CRISPR Therapeutics Provides Business Update and Reports Third Quarter 2021 Financial Results

-Achieved target enrollment in CTX001 clinical trials for beta thalassemia (TDT) and sickle cell disease (SCD); regulatory submissions planned for late 2022-

-Reported positive results from the ongoing Phase 1 CARBON clinical trial evaluating the safety and efficacy of CTX110 for CD19+ B-cell malignancies; *enrollment continues, with potential registrational trial incorporating consolidation dosing expected to initiate in Q1 2022-*

-Implementing consolidation dosing protocols for CTX120™ and CTX130™ clinical trials; enrollment continues, with top-line data expected to report in 1H 2022-

-Regenerative medicine and in vivo programs continue to progress and remain on track-

ZUG, Switzerland and CAMBRIDGE, Mass., November 3, 2021 – CRISPR Therapeutics (Nasdaq: CRSP), a biopharmaceutical company focused on creating transformative gene-based medicines for serious diseases, today reported financial results for the third quarter ended September 30, 2021.

"The third quarter marked significant progress across our portfolio," said Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics. "With our partner Vertex, we achieved target enrollment for the CTX001 clinical trials in patients with beta thalassemia and sickle cell disease, which can support regulatory submissions in late 2022. Additionally, we demonstrated proof of concept for our allogeneic CAR-T platform with positive data from our CARBON trial of CTX110, which showed that immediately available "off-the-shelf" cell therapies can offer efficacy similar to autologous CAR-T with a differentiated safety profile for patients with large B-cell lymphomas. Based on these encouraging results, we plan to expand the CARBON trial into a potentially registrational trial in the first quarter of 2022. Furthermore, we hope to bring these transformative allogeneic CAR-T therapies to patients in outpatient and community oncology settings, enabling broad access."

Recent Highlights and Outlook

- **Beta Thalassemia and Sickle Cell Disease**
    - Data presented to date for 22 patients with greater than 3 months of follow-up support the profile of CTX001 as a one-time functional cure for patients with TDT and severe SCD, showing consistent and durable benefit across all treated patients.
    - Target enrollment has been achieved in the ongoing clinical trials for CTX001 in TDT and SCD, with planned regulatory submissions in late 2022.
- **Immuno-Oncology**

- On October 12, 2021, CRISPR Therapeutics announced positive results from its ongoing Phase 1 CARBON trial evaluating the safety and efficacy of CTX110, its wholly-owned allogeneic chimeric antigen receptor T cell (CAR-T) investigational therapy targeting CD19+ B-cell malignancies. The data showed early evidence of a dose dependent response to CTX110, with overall response rates (ORR), complete response rates (CR) and durability similar to approved autologous CD19 CAR-T therapies on an intent-to-treat (ITT) basis. A single dose of CTX110 at DL2 and above resulted in a 58% ORR and 38% CR rate in large B-cell lymphoma (LBCL) patients on an ITT basis. The pharmacokinetic data provide a strong rationale that consolidation dosing can improve on an already competitive profile for CTX110. Based on the safety and efficacy profile, the Company plans to expand into a potential registrational trial that incorporates consolidation dosing in Q1 2022.

- In addition to CTX110, CRISPR Therapeutics has ongoing Phase 1 clinical trials assessing safety and efficacy of several dose levels for the following CAR-Ts: (i) CTX120, its wholly-owned allogeneic CAR-T investigational therapy targeting B-cell maturation antigen for the treatment of relapsed or refractory multiple myeloma; and (ii) CTX130, its wholly-owned allogeneic CAR-T investigational therapy targeting CD70 for the treatment of both solid tumors and certain hematologic malignancies. Based on the learnings from CTX110, the Company is implementing consolidation dosing protocols for its CTX120 and CTX130 clinical trials and expects to report top-line data in the first half of 2022.

- In October, CRISPR Therapeutics announced two poster presentations at the Society for Immunotherapy of Cancer (SITC) 36th Annual Meeting, to be held both virtually and at the Walter E. Washington Convention Center in Washington, D.C., from November 10 to 14, 2021. The Company also announced an oral presentation at the SITC 2021 Pre-Conference Program, The Evolution of Immunotherapy: An Exploration of Immunity Beyond T cells, CAR T in Solid Tumors and Novel Combinations, which will be held from 2:00 p.m. – 6:00 p.m. ET on November 10, 2021.

- **Regenerative Medicine and *In Vivo* Programs:**

  - CRISPR Therapeutics and its partner ViaCyte remain on track to initiate a Phase 1/2 trial of their allogeneic stem cell-derived therapy for the treatment of Type 1 diabetes in 2021. The combination of ViaCyte's stem cell capabilities and CRISPR Therapeutics' gene editing capabilities has the potential to enable a beta-cell replacement product that may deliver durable benefit to patients without requiring immune suppression.

  - The Company continues to make progress with its *in vivo* approaches for liver gene editing. The Company expects to move multiple programs utilizing *in vivo* approaches into the clinic in the next 18 to 24 months.

- **Other Corporate Matters**

    - In October, CRISPR Therapeutics announced the appointment of Brendan Smith as Chief Financial Officer. Mr. Smith brings more than 20 years of financial, operational and strategic leadership experience, most recently as the Chief Financial Officer of Translate Bio.

Third Quarter 2021 Financial Results

- **Cash Position:** Cash, cash equivalents and marketable securities were $2,477.4 million as of September 30, 2021, compared to $2,589.4 million as of June 30, 2021. The decrease in cash of $112.0 million was primarily driven by cash used in operating activities to support ongoing research and development of the Company's clinical and pre-clinical programs.

- **Revenue:** Total collaboration revenue was $0.3 million for the third quarter of 2021, compared to $0.1 million for the third quarter of 2020. Collaboration revenue primarily consisted of revenue recognized in connection with our collaboration agreements with Vertex.

- **R&D Expenses:** R&D expenses were $105.3 million for the third quarter of 2021, compared to $71.0 million for the third quarter of 2020. The increase in expense was driven by development activities supporting the advancement of the hemoglobinopathies program and wholly-owned immuno-oncology programs, as well as increased headcount and supporting facilities related expenses.

- **G&A Expenses:** General and administrative expenses were $24.4 million for the third quarter of 2021, compared to $21.5 million for the third quarter of 2020. The increase in general and administrative expenses for the year was primarily driven by headcount-related expense.

- **Net Loss:** Net loss was $127.2 million for the third quarter of 2021, compared to a net loss of $92.4 million for the third quarter of 2020.

About CTX001

CTX001 is an investigational, autologous, *ex vivo* CRISPR/Cas9 gene-edited therapy that is being evaluated for patients suffering from TDT or severe SCD, in which a patient's hematopoietic stem cells are edited to produce high levels of fetal hemoglobin (HbF; hemoglobin F) in red blood cells. HbF is a form of the oxygen-carrying hemoglobin that is naturally present at birth, which then switches to the adult form of hemoglobin. The elevation of HbF by CTX001 has the potential to alleviate or eliminate transfusion requirements for patients with TDT and reduce or eliminate painful and debilitating sickle crises for patients with SCD. Earlier results from these ongoing trials were published as a Brief Report in *The New England Journal of Medicine* in January of 2021.

Based on progress in this program to date, CTX001 has been granted Regenerative Medicine Advanced Therapy (RMAT), Fast Track, Orphan Drug, and Rare Pediatric Disease designations from the U.S. Food and Drug Administration (FDA) for both TDT and SCD. CTX001 has also been granted Orphan Drug Designation

from the European Commission, as well as Priority Medicines (PRIME) designation from the European Medicines Agency (EMA), for both TDT and SCD.

Among gene-editing approaches being investigated/evaluated for TDT and SCD, CTX001 is the furthest advanced in clinical development.

About the CRISPR-Vertex Collaboration
Vertex and CRISPR Therapeutics entered into a strategic research collaboration in 2015 focused on the use of CRISPR/Cas9 to discover and develop potential new treatments aimed at the underlying genetic causes of human disease. CTX001 represents the first potential treatment to emerge from the joint research program. Under a recently amended collaboration agreement, Vertex will lead global development, manufacturing and commercialization of CTX001 and split program costs and profits worldwide 60/40 with CRISPR Therapeutics.

About CLIMB-111
The ongoing Phase 1/2 open-label trial, CLIMB-Thal-111, is designed to assess the safety and efficacy of a single dose of CTX001 in patients ages 12 to 35 with TDT. The trial will enroll up to 45 patients and follow patients for approximately two years after infusion. Each patient will be asked to participate in a long-term follow-up trial.

About CLIMB-121
The ongoing Phase 1/2 open-label trial, CLIMB-SCD-121, is designed to assess the safety and efficacy of a single dose of CTX001 in patients ages 12 to 35 with severe SCD. The trial will enroll up to 45 patients and follow patients for approximately two years after infusion. Each patient will be asked to participate in a long-term follow-up trial.

About CLIMB-131
This is a long-term, open-label trial to evaluate the safety and efficacy of CTX001 in patients who received CTX001 in CLIMB-111 or CLIMB-121. The trial is designed to follow participants for up to 15 years after CTX001 infusion.

About CTX110
CTX110, a wholly owned program of CRISPR Therapeutics, is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting cluster of differentiation 19, or CD19. CTX110 is being investigated in the ongoing CARBON trial.

About CARBON
The ongoing Phase 1 single-arm, multi-center, open label clinical trial, CARBON, is designed to assess the safety and efficacy of several dose levels of CTX110 for the treatment of relapsed or refractory B-cell malignancies.

About CTX120
CTX120, a wholly-owned program of CRISPR Therapeutics, is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting B-cell maturation antigen, or BCMA. CTX120 is being investigated in an ongoing Phase 1 single-arm, multi-center, open-label clinical trial designed to assess the

safety and efficacy of several dose levels of CTX120 for the treatment of relapsed or refractory multiple myeloma. CTX120 has been granted Orphan Drug designation from the FDA.

About CTX130

CTX130, a wholly-owned program of CRISPR Therapeutics, is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting cluster of differentiation 70, or CD70, an antigen expressed on various solid tumors and hematologic malignancies. CTX130 is being developed for the treatment of both solid tumors, such as renal cell carcinoma, and T-cell and B-cell hematologic malignancies. CTX130 is being investigated in two ongoing independent Phase 1, single-arm, multi-center, open-label clinical trials that are designed to assess the safety and efficacy of several dose levels of CTX130 for the treatment of relapsed or refractory renal cell carcinoma and various subtypes of lymphoma, respectively.

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, regenerative medicine and rare diseases. To accelerate and expand its efforts, CRISPR Therapeutics has established strategic collaborations with leading companies including Bayer, Vertex Pharmaceuticals and ViaCyte, Inc. 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 San Francisco, California and London, United Kingdom. For more information, please visit www.crisprtx.com.

CRISPR Therapeutics Forward-Looking Statement

This press release may contain a number of "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including statements made by Dr. Kulkarni in this press release, as well as statements regarding CRISPR Therapeutics' expectations about any or all of the following: (i) the safety, efficacy, data and clinical progress of CRISPR Therapeutics' various clinical programs, including CTX001, CTX110, CTX120 and CTX130; (ii) the status of clinical trials and preclinical studies (including, without limitation, the expected timing of data releases and development, as well as initiation and completion of clinical trials) and development timelines for CRISPR Therapeutics' product candidates; (iii) expectations regarding the data that has been presented from our various clinical trials (including our CARBON trial) as well as data that will be generated by ongoing and planned clinical trials, and the ability to use that data for the design and initiation of further clinical trials or to support regulatory filings; (iv) the actual or potential benefits of regulatory designations; (v) the potential benefits of CRISPR Therapeutics' collaborations and strategic partnerships; (vi) the intellectual property coverage and positions of CRISPR Therapeutics, its licensors and third parties as well as the status and potential outcome of proceedings involving any such intellectual property; (vii) the sufficiency of CRISPR Therapeutics' cash resources; and (viii) the therapeutic value, development, and commercial potential of CRISPR/Cas9 gene

editing technologies and therapies including as compared to other therapies. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects" and similar expressions are intended to identify forward-looking statements. 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, 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: the potential for initial and preliminary data from any clinical trial and initial data from a limited number of patients not to be indicative of final trial results; the potential that clinical trial results may not be favorable; that one or more of CRISPR Therapeutics' internal or external product candidate programs will not proceed as planned for technical, scientific or commercial reasons; that future competitive or other market factors may adversely affect the commercial potential for CRISPR Therapeutics' product candidates; uncertainties inherent in the initiation and completion of preclinical studies for CRISPR Therapeutics' product candidates (including, without limitation, availability and timing of results and whether such results will be predictive of future results of the future trials); uncertainties about regulatory approvals to conduct trials or to market products; the potential impacts due to the coronavirus pandemic such as (x) delays in regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy; (y) the timing and progress of clinical trials, preclinical studies and other research and development activities; and (z) the overall impact of the coronavirus pandemic on its business, financial condition and results of operations; uncertainties regarding the intellectual property protection for CRISPR Therapeutics' technology and intellectual property belonging to third parties, and the outcome of proceedings (such as an interference, an opposition or a similar proceeding) involving all or any portion of such intellectual property; and those risks and uncertainties described under the heading "Risk Factors" in CRISPR Therapeutics' most recent annual report on Form 10-K, quarterly report on Form 10-Q, and in any other subsequent filings made by CRISPR Therapeutics with the U.S. Securities and Exchange Commission, 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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CRISPR Therapeutics AG
Condensed Consolidated Statements of Operations
(Unaudited, In thousands except share data and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Revenue:				
Collaboration revenue	$ 329	$ 148	$ 900,733	$ 349
Grant revenue	495	—	1,331	—
Total revenue	$ 824	$ 148	$ 902,064	$ 349
Operating expenses:				
Research and development	105,321	71,008	304,163	184,581
General and administrative	24,352	21,539	78,675	62,442
Total operating expenses	129,673	92,547	382,838	247,023
(Loss) income from operations	(128,849)	(92,399)	519,226	(246,674)
Total other income, net	1,101	160	3,806	5,804
Net (loss) income before income taxes	(127,748)	(92,239)	523,032	(240,870)
Benefit (provision) for income taxes	595	(200)	(4,123)	(956)
Net (loss) income	(127,153)	(92,439)	518,909	(241,826)
Foreign currency translation adjustment	(24)	31	(14)	3
Unrealized loss on marketable securities	(117)	(144)	(673)	(144)
Comprehensive (loss) income	$ (127,294)	$ (92,552)	$ 518,222	$ (241,967)
Net (loss) income per common share — basic	$ (1.67)	$ (1.32)	$ 6.85	$ (3.77)
Basic weighted-average common shares outstanding	76,288,534	70,143,481	75,712,437	64,159,224
Net (loss) income per common share — diluted	$ (1.67)	$ (1.32)	$ 6.44	$ (3.77)
Diluted weighted-average common shares outstanding	76,288,534	70,143,481	80,554,682	64,159,224

CRISPR Therapeutics AG
Condensed Consolidated Balance Sheets Data
(Unaudited, in thousands)

	As of	
	September 30, 2021	December 31, 2020
Cash	$ 1,011,548	$ 1,168,620
Marketable securities	1,465,812	521,713
Working capital	2,422,729	1,622,361
Total assets	2,821,725	1,827,966
Total shareholders' equity	2,512,923	1,664,234