CRISPR Therapeutics Provides Business Update and Reports Fourth Quarter and Full Year 2020 Financial Results

- *More than 20 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 -*

- *The first patient treated in the CLIMB-Thal-111 trial completed two years of follow-up and has enrolled in the long-term follow-up trial, CTX001-131 -*

- *Additional data from CTX110™ trial expected to report in 2021, along with top-line data from CTX120™ and CTX130™ -*

ZUG, Switzerland and CAMBRIDGE, Mass., February 16, 2021 – CRISPR Therapeutics (Nasdaq: CRSP), a biopharmaceutical company focused on creating transformative gene-based medicines for serious diseases, today reported financial results for the fourth quarter and full year ended December 31, 2020.

"2020 was a pivotal year in the growth of CRISPR Therapeutics. Data presented at ASH and published in *The New England Journal of Medicine* in December of last year provided important validation of our clinical program, CTX001, in TDT and SCD, while positive top-line results from our ongoing Phase 1 CARBON trial for CTX110 targeting CD19+ B-cell malignancies, reported in October 2020, demonstrated meaningful progress for our immuno-oncology program," said Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics. "We are entering 2021 with strong momentum and look forward to further advancing our programs as we enter a new phase of growth for the company."

Dr. Kulkarni added: "In 2021, we expect to complete enrollment in the CTX001 clinical trials and provide data updates on our three clinical allogeneic CAR-T programs. Additionally, we hope to make meaningful progress in bringing our large-scale manufacturing facility online and in building our commercial infrastructure."

Recent Highlights and Outlook

- **Beta Thalassemia and Sickle Cell Disease**

    - In December 2020, CRISPR Therapeutics and its partner Vertex announced positive data on a total of 10 patients treated with the investigational CRISPR/Cas9-based gene-editing therapy, CTX001, in two ongoing Phase 1/2 clinical trials, CLIMB-Thal-111 and CLIMB-SCD-121 during the Scientific Plenary Session at the American Society of Hematology Annual Meeting and Exposition.

    - The companies also announced in December 2020 that *The New England Journal of Medicine* published an independently peer-reviewed article entitled "CRISPR-Cas9 Gene Editing for Sickle Cell Disease and β Thalassemia." The article includes detailed information on the first patient with transfusion-dependent beta thalassemia (TDT)

enrolled in CLIMB-Thal-111 and the first patient with severe sickle cell disease (SCD) enrolled in CLIMB-SCD-121, at 18 and 15 months of follow-up, respectively.

- Enrollment and dosing are ongoing in the clinical trials for CTX001. More than 20 patients have been dosed with CTX001 across both trials to date. Completion of enrollment in both trials is expected in 2021. Additionally, the first patient with TDT treated in CLIMB-Thal-111 recently completed two years of follow-up and has enrolled in the long termlong-term follow-up trial, CTX001-131.

- **Immuno-Oncology**

  - On October 21, 2020, CRISPR Therapeutics announced positive top-line results from its ongoing Phase 1 CARBON trial assessing the safety and efficacy of several dose levels of CTX110, its wholly-owned allogeneic CAR-T investigational therapy targeting CD19+, for the treatment of relapsed or refractory B-cell malignancies. The Company expects to report additional data from this trial in 2021.

  - 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' two independent Phase 1 clinical trials assessing the safety and efficacy of several dose levels of CTX130, its wholly-owned allogeneic CAR-T investigational therapy targeting CD70, 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.

- **Regenerative Medicine**

  - CRISPR Therapeutics and its partner ViaCyte plan 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.

- **Other Corporate Matters**

  - Earlier this month, CRISPR Therapeutics strengthened its senior management team with the appointment of Philippe Drouet as Chief Commercial Officer.

  - In December 2020, CRISPR Therapeutics announced the receipt of a grant from the Bill & Melinda Gates Foundation to research *in vivo* gene editing therapies for the treatment of HIV. The grant builds upon CRISPR Therapeutics' proprietary CRISPR/Cas9 gene editing

technology and expertise in editing hematopoietic stem cells and contributes to efforts to accelerate transformative medicines for global health.

- In October 2020, Professor Emmanuelle Charpentier, CRISPR Therapeutics' co-founder, was awarded the 2020 Nobel Prize in Chemistry for her groundbreaking work on the CRISPR/Cas9 system. She is Founding, Scientific and Managing Director of the Max Planck Unit for the Science of Pathogens and Honorary Professor at Humboldt University, Berlin, Germany.

- In July 2020, CRISPR Therapeutics announced it entered into a lease agreement with Breakthrough Properties for a new location in Boston, Massachusetts. The new facility will consolidate CRISPR's various office and laboratory locations in the greater Boston area into a single location and support the Company's anticipated future growth for five to seven years from the date of occupancy, which is expected in 2022.

- In June 2020, CRISPR Therapeutics announced that it is building a new cell therapy manufacturing facility in Framingham, Massachusetts, for clinical and commercial production of the Company's investigational cell therapy product candidates. The facility is being designed to provide GMP manufacturing according to U.S. Food and Drug Administration and European Medicines Agency regulations and guidelines to support clinical supply and commercial product upon potential regulatory approval.

- In April 2020, CRISPR Therapeutics announced that under its June 2019 collaboration agreement with Vertex to discover and develop gene editing therapies for the treatment of Duchenne Muscular Dystrophy and Myotonic Dystrophy Type 1 (DM1), CRISPR Therapeutics received a payment of $25 million from Vertex related to the achievement of a research milestone in the DM1 program. CRISPR Therapeutics is eligible to receive additional milestone payments from Vertex of up to $800 million for these two programs.

Fourth Quarter and Full Year 2020 Financial Results

- **Cash Position:** Cash, cash equivalents and marketable securities were $1,690.3 million as of December 31, 2020, compared to $943.8 million as of December 31, 2019. The increase in cash of $746.6 million was primarily driven by cash from financing activities of $1,016.1 million, which consists primarily of proceeds from the Company's July public offering and funds received from its "at-the-market" offering during 2020.

- **Revenue:** Total collaboration revenue was $0.2 million for the fourth quarter of 2020 compared to $77.0 million for fourth quarter of 2019, and $0.5 million for the year ended December 31, 2020, compared to $289.6 million for the year ended December 31, 2019. The decrease in collaboration revenue is primarily attributable to revenue recognized in connection with the sale of certain licenses under the Company's collaboration with Vertex during the year ended December 31, 2019.

- **R&D Expenses:** R&D expenses were $82.4 million for the fourth quarter of 2020 compared to $48.8 million for the fourth quarter of 2019, and $266.9 million for the year ended December 31, 2020, compared to $179.4 million for the year ended December 31, 2019. The increase in expense for the year 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 $25.8 million for the fourth quarter of 2020 compared to $17.3 million for the fourth quarter of 2019, and $88.2 million for the year ended December 31, 2020, compared to $63.5 million for the year ended December 31, 2019. The increase in general and administrative expenses for the year was driven by headcount-related expense.

- **Net Income/Loss:** Net loss was $107.0 million for the fourth quarter of 2020 compared to income of $30.5 million for the fourth quarter of 2019, and net loss was $348.9 million for the year ended December 31, 2020, compared to income of $66.9 million for the year ended December 31, 2019.

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 engineered 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 transfusion requirements for TDT patients and reduce painful and debilitating sickle crises for SCD patients.

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

CTX001 is being developed under a co-development and co-commercialization agreement between CRISPR Therapeutics and Vertex. Among gene-editing approaches being investigated/evaluated for TDT and SCD, CTX001 is the furthest advanced in clinical development.

About CLIMB-Thal-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-SCD-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 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.

Based on progress to date in this program, 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 partnerships 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 (including, without limitation, expectations regarding the data that is being presented, the expected timing of data releases and development, as well as 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, including expectations regarding the CTX001 and CTX110 data that was recently presented; (iv) the actual or potential benefits of regulatory designations; (v) CRISPR Therapeutics' ability to build out new facilities in anticipated timeframes and need for infrastructure expansion; (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; (viii) the expected benefits of CRISPR Therapeutics' collaborations; (ix) updates to CRISPR Therapeutics' management team; and (x) 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 December 31,		Year Ended December 31,	
	2020	2019	2020	2019
Revenue:				
Collaboration revenue	$ 194	$ 77,016	$ 543	$ 289,590
Grant revenue	176	—	176	—
Total revenue	$ 370	$ 77,016	719	$ 289,590
Operating expenses:				
Research and development	82,365	48,762	266,946	179,362
General and administrative	25,766	17,271	88,208	63,488
Total operating expenses	108,131	66,033	355,154	242,850
(Loss) Income from operations	(107,761)	10,983	(354,435)	46,740
Total other income (expense), net	575	19,563	6,379	20,566
Net (loss) income before income taxes	(107,186)	30,546	(348,056)	67,306
Benefit (provision) for income taxes	147	(4)	(809)	(448)
Net (loss) income	(107,039)	30,542	(348,865)	66,858
Foreign currency translation adjustment	37	29	40	15
Unrealized loss on marketable securities	14	—	(130)	—
Comprehensive (loss) income	$ (106,988)	$ 30,571	$ (348,955)	$ 66,873
Net (loss) income per common share - basic	$ (1.50)	$ 0.53	$ (5.29)	$ 1.23
Basic weighted-average common shares outstanding	71,282,096	57,395,839	65,949,672	54,392,304
Net (loss) income per common share - diluted	$ (1.50)	$ 0.51	$ (5.29)	$ 1.17
Diluted weighted-average common shares outstanding	71,282,096	60,233,927	65,949,672	56,932,798

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

	As of	
	December 31, 2020	December 31, 2019
Cash	$ 1,168,620	$ 943,771
Marketable securities	521,713	—
Working capital	1,622,361	930,441
Total assets	1,827,966	1,066,752
Total shareholders' equity	1,664,234	939,425