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CRISPR Therapeutics and ViaCyte, Inc. to Start Clinical Trial of the First Gene-Edited Cell Replacement Therapy for Treatment of Type 1 Diabetes

-Initiation of patient enrollment expected by year-end-

ZUG, Switzerland and CAMBRIDGE, Mass., and SAN DIEGO, Calif., November 16, 2021 — 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 that Health Canada has approved the companies' Clinical Trial Application (CTA) for VCTX210, an allogeneic, gene-edited, immune-evasive, stem cell-derived therapy for the treatment of type 1 diabetes (T1D). Initiation of patient enrollment is expected by year-end.

"With the approval of our CTA, we are excited to bring a first-in-class CRISPR-edited cell therapy for the treatment of type 1 diabetes to the clinic, an important milestone in enabling a whole new class of gene-edited stem cell-derived medicines," said Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics. "The combination of ViaCyte's leading stem cell capabilities and CRISPR Therapeutics' pre-eminent gene-editing platform has the potential to meaningfully impact the lives of patients living with type 1 diabetes."

"Being first into the clinic with a gene-edited, immune-evasive cell therapy to treat patients with type 1 diabetes is breaking new ground as it sets a path to potentially broadening the treatable population by eliminating the need for immunosuppression with implanted cell therapies," said Michael Yang, President and Chief Executive Officer of ViaCyte. "This approach builds on previous accomplishments by both companies and represents a major step forward for the field as we strive to provide a functional cure for this devastating disease."

The Phase 1 clinical trial of VCTX210 is designed to 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 therapies for the treatment of diabetes. VCTX210 is an allogeneic, gene-edited, stem cell-derived product developed by applying CRISPR Therapeutics' gene-editing technology to ViaCyte's proprietary stem cell capabilities and has the potential to enable a beta-cell replacement product that may deliver durable benefit to patients without requiring concurrent immune suppression.

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. Kulkarni and Mr. Yang in this press release, as well as 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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