company, there are no agreements, understandings or proposed transactions between the Company or any Subsidiary and any of its respective officers, directors, employees, "affiliates" or "associates" (as those terms are defined in Rule 405 of the Act). Neither the Company nor any Subsidiary is indebted, directly or indirectly, to any of the directors, officers or employees of any of the Company or the Subsidiaries or to their respective spouses or children, other than in connection with expenses or advances of expenses incurred in the ordinary course of business or employee relocation expenses. None of the directors, officers or key employees of the Company or any of the Subsidiaries, or any members of their immediate families (i) are, directly or indirectly, indebted to the Company or any Subsidiary or, (ii) to the Company's knowledge, have any direct or indirect ownership interest in any firm or corporation with which the Company or any Subsidiary has a business relationship, or any firm or corporation which competes with the Company or any Subsidiary except that directors, officers or key employees of the Company may own stock in (but not exceeding two percent of the outstanding capital stock of) publicly traded companies that may compete with the Company or any Subsidiary. To the Company's knowledge, none of the Company's directors, officers, employees, affiliates or associates or any members of their immediate families nor those of any Subsidiary are, directly or indirectly, interested in any material contract with the Company.

2.14 Tax Returns. The Company and each Subsidiary has timely filed all tax returns (federal, state and local) required to be filed by it and all Taxes (as defined below), assessments and other government charges imposed upon such entity, or upon any of the assets, income or franchises of such entity, have been timely paid or, if not yet payable, are adequately accrued on such entity's books and records. There are no actual or proposed Tax deficiencies, assessments or adjustments with respect to the Company or any Subsidiary thereof or any assets or operations of any of such entities, and there are no ongoing or pending Tax audits by any taxing authority against any of such entities. "**Tax**" or "**Taxes**" means any federal, state, local or foreign income, gross receipts, license, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall, profits, environmental, customs, capital stock, franchise, employees' income withholding, foreign or domestic withholding, social security, unemployment, disability, real property, personal property, sales, use, transfer, value added, alternative or add-on minimum or other similar tax, governmental fee, governmental assessment or governmental charge of any kind whatsoever, including any interest, penalties or additions to Tax or additional amounts with respect to the foregoing.

2.15 Changes. With respect to the Company and each Subsidiary, since _____, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company or any of its Subsidiaries from that reflected in the Financial Statements (as hereinafter defined);

(b) any damage, destruction or loss, whether or not covered by insurance that would have a Material Adverse Effect;

(c) any waiver or material compromise by the Company or any Subsidiary of a valuable right or of a debt owed to it;

(d) any satisfaction or discharge of any lien, claim or encumbrance or payment of any obligation by the Company or any Subsidiary, except in the ordinary course of business (as such business is presently conducted or proposed to be conducted) and that would not have a Material Adverse Effect;

(e) any material change or amendment to a contract or arrangement by which the Company or any Subsidiary or any of its respective assets or properties is bound or subject;

(f) any sale, assignment or transfer of any intellectual property rights, or the disclosure of any proprietary confidential information to any person not under a duty to keep such information confidential;

(g) any resignation or termination of employment of any key officer, or director of the Company or any Subsidiary; and the Company is not aware of the impending resignation or termination of employment of any such officer or director;

(h) any material change in any compensation arrangement or agreement with any employee of the Company;

(i) any mortgage, pledge, transfer of a security interest in, or lien, created by the Company or any Subsidiary, with respect to any of its material properties outside the ordinary course of business;

(j) any loans or guarantees made by the Company or any Subsidiary to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(k) any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Company;

(l) to the Company's knowledge, any other event or condition of any character that would have a Material Adverse Effect; or

(m) any agreement or commitment by the Company or any Subsidiary to do any of the things described in this Section 2.15.

2.16 Permits. The Company and each of the Subsidiaries has all franchises, permits, licenses and any similar authority necessary for the conduct of its business as now being conducted by it, the lack of which would have a Material Adverse Effect, and the Company believes it or such Subsidiary can obtain, without undue burden or expense, any similar authority for the conduct of its business as planned to be conducted. Neither the Company nor any Subsidiary is in default in any material respect under any of such franchises, permits, licenses or other similar authority.

2.17 Environmental and Safety Laws. The Company, each of the Subsidiaries and the operation of its respective business and any real property that the Company or such Subsidiary owns or has owned, leases or has leased or otherwise occupies or uses or has occupied or used (the "**Premises**") are, to the best of the Company's knowledge, in compliance with all applicable Environmental Laws (as defined below) and orders or directives of any governmental authorities having jurisdiction under such Environmental Laws. Neither the Company nor any Subsidiary has received any, written citation, directive, letter or other communication, written or oral, or any notice of any proceeding, claim or lawsuit, from any person arising out of the Company's or such Subsidiary's ownership or occupation of any of the Premises, or the conduct of its respective operations. For purposes of this Agreement, the term "**Environmental Laws**" shall mean any federal, state, local or foreign law, ordinance, rule, regulation, permit and authorization pertaining to the protection of human health or the environment. The Company has made available to _____ true and complete copies of all material environmental records, reports, notifications, certificates of need, permits, pending permit applications, correspondence, engineering studies, and environmental studies or assessments

2.18 Disclosure. The Company has provided _____ with all the information reasonably available to the Company that _____ has requested for deciding whether to purchase the Note. Neither this Agreement (including all the exhibits and schedules hereto) nor any certificates delivered in connection herewith contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements herein or therein not misleading in light of the circumstances under which they were made.

2.19 Registration Rights. Except as set forth in _____, the Company has not granted or agreed to grant any registration rights, including piggyback rights, to any person or entity.

2.20 Corporate Documents; Minute Books. The certificate of incorporation and bylaws of each of the Company and its Subsidiaries are in the form previously provided to or made available to _____.

2.21 Title to Property and Assets. The property and assets the Company owns and the property and assets each Subsidiary owns are owned by the Company or such Subsidiary, as the case may be, free and clear of all mortgages, liens, loans and encumbrances, except (i) as reflected in the Financial Statements, (ii) for statutory liens for the payment of current taxes that are not yet delinquent and other statutory liens, encumbrances or security interests that arise in the ordinary course of business which individually or in the aggregate would not have a material adverse effect on the Company or its business, and (iii) for minor defects in title, none of which, individually or in the aggregate, materially impair the Company's ownership or use of such property or assets. With respect to the property and assets it leases, the Company, or each Subsidiary, as the case may be, is in compliance with such leases in all material respects and, to the best of the Company's knowledge, holds a valid leasehold interest free of any liens, claims or encumbrances, subject to clauses (i), (ii) and (iii) above.

2.22 Labor Agreements and Actions. Neither the Company nor any Subsidiary has any collective bargaining agreements with any of its employees. There is no labor union organizing activity pending, or to the Company's knowledge, threatened with respect to the Company or any Subsidiary. The Company is not aware that any officer or key employee, or that any group of employees, of the Company or any Subsidiary, intends to terminate their employment with the Company or such Subsidiary, nor does the Company or any Subsidiary have a present intention to terminate the employment of any of the foregoing. The employment of each officer and employee of the Company and each Subsidiary is terminable at the will of the Company or such Subsidiary. Neither the Company nor any Subsidiary is a party to or bound by any currently effective employment contract, deferred compensation agreement, bonus plan, incentive plan, profit sharing plan, retirement agreement or other employee compensation agreement. To the best of the Company's knowledge, the Company and each Subsidiary has complied in all material respects with all applicable state and federal equal employment opportunity and other laws related to employment (including without limitation, provisions thereof relating to wages, hours, equal opportunity, collective bargaining and the payment of social security and other taxes), and the Company is not aware that it or any Subsidiary has any labor relations problems (including without limitation, any union organization activities, threatened or actual strikes or work stoppages or material grievances). Neither the Company nor any Subsidiary is bound by or subject to (and none of its assets or properties is bound by or subject to) any written or oral, express or implied, contract, commitment or arrangement with any labor union. Neither the Company nor any Subsidiary has made any representations regarding equity incentives to any officer, employees, director or consultant that are inconsistent with the share amounts and terms set forth in the Company's or such Subsidiary's board minutes.

2.23 Qualified Small Business Stock. The Company is a "qualified small business" as defined in Section 1202(d) of the Internal Revenue Code, and, to the best of the Company's knowledge, after consultation with its tax advisors, if issued at the Closing upon conversion of the Note, the Conversion Shares, if such shares are shares of Series C-1 Preferred Stock, would meet the requirements for qualification as "qualified small business stock" as defined in Section 1202(c) of the Internal Revenue Code.

2.24 Financial Statements. The Company has made available to _____ a copy of the unaudited consolidated balance sheet of ViaCyte, Inc. as of _____ and the related unaudited statement of cash flow for the three month period ended _____ (collectively, the "**Financial Statements**"). The Financial Statements have been prepared in a manner consistent with generally accepted accounting principles applied on a consistent basis by the Company throughout the periods indicated, except that the unaudited Financial Statements do not contain all footnotes required by generally accepted accounting principles and are subject to normal quarter-end adjustments. The Financial Statements fairly and accurately present the financial condition and operating results of the applicable entity as of _____, subject to normal quarter-end audit adjustments. Except as set forth in the Financial Statements or otherwise disclosed pursuant to this Agreement, the Company has no material liabilities, contingent or otherwise, other than (i) liabilities incurred in the ordinary course of business subsequent to the date of its balance sheet made available to _____ as described in the first sentence hereof and (ii) obligations under contracts and commitments incurred in the ordinary course of business and not required under generally accepted accounting principles to be reflected in the Financial Statements, which, in both cases, individually or in the aggregate are not material to the financial condition or operating results of the Company, taken as a whole.

2.25 Employee Benefit Plans. Neither the Company nor any of the Subsidiaries has any Employee Benefit Plan as defined in the Employee Retirement Income Security Act of 1974.

2.26 Insurance. The Company and each of the Subsidiaries has in full force and effect fire and casualty insurance policies, with extended coverage, sufficient in amount (subject to reasonable deductibles) to allow it to replace any of its properties that might be damaged or destroyed and such other insurance in such amounts as are customary within the Company's industry.

2.27 FIRPTA. The Company hereby represents that neither it nor any Subsidiary is now or ever has been a "United States real property holding corporation," as defined in §897(c)(2) of the Internal Revenue Code of 1986, as amended, and Treasury Regulation § 1.897-2(b).

2.28 Additional Liability. Neither the Company nor any Subsidiary has received any written notice that it has been sued in any suit, action or proceeding which involves a claim related to the products developed or currently being developed by the Company or to stem cell research.

3. Representations and Warranties of _____. _____ hereby represents, warrants and covenants to the Company that:

3.1 Authorization. _____ has full power and authority to enter into this Agreement, and this Agreement constitutes its valid and legally binding obligation, enforceable in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally and (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies.

3.2 Purchase Entirely for Own Account. _____ understands that the Note is not, and any Underlying Stock issued on conversion, at the time of issuance may not be, registered under the Securities Act on the ground that the sale provided for in this Agreement and the issuance of securities hereunder is exempt from registration under the Securities Act pursuant to Section 4(2) thereof, and that the Company's reliance on such exemption is predicated, in part, on _____'s representations set forth herein. By _____'s execution of this Agreement _____ hereby confirms, that the Note to be received by _____, and the Underlying Stock issuable upon conversion, will be acquired for investment for _____'s own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that _____ has no present intention of selling, granting any participation in or otherwise distributing the same. By executing this Agreement, _____ further represents that _____ does not have any intention, contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to any of the foregoing securities.

3.3 Disclosure of Information. _____ represents that it has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of the Note and the business, properties, prospects and condition (financial or otherwise) of the Company. The foregoing, however, does not limit or modify the representations and warranties of the Company in Section 2 of this Agreement or the right of _____ to rely thereon.

3.4 Investment Experience. _____ is an investor in securities of companies in the development stage and acknowledges that it is able to fend for itself, can bear the economic risk of its investment, and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in the Note and the Underlying Stock. _____ also represents it has not been organized for the purpose of acquiring the Securities or the Underlying Stock.

3.5 Accredited Investor. _____ is an "accredited investor" within the meaning of Securities and Exchange Commission ("**SEC**") Rule 501 of Regulation D, as presently in effect.

3.6 Restricted Securities. _____understands that the Note it is purchasing, and, upon conversion, the Underlying Stock, are characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities, and, upon conversion, the Underlying Stock, may be resold without registration under the Act only in certain limited circumstances. In the absence of an effective registration statement covering the Note or the Underlying Stock or an available exemption from registration under the Act, the Note and the Underlying Stock must be held indefinitely.

3.7 Further Limitations on Disposition. Without in any way limiting the representations set forth above, _____ further agrees not to make any disposition of all or any portion of the Note, and, upon conversion, the Underlying Stock, unless and until the transferee has agreed in writing for the benefit of the Company to be bound by this Section 3 and, to the extent such disposed securities are shares of the Company's Series C-1 Preferred Stock, _____, and:

(a) There is then in effect a registration statement under the Act covering such proposed disposition and such disposition is made in accordance with such registration statement; or

(b)(i) shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, and (ii) if requested by the Company, _____ shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company that such disposition will not require registration of such shares under the Act. It is agreed that the Company will not require opinions of counsel for transactions made pursuant to Rule 144 except in unusual circumstances.

(c) Notwithstanding the provisions of subsections (a) and (b) above, no such registration statement or opinion of counsel shall be necessary for a transfer by _____ to an affiliate of _____, if the transferee agrees in writing to be subject to the terms hereof to the same extent as if the transferee were _____ hereunder.

3.8 Legends. It is understood that the certificates evidencing the Note and any Underlying Stock may bear one or all of the following legends:

(a) The following legend under the Securities Act:

"THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, OR HYPOTHECATED ABSENT AN EFFECTIVE REGISTRATION THEREOF UNDER SUCH ACT OR COMPLIANCE WITH RULE 144 PROMULGATED UNDER SUCH ACT, OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL, SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED."

(b) Any legend required by the laws of the State of California, including any legend required by the California Department of Corporations and Sections 417 and 418 of the California Corporations Code.

3.9 _____ Counsel. _____ acknowledges that it has had the opportunity to review this Agreement, the exhibits and the schedules attached hereto and the transactions contemplated by this Agreement with _____'s own legal counsel. _____ is relying solely on _____'s legal counsel and not on any statements or representations of the Company (other than those set forth in Section 2 herein) or any of the Company's agents, including the Company's counsel, Cooley, for legal advice, with respect to this investment or the transactions contemplated by this Agreement. The foregoing, however, shall in no way be deemed to limit the representations and warranties of the Company set forth in Section 2 hereof or the ability of _____ to rely thereupon.

4. California Commissioner of Corporations

4.1 Corporate Securities Law. THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO SUCH QUALIFICATION OR IN THE ABSENCE OF AN EXEMPTION FROM SUCH QUALIFICATION IS UNLAWFUL. PRIOR TO ACCEPTANCE OF SUCH CONSIDERATION BY THE COMPANY, THE RIGHTS OF ALL PARTIES TO THIS AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED OR AN EXEMPTION FROM SUCH QUALIFICATION BEING AVAILABLE.

5. Conditions of _____'s Obligations at Closing. The obligations of _____ under subsection 1.2 of this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions:

5.1 Representations and Warranties. The representations and warranties of the Company contained in Section 2 shall be true and correct on and as of the Closing.

5.2 Performance. The Company shall have performed and complied with all agreements, obligations and conditions contained in this Agreement or in ancillary documents incident to the transaction contemplated by this Agreement that are required to be performed or complied with by it on or before the Closing.

5.3 Closing Documents. The Company shall have delivered, on or before the Closing, to _____ all of the following documents:

(a) A Compliance Certificate, dated as of the Closing, stating that the conditions specified in Sections 5.1 and 5.2 have been fulfilled and stating that there shall have been no adverse change in the business, affairs, operations, properties, assets or condition (financial or otherwise) of the Company since the date of this Agreement.

(b) A Secretary's Certificate, certifying copies of the resolutions duly adopted by the Board of Directors of the Company and stockholders authorizing the execution, delivery and performance of the Transaction Agreements and each of the other agreements contemplated hereby, the issuance and sale of the Note and the consummation of all other transactions contemplated by this Agreement.

(c) Certified copy of the Company's certificate of incorporation, as in effect at the Closing.

(d) Certificates of good standing issued by the secretary of state for each state where the Company is authorized to do business.

5.4 Qualifications. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state or foreign jurisdiction that are required in connection with the lawful issuance and sale of the Note pursuant to this Agreement shall be duly obtained and effective as of the Closing.

5.5 Redacted

6. Conditions of the Company's Obligations at Closing. The obligations of the Company to _____ under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by _____:

6.1 Representations and Warranties. The representations and warranties of _____ contained in Section 3 shall be true on and as of the Closing.

6.2 Payment of Purchase Price. _____ shall have delivered at the Closing the purchase price specified in Section 1.2.

6.3 Performance. _____ shall have performed and complied with all covenants, agreements, obligations, and conditions contained in this Agreement that are required to be performed and complied with on or before the Closing.

6.4 Qualifications. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state or foreign jurisdiction that are required in connection with the lawful issuance and sale of the Note pursuant to this Agreement shall be duly obtained and effective as of the Closing.

7. Miscellaneous.

7.1 Survival. The warranties, representations and covenants of the Company and _____ contained in or made pursuant to this Agreement shall survive the execution and delivery of this Agreement and the Closing and shall in no way be affected by any investigation of the subject matter thereof made by or on behalf of _____ or the Company.

7.2 Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties and shall inure to the benefit of and be binding upon each person who shall be a holder of the Note and/or Underlying Stock from time to time; provided, however, that prior to the receipt by the Company of adequate written notice of the transfer of the Note or any Underlying Stock specifying the full name and address of the transferee, the Company may deem and treat the person listed as the holder of the Note or Underlying Stock in its records as the absolute owner and holder of the Note or Underlying Stock for all purposes. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto or their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

7.3 Governing Law. This Agreement shall be governed by and construed under the laws of the State of California as applied to agreements among California residents entered into and to be performed entirely within California.

7.4 Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

7.5 Notices. Unless otherwise provided, any notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified, (ii) when sent by confirmed telex, electronic mail or facsimile if sent during normal business hours of the recipient, if not, then on the next business day; (iii) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the address as set forth on the signature page hereof or at such other address as such party may designate by ten days advance written notice to the other parties hereto.

7.6 Finder's Fee. Each party represents that it neither is nor will be obligated for any finder's fee or commission in connection with this transaction. _____ agrees to indemnify and to hold harmless the Company from any liability for any commission or compensation in the nature of a finders' fee (and the costs and expenses of defending against such liability or asserted liability) for which _____ or any of its officers, partners, employees or representatives is responsible. The Company agrees to indemnify and hold harmless _____ from any liability for any commission or compensation in the nature of a finders' fee (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

7.7 Fees and Expenses. Each party shall pay all costs and expenses that it incurs with respect to the negotiation, execution, delivery and performance of the Agreement; provided that the Company shall reimburse _____ up to $25,000 for its reasonable out-of- pocket legal fees and other transaction expenses incurred in connection with the negotiation and execution of the Transaction Agreements.

7.8 Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and _____. Any amendment or waiver effected in accordance with this paragraph shall be binding upon each holder of any securities purchased under this Agreement at the time outstanding (including securities into which such securities are convertible), each future holder of all such securities and the Company.

7.9 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

7.10 Entire Agreement. This Agreement and the documents referred to herein constitute the entire agreement among the parties and no party shall be liable or bound to any other party in any manner by any warranties, representations or covenants except as specifically set forth herein or therein.

7.11 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

7.12 Knowledge; Material Adverse Effect. For purposes of the representations and warranties set forth in Section 2 hereof, the phrase "**to the Company's knowledge**" or "**to the best of the Company's knowledge**" shall mean the actual knowledge after reasonable investigation of the officers of the Company and its Subsidiaries and "**Material Adverse Effect**" shall mean a material adverse effect on the business, assets (including intangible assets), liabilities, financial condition, property or results of operations of the Company and the Subsidiaries, taken as a whole.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this **CONVERTIBLE NOTE PURCHASE AGREEMENT** as of the date first above written.

COMPANY:

VIACYTE, INC.,
a Delaware corporation

By: _____

Paul K. Laikind, Ph.D.

President and Chief Executive Officer

Schedule A

Schedule of Exceptions

Exhibit A

Form of Convertible Promissory Note

THIS CONVERTIBLE PROMISSORY NOTE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. NO SALE OR DISPOSITION MAY BE EFFECTED EXCEPT IN COMPLIANCE WITH RULE 144 UNDER SAID ACT OR AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL FOR THE HOLDER SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE ACT OR RECEIPT OF A NO-ACTION LETTER FROM THE SECURITIES AND EXCHANGE COMMISSION. THIS CONVERTIBLE PROMISSORY NOTE IS SUBJECT TO THE TERMS AND CONDITIONS OF THAT CERTAIN SUBORDINATION AGREEMENT DATED AS OF AUGUST 6, 2014, BY AND AMONG HOLDER, THE COMPANY AND SQUARE 1 BANK, AS IT MAY BE AMENDED FROM TIME TO TIME.

CONVERTIBLE PROMISSORY NOTE

$_____ **San Diego, California**

For value received **ViaCyte, Inc.,** a Delaware corporation ("***Payor***" or the "***Company***") promises to pay to _____ or its assigns ("***Holder***") the principal sum of $_____ with simple interest on the outstanding principal amount at the rate of 8% per annum. Interest shall commence with the date hereof and shall continue on the outstanding principal until paid in full or converted. Interest shall be computed on the basis of a year of 365 days for the actual number of days elapsed.

1. This note (the "***Note***") is issued pursuant to the terms of that certain Convertible Note Purchase Agreement (the "***Agreement***") dated as of _____ to the Holder.

2. All payments of interest and principal shall be in lawful money of the United States of America. All payments shall be applied first to accrued interest, and thereafter to principal.

3. In the event that, prior to the Maturity Date (as defined below) and prior to an IPO (as defined below), Payor issues and sells shares of its Equity Securities to investors (the "***Investors***") in a bona fide equity financing led by one or more venture capital funds with total proceeds to the Payor of not less than $[***] (excluding the conversion of the Note, but including other conversions of indebtedness) (a "***Qualified Financing***"), then the then-outstanding principal balance of this Note (and any then-unpaid accrued interest) (the "***Conversion Amount***") shall automatically convert in whole without any further action by the Holder into such Equity Securities (rounded down to the nearest whole share, if applicable) at a conversion price equal to the price per share paid by the Investors purchasing the Equity Securities on the same terms and conditions as given to the Investors. For purposes of this Note, the term "***Equity Securities***" shall mean the Payor's Preferred Stock or any securities conferring the right to purchase the Payor's Preferred Stock or securities convertible into, or exchangeable for (with or without additional consideration), the Payor's Preferred Stock, in each case issued in the Qualified Financing following the date hereof, except that such defined term shall not include any security granted, issued and/or sold by the Payor to any employee, director or consultant in such capacity.

4. In the event that Payor, prior to the Maturity Date and prior to a Qualified Financing, completes an IPO, the Conversion Amount shall automatically convert in whole without any further action by the Holder into that number of fully paid and nonassessable shares of the Company's common stock as is equal to the Conversion Amount divided by the price per share that such shares are offered and sold to the public in the IPO, rounded down to the nearest whole share. For purposes of this Note, the term "***IPO***" shall mean the closing of a firmly underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of the Company's common stock for the account of the Company in which either (a) the gross cash proceeds to

the Company (before underwriting discounts, commissions and fees) are at least $[***] or (b) all outstanding shares of preferred stock of the Company are converted to common stock of the Company.

5. In the event that there has not been a Qualified Financing or an IPO prior to _____ (the "***Maturity Date***"), the Conversion Amount shall automatically convert in whole without any further action by the Holder into that number of fully paid and nonassessable shares of the Company's Series C-1 Preferred Stock as is equal to the Conversion Amount divided by $1.00 (as adjusted for any stock splits, combinations or the like with respect to the Company's Series C-1 Preferred Stock or its common stock), rounded down to the nearest whole share.

6. Unless this Note has been converted in accordance with the terms of Sections 3, 4 or 5 above, the entire outstanding principal balance and all unpaid accrued interest under this Note shall become fully due and payable upon the closing of an Acquisition or Asset Transfer (each as defined in the Company's certificate of incorporation).

7. In the event of any default hereunder, Payor shall pay all reasonable attorneys' fees and court costs incurred by Holder in enforcing and collecting this Note.

8. Payor may not prepay this Note prior to the Maturity Date without the consent of Holder.

9. If there shall be any Event of Default (as defined below) hereunder, at the option and upon the declaration of the Holder and upon written notice to the Payor (which election and notice shall not be required in the case of an Event of Default under Section 9(c) or 9(d)), this Note shall accelerate and all principal and unpaid accrued interest shall become due and payable. The occurrence of any one or more of the following shall constitute an "Event of Default":

(a) Payor fails to pay timely any of the principal amount due under this Note on the date the same becomes due and payable or any accrued interest or other amounts due under this Note on the date the same becomes due and payable;

(b) Payor shall default in its performance of any covenant under the Agreement;

(c) Payor files any petition or action for relief under any bankruptcy, reorganization, insolvency or moratorium law or any other law for the relief of, or relating to, debtors, now or hereafter in effect, or makes any assignment for the benefit of creditors or takes any corporate action in furtherance of any of the foregoing; or

(d) An involuntary petition is filed against Payor (unless such petition is dismissed or discharged within sixty (60) days under any bankruptcy statute now or hereafter in effect, or a custodian, receiver, trustee, assignee for the benefit of creditors (or other similar official) is appointed to take possession, custody or control of any property of Payor.

10. Payor hereby waives demand, notice, presentment, protest and notice of dishonor.

11. This Note shall be governed by and construed under the laws of the State of California, as applied to agreements among California residents, made and to be performed entirely within the State of California, without giving effect to conflicts of laws principles.

12. The indebtedness evidenced by this Note is subordinated in right of payment to the prior payment in full of any Senior Indebtedness in existence on the date of issuance of this Note. "***Senior Indebtedness***" shall mean, unless expressly subordinated to or made on a parity with the amounts due under this Note, all amounts due in connection with (a) indebtedness of Payor to banks or other lending institutions regularly engaged in the business of lending money (excluding venture capital, investment banking or similar institutions and their affiliates, which sometimes engage in lending activities but which are primarily engaged in investments in equity securities), and (b) any such indebtedness or any debentures, notes or other evidence of indebtedness issued in exchange for such Senior Indebtedness, or any indebtedness arising from the satisfaction of such Senior Indebtedness by a guarantor.

13. Any term of this Note may be amended or waived only with the written consent of Payor and Holder.

14. This Note may be transferred only upon its surrender to the Company for registration of transfer, duly endorsed, or accompanied by a duly executed written instrument of transfer in form satisfactory to the Company. Thereupon, this Note shall be reissued to, and registered in the name of, the transferee, or a new Note for like principal amount and interest shall be issued to, and registered in the name of, the transferee. Interest and principal shall be paid solely to the registered holder of this Note. Such payment shall constitute full discharge of the Company's obligation to pay such interest and principal.

VIACYTE, INC.

By: _____

Name: _____

Title:

Schedule A

Consideration

Subject to the terms and conditions hereof and except as otherwise provided herein, CRISPR shall issue such number of its common shares, CHF 0.03 per share (the "**Shares**"), and such amount of cash, to ViaCyte on the dates and amounts set forth below. Within five (5) Business Days from each issuance date set forth below (each an "**Issue Date**"), (i) CRISPR shall cause its transfer agent to credit the account of ViaCyte with the applicable number of Shares as calculated pursuant to the terms of this Schedule A by electronic delivery at ViaCyte's designated balance account at the Depository Trust Company and (ii) initiate a wire for the applicable cash amount set forth below, in immediately available funds denominated in U.S. Dollars, to an account designated by ViaCyte. Such account information shall be provided by ViaCyte in writing at least three (3) business days in advance of the first Issue Date and three (3) business days in advance of any Issue Date in which ViaCyte desires to change the account information. All Shares shall be issued by CRISPR pursuant to an effective registration statement under the Securities Act of 1933, as amended, and be issuable without restrictive legends. The value attributed to each Share for purposes of calculating the value of the Shares to be issued shall be the closing price of CRISPR's common shares as quoted on the Nasdaq Global Market on each applicable Issue Date.

Issue Date	Value of Shares To Be Issued ($)	Amount of Cash Payment ($)
Five (5) Business Days after the Effective Date of the Agreement (the "**First Issue Date**")	$7,500,000 (the "**First Tranche Shares**")	$5,000 less the Nominal Payment (as calculated below)
The close of market on the first Business Day after CRISPR files its Quarterly Report on Form 10-Q for the three months ending September 30, 2018 (the "**Second Issue Date**")	Second Tranche Amount (as defined below)	$5,000 less the Nominal Payment (as calculated below)

For purposes hereof, the term "**Second Tranche Amount**" shall be a dollar amount equal to the difference between (i) $15,000,000 and (ii) the aggregate net proceeds (after deduction for any reasonable and ordinary broker fees and commissions or other reasonable customary costs, charges or expenses solely and directly incurred in connection with ordinary broker sales of common shares on the Nasdaq Global Market up to the Expense Cap (as defined below) (for clarity, any of the foregoing amounts in excess of the Expense Cap shall not be so deducted), but without deduction for any other amounts including applicable taxes (other than any applicable stamp duties imposed on ViaCyte) received by or on behalf of ViaCyte in connection with selling the First Tranche Shares (the "**First Tranche Proceeds**"). Notwithstanding the foregoing, the term "First Tranche Proceeds" shall be deemed to equal $7,500,000 if CRISPR elects to pay ViaCyte $7,500,000 in cash (rather than issue Shares equal in value thereto) on the First Issue Date, as provided below in this Schedule A. ViaCyte will give CRISPR written notice within two (2) Business Days after ViaCyte has sold all First Tranche Shares (the "**First Tranche Sales Notice**"). In connection with the Second Tranche Amount, CRISPR shall issue such number of whole common shares with a value equal to the Second Tranche Amount (rounding down to the nearest whole common share) (the "**Second Tranche Shares**"). Any shortfall in the amount owed shall be paid via wire transfer in immediately available funds, to an account designated by ViaCyte on the date the Second Tranche Amount is issued to ViaCyte. For purposes hereof, the term "**Expense Cap**" shall mean $[***].

In connection with providing the First Tranche Sales Notice, ViaCyte will deliver an officer's certificate to CRISPR setting forth in reasonable detail the calculation of the First Tranche Proceeds, and ViaCyte will provide to CRISPR any information and documentation reasonably requested by CRISPR relating to such calculation. The Parties acknowledge and agree that if, for whatever reason, CRISPR fails to receive the First Tranche Sales Notice on or before the 30th day following ViaCyte's receipt of the First Tranche Shares, then, notwithstanding anything to the contrary set forth in this Agreement and this Schedule A, the First Tranche Proceeds shall be deemed to equal a dollar amount equal to the product of (x) the First Tranche Shares multiplied by (y) the highest closing price of CRISPR's common shares as quoted on the Nasdaq Global Market during the period starting on the first business day following ViaCyte's receipt of the First Tranche Shares and ending on the 30th day following ViaCyte's receipt of the First Tranche Shares. The foregoing notwithstanding, the time period for ViaCyte to deliver the First Tranche Sales Notice shall be extended by a number of days equal to the number of days during the 30-day period following ViaCyte's receipt of the First Tranche Shares, if any, that (i) trading in CRISPR's common shares is suspended on the Nasdaq Global Market or (ii) ViaCyte determines in good faith that, based upon the advice of a nationally recognized law firm based in the United States that is expert in U.S. securities law matters, ViaCyte is unable to sell the First Tranche Shares on the Nasdaq Global Market due to its possession of material non-public information related to CRISPR and ViaCyte gives CRISPR written notice of such fact within one (1) Business Day of obtaining such written advice.

Nominal Payment

In order to facilitate the issuance of the Shares in accordance with Swiss law, CRISPR shall withhold from the cash amount to be paid on each Issue Date (i.e., $5,000) by an amount equal to (i) CHF 0.03 multiplied by (ii) the number of Shares to be issued on the Issue Date (the aggregate so calculated on each Issue Date is referred to as the "**Nominal Payment**"). On behalf of ViaCyte, CRISPR, or an affiliate thereof, shall wire such Nominal Payment in immediately available funds to an escrow bank account in the sense of art. 633 para 1 Swiss Code of Obligations. Pursuant to Swiss law (art. 633 para 2 Swiss Code of Obligations) any amount in such escrow account will only be released to CRISPR after the Shares have been registered in the commercial register of Zug, Switzerland.

Make-Whole Adjustment

It is the intention of the Parties that ViaCyte receive no more and no less than $15,000,000 via (i) aggregate net proceeds (after deduction for any reasonable and ordinary broker fees and commissions or other reasonable and customary costs, charges or expenses solely and directly incurred in connection with ordinary broker sales of common shares on the Nasdaq Global Market up to the Expense Cap (for clarity, any of the foregoing amounts in excess of the Expense Cap shall not be so deducted), but without deduction for any other amounts including applicable taxes (other than any applicable stamp duties imposed on ViaCyte) in connection with the sale of all Shares issued hereunder; and/or (ii) cash payments in lieu of issuing Shares as contemplated by the last section of this Schedule A; and/or (iii) any combination of clauses (i) and (ii).

ViaCyte will give CRISPR written notice within two (2) Business Days after ViaCyte has sold all Shares (the "**Final Sales Notice**"). In connection with providing the Final Sales Notice, ViaCyte will deliver an officer's certificate to CRISPR setting forth in reasonable detail the calculation of the aggregate gross proceeds (after deduction for any reasonable and ordinary broker fees and commissions or other reasonable and customary costs, charges or expenses solely and directly incurred in connection with ordinary broker sales of common shares on the Nasdaq Global Market up to the Expense Cap (for clarity, any of the foregoing amounts in excess of the Expense Cap shall not be so deducted), but without deduction for any other amounts including applicable taxes (other than any applicable stamp duties imposed on ViaCyte) received by or on behalf of ViaCyte in connection with selling all Shares (the "**Final Sales Proceeds**"), and ViaCyte will provide to CRISPR any information and documentation reasonably requested by CRISPR relating to such calculation. The Parties acknowledge and agree that if, for whatever reason, CRISPR fails to receive the Final Sales Notice on or before the 30th day following ViaCyte's receipt of the Second Tranche Shares, then, notwithstanding anything to the contrary set forth in this Agreement and this Schedule A, the portion of the Final Sales Proceeds attributable to the Second Tranche Shares shall be deemed to equal a dollar amount equal to the product of (x) the total number of Second Tranche Shares multiplied by (y) the highest closing price of CRISPR's common shares as quoted on the Nasdaq Global Market during the period starting on the first business day following ViaCyte's receipt of the Second Tranche Shares and ending on the 30th day following ViaCyte's receipt of the Second Tranche Shares. The foregoing notwithstanding, the time period for ViaCyte to deliver the Final Sales Notice shall be extended by a number of days equal to the number of days during the 30-day period following ViaCyte's receipt of the Second Tranche Shares, if any, that (i) trading in CRISPR's common shares is suspended on the Nasdaq Global Market or (ii) ViaCyte determines in good faith that, based upon the advice of a nationally recognized law firm based in the United States that is expert in U.S. securities law matters, ViaCyte is unable to sell the Second Tranche Shares on the Nasdaq Global Market due to its possession of material non-public information related to CRISPR and ViaCyte gives CRISPR written notice of such fact within one (1) Business Day of obtaining such written advice.

If the Final Sales Proceeds are less than $15,000,000, then CRISPR will owe ViaCyte an amount equal to (i) $15,000,000 less (ii) the Final Sales Proceeds (the amount so calculated is referred to as the "**Deficiency Amount**"). CRISPR will pay the Deficiency Amount to ViaCyte via wire transfer of immediately available funds to an account designated by ViaCyte in writing.

If the Final Sales Proceeds are more than $15,000,000, then ViaCyte will owe CRISPR an amount equal to (i) the Final Sales Proceeds less (ii) the Final Sales Proceeds (the amount so calculated is referred to as the "**Surplus Amount**"). ViaCyte will pay the Surplus Amount to CRISPR via wire transfer of immediately available funds to an account designated by CRISPR in writing.

The above payment will be made within five (5) Business Days after calculation thereof. The Parties intend that the payment above be made on or before December 31, 2018.

Trading Day Restriction

ViaCyte acknowledges and agrees that ViaCyte will not, directly or indirectly, sell or cause to be sold more than 50,000 of the Shares in a single trading day.

Cash Payment Election

Notwithstanding anything to the contrary set forth herein, CRISPR may, in its sole discretion, elect to pay ViaCyte the amount of dollars or value of Shares (as applicable) described under the heading "Value of Shares to Be Issued ($)" in the table above in cash instead of issuing Shares with respect to any such

amount. CRISPR shall notify ViaCyte in writing by 6:59 pm ET on the trading day before the First Issue Date or Second Issue Date, as the case may be. If CRISPR makes such an election, then CRISPR shall not be required to pay the amount described under the heading "Amount of Cash Payment ($)" in the table above that would have been paid to ViaCyte had CRISPR issued Shares with respect to the First Issue Date and/or Second Issue Date, as the case may be. Any such cash payment under this paragraph shall paid to ViaCyte via wire transfer of immediately available funds denominated in U.S. Dollars on the First Issue Date or Second Issue Date, as the case may be, to an account designated by ViaCyte in writing.

Schedule 1.32

CRISPR In-License Agreements

Agreement Title	Effective Date	Licensor
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

Schedule 1.128

ViaCyte In-License Agreements

Agreement Title	Effective Date	Licensor
[***]	[***]	[***]
[***]	[***]	[***]

Schedule 2.10.4

Companies Triggering Section 2.10.4

Change of Control of CRISPR with:	Change of Control of ViaCyte with:
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

Schedule 7.1

ViaCyte Schedule of Exceptions

[***]

Schedule 7.2

CRISPR Schedule of Exceptions

[***]

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: November 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: November 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 September 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)

November 7, 2018

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

November 7, 2018