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

- More than 45 patients have been dosed with CTX001™ across CLIMB-Thal-111 and CLIMB-SCD-121 to date; completion of enrollment in both trials is expected in 2021-

-Received Orphan Drug Designation (ODD) for Phase 1 clinical trial of CTX130™ for the treatment of T-cell lymphoma-

-Enrollment ongoing in CTX110™, CTX120™ and CTX130 clinical trials-

ZUG, Switzerland and CAMBRIDGE, Mass., July 29, 2021 – CRISPR Therapeutics (Nasdaq: CRSP), a biopharmaceutical company focused on creating transformative gene-based medicines for serious diseases, today reported financial results for the second quarter ended June 30, 2021.

"We concluded an important quarter in which we reported notable data from our hemoglobinopathies program while rapidly advancing our entire clinical and pre-clinical portfolio and our capabilities," said Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics. "Updated clinical data on CTX001 presented at EHA demonstrate consistency and durability, further validating the promise of a functional cure for sickle cell disease and beta thalassemia. We expect to report clinical data from our immuno-oncology programs later this year, and to file multiple INDs for our regenerative medicine and *in vivo* programs in the next 18 to 24 months. In addition, we continue to expand our portfolio and access best-in-class capabilities through collaborations, such as those recently announced with Capsida Biotherapeutics and Nkarta Therapeutics."

Recent Highlights and Outlook

- **Beta Thalassemia and Sickle Cell Disease**

    - In April, CRISPR Therapeutics and Vertex announced an amendment to their collaboration for CTX001. In connection with the completion of the transaction in June, Vertex made a $900 million upfront payment to CRISPR Therapeutics.

    - Data from 22 patients with at least three months of follow-up after CTX001 infusion were presented at the Annual European Hematology Association Virtual Congress (EHA) in June and continued to build the profile of a functional cure for patients with transfusion-dependent beta thalassemia (TDT) and severe sickle cell disease (SCD), showing consistent and durable benefit with longer term data from a larger population of patients.

    - Enrollment and dosing are ongoing in the clinical studies for CTX001 and more than 45 patients have been dosed across the programs to date. The companies anticipate achieving target enrollment in both studies in the third quarter of 2021, with regulatory filings possible in the next 18 to 24 months.

- **Immuno-Oncology**

    - The Company expects to report additional clinical data in 2021 from its ongoing Phase 1 CARBON trial assessing the safety and efficacy of several dose levels of CTX110, its wholly-owned allogeneic chimeric antigen receptor T cell (CAR-T) investigational therapy targeting CD19, for the treatment of relapsed or refractory B-cell malignancies.

    - CRISPR Therapeutics' Phase 1 clinical trial assessing the safety and efficacy of several dose levels of CTX120, its wholly-owned allogeneic CAR-T investigational therapy targeting B-cell maturation antigen for the treatment of relapsed or refractory multiple myeloma, is ongoing. The Company expects to report top-line data from this trial in 2021.

    - CRISPR Therapeutics received Orphan Drug Designation (ODD) from the U.S. Food and Drug Administration (FDA) for CTX130, its wholly-owned allogeneic CAR-T investigational therapy targeting CD70, for the treatment of T-cell lymphoma. CRISPR Therapeutics' two independent Phase 1 clinical trials assessing the safety and efficacy of several dose levels of CTX130, for the treatment of both solid tumors and certain hematologic malignancies, are ongoing. The Company expects to report top-line data from these trials in 2021.

    - In May, CRISPR Therapeutics and Nkarta Therapeutics announced a research and development collaboration to co-develop and co-commercialize two chimeric antigen receptor (CAR) NK cell product candidates, one targeting CD70, and a product candidate combining NK and T cells (NK+T), each enhanced with genome engineering.

- **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's 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. Additionally, earlier this month, *Nature Communications* published an independently peer-reviewed article entitled "Improved CRISPR genome editing using small highly active and specific engineered RNA-guided nucleases." The publication includes information on the Company's development of proprietary small Cas9 variants which may allow for more efficient delivery *in vivo* using viral delivery vehicles. The Company expects to move multiple programs utilizing *in vivo* approaches into the clinic in the next 18 to 24 months.

    - In June, CRISPR Therapeutics and Capsida Biotherapeutics announced a strategic partnership to research, develop, manufacture and commercialize *in vivo* gene editing therapies delivered with engineered AAV vectors for the treatment of familial amyotrophic lateral sclerosis (ALS) and Friedreich's ataxia.

- **Other Corporate Matters**

    - In June, CRISPR Therapeutics announced the election of H. Edward Fleming Jr., M.D. to its Board of Directors. Dr. Fleming is a Senior Partner at McKinsey and Company and the global leader of McKinsey's R&D practice.

Second Quarter 2021 Financial Results

- **Cash Position:** Cash, cash equivalents and marketable securities were $2,589.4 million as of June 30, 2021, compared to $1,806.2 million as of March 31, 2021. The increase in cash of $783.2 million was primarily driven by an upfront payment of $900.0 million in connection with the Amended and Restated Joint Development and Commercialization Agreement with Vertex, offset by continuing operating expenses.

- **Revenue:** Total collaboration revenue was $900.2 million for the second quarter of 2021, compared to less than $0.1 million for the second quarter of 2020. Collaboration revenue primarily consisted of the $900.0 million upfront payment from Vertex, as well as charges to partners for research activities.

- **R&D Expenses:** R&D expenses were $108.3 million for the second quarter of 2021, compared to $59.4 million for the second 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 $29.8 million for the second quarter of 2021, compared to $21.4 million for the second quarter of 2020. The increase in general and administrative expenses for the year was primarily driven by headcount-related expense.

- **Net Income (loss):** Net income was $759.2 million for the second quarter of 2021, compared to a net loss of $79.7 million for the second 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 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) the 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, including expectations regarding the CTX001 data; (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. 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 June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Revenue:				
Collaboration revenue	$ 900,202	$ 44	$ 900,404	$ 201
Grant revenue	499	—	836	—
Total revenue	$ 900,701	$ 44	$ 901,240	$ 201
Operating expenses:				
Research and development	108,277	59,380	198,842	113,573
General and administrative	29,806	21,353	54,323	40,903
Total operating expenses	138,083	80,733	253,165	154,476
Income (loss) from operations	762,618	(80,689)	648,075	(154,275)
Total other income, net	750	1,412	2,705	5,644
Net income (loss) before income taxes	763,368	(79,277)	650,780	(148,631)
Provision for income taxes	(4,143)	(379)	(4,718)	(756)
Net income (loss)	759,225	(79,656)	646,062	(149,387)
Foreign currency translation adjustment	5	(3)	10	(28)
Unrealized loss on marketable securities	(173)	—	(556)	—
Comprehensive income (loss)	$ 759,057	$ (79,659)	$ 645,516	$ (149,415)
Net income (loss) per common share — basic	$ 10.01	$ (1.30)	$ 8.57	$ (2.44)
Basic weighted-average common shares outstanding	$ 75,826,594	$ 61,420,746	$ 75,418,160	$ 61,134,214
Net income (loss) per common share — diluted	$ 9.44	$ (1.30)	$ 8.03	$ (2.44)
Diluted weighted-average common shares outstanding	80,449,956	61,420,746	80,458,855	61,134,214

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

	As of	
	June 30, 2021	December 31, 2020
Cash	$ 1,646,646	$ 1,168,620
Marketable securities	942,800	521,713
Working capital	2,521,020	1,622,361
Total assets	2,899,519	1,827,966
Total shareholders' equity	2,603,795	1,664,234