Poseida Therapeutics Announces Publication Highlighting Potential of Cas-CLOVER™ as an Efficient and Robust Gene Editing System for Developing Allogeneic CAR-T Products

Publication highlights ability of Cas-CLOVER to perform multiplexed gene editing to produce allogeneic products with a high percentage of T_{scm} cells that may result in better tolerability and deeper clinical responses

Cas-CLOVER has demonstrated lower off-target and translocation activity than other published technologies including CRISPR, TALENs and Base Editors

SAN DIEGO, June 29, 2022 /PRNewswire/ -- Poseida Therapeutics, Inc. (Nasdaq: PSTX), a clinical-stage biopharmaceutical company utilizing proprietary genetic engineering platform technologies to create cell and gene therapeutics with the capacity to cure, today announced a peer-reviewed publication highlighting the potential of its proprietary Cas-CLOVER Site-specific Gene Editing System as a high-efficiency platform for the production of allogeneic CAR-T cells. The paper, titled *"Cas-CLOVER is a novel high-fidelity nuclease for safe and robust generation of T_{SCM}-enriched allogeneic CAR-T cells,"* was published online today in *Molecular Therapy – Nucleic Acids*. The paper will appear in print in the September 2022 issue of the journal.

Poseida announces publication on potential of Cas-CLOVER as robust gene editing system in #allogeneic CAR-T development.

"We are excited to publish data from this very comprehensive study of our gene editing system in T cells," said Eric Ostertag, M.D., Ph.D., Executive Chairman of Poseida Therapeutics. "This publication validates the precision of our proprietary Cas-CLOVER system, which is utilized in the manufacture of our fully allogeneic product candidates currently in clinical trials, including P-BCMA-ALLO1 for relapsed/refractory multiple myeloma and P-MUC1C-ALLO1 for multiple solid tumor indications."

Cas-CLOVER is a novel, high-fidelity gene editing system that can be used for high-efficiency gene editing in T cells to create allogeneic CAR-T products. In these published studies, Cas-CLOVER was used for multiplexed gene editing in resting T cells, which resulted in allogeneic product candidates with a high percentage (45%-70%) of desirable T stem cell memory (T_{scm}) cells. Using next-generation sequencing, off-target activity was measured at a rate between 0.012% and 0.089%, which is significantly lower than many other gene editing platforms. In addition, off-target translocations, which are undesirable chromosomal abnormalities, approached the lower limit of detection at a frequency of less than 0.01%.

"Cas-CLOVER is a highly versatile and precise system that can be used to make site-specific deletions, insertions and knock-ins and works in multiple cell types," said Blair Madison, Ph.D., Vice President, Genetic Engineering at Poseida Therapeutics, first author of the publication. "We continue to innovate, including the enhancement of Cas-CLOVER, to create potentially transformative treatments for patients in oncology and rare diseases."

About Poseida Therapeutics, Inc.

Poseida Therapeutics is a clinical-stage biopharmaceutical company dedicated to utilizing our proprietary genetic engineering platform technologies to create next generation cell and gene therapeutics with the capacity to cure. We have discovered and are developing a broad portfolio of product candidates in a variety of indications based on our core proprietary platforms, including our non-viral piggyBac® DNA Delivery System, Cas-CLOVER Site-specific Gene Editing System and nanoparticle- and AAV-based gene delivery technologies. Our core platform technologies have utility, either alone or in combination, across many cell and gene therapeutic modalities and enable us to engineer our portfolio of product candidates that are designed to overcome the primary limitations of current generation cell and gene therapeutics. To learn more, visit www.poseida.com and connect with us on Twitter and LinkedIn.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include statements regarding, among other things, the potential benefits of Poseida's technology platforms and product candidates, the safety and efficiency of Poseida's Cas-CLOVER Site-specific Gene Editing System, Poseida's plans and strategy with respect to developing its technologies and product candidates, and anticipated timelines and milestones with respect to Poseida's development programs and manufacturing activities. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon Poseida's current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks and uncertainties associated with development and regulatory approval of novel product candidates in the biopharmaceutical industry and the other risks described in Poseida's filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Poseida undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made, except as required by law.

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