CRISPR Therapeutics and ViaCyte, Inc. Announce First Patient Dosed in Phase 1 Clinical Trial of Novel Gene-Edited Cell Replacement Therapy for Treatment of Type 1 Diabetes (T1D)

ZUG, Switzerland, and CAMBRIDGE, Mass., and SAN DIEGO, Calif., February 2, 2022 – CRISPR Therapeutics (Nasdaq: CRSP), a biopharmaceutical company focused on developing transformative gene-based medicines for serious diseases, and ViaCyte, Inc., a clinical-stage regenerative medicine company developing novel cell replacement therapies to address diseases with significant unmet needs, today announced the first patient has been dosed in the Phase 1 clinical trial of VCTX210 for the treatment of type 1 diabetes (T1D).

VCTX210 is an investigational, allogeneic, gene-edited, stem cell-derived product developed in collaboration by applying CRISPR Therapeutics' gene-editing technology to ViaCyte's proprietary stem cell capabilities for the generation of pancreatic cells designed to evade recognition by the immune system. This immune-evasive cell replacement therapy is designed to enable patients to produce their own insulin.

"We are excited to work with CRISPR Therapeutics and ViaCyte to carry out this historic, first-in-human transplant of gene-edited, stem cell-derived pancreatic cells for the treatment of diabetes designed to eliminate the need for immune suppression," said James Shapiro, M.D., Ph.D., Canada Research Chair, Director of the Islet Transplant Program at the University of Alberta, Canada, and a clinical investigator in the trial. "If this approach is successful, it will be a transformative treatment for patients with all insulin-requiring forms of diabetes."

The Phase 1 clinical trial of VCTX210 will assess its safety, tolerability, and immune evasion in patients with T1D. This program is being advanced by CRISPR Therapeutics and ViaCyte as part of a strategic collaboration for the discovery, development, and commercialization of gene-edited stem cell-derived therapies that could offer a functional cure for people living with T1D and insulin-requiring type 2 diabetes without the need for immunosuppression.

About VCTX210

VCTX210 is an investigational, allogeneic, gene-edited, immune-evasive, stem cell-derived therapy for the treatment of T1D. VCTX210 is being developed under a co-development and co-commercialization agreement between CRISPR Therapeutics and ViaCyte, Inc.

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.

About ViaCyte

ViaCyte is a privately held clinical-stage regenerative medicine company developing novel cell replacement therapies based on two major technological advances: cell replacement therapies derived from pluripotent stem cells and medical device systems for cell encapsulation and implantation. ViaCyte has the opportunity to use these technologies to address critical human diseases and disorders that can potentially be treated by replacing lost or malfunctioning cells or proteins. ViaCyte's first product candidates are being developed as potential long-term treatments for patients with type 1 diabetes to achieve glucose control targets and reduce the risk of hypoglycemia and diabetes-related complications. To accelerate and expand ViaCyte's efforts, it has established collaborative partnerships with leading companies, including CRISPR Therapeutics and W.L. Gore & Associates. ViaCyte is headquartered in San Diego, California. For more information, please visit www.viacyte.com and connect with ViaCyte on Twitter, Facebook, and LinkedIn.

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. Shapiro 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 our various clinical programs, including our VCTX210 program; (ii) the status of clinical trials (including, without limitation, activities at clinical trial sites) and expectations regarding data from clinical trials; (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; and (iv) 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; potential impacts due to the coronavirus pandemic, such as the timing and progress of clinical trials; that future competitive or other market factors may adversely affect the commercial potential for CRISPR Therapeutics' product candidates; 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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