Poseida Therapeutics Provides Update on Key Programs and Developments During R&D Day

Virtual R&D Day featuring key opinion leaders and Poseida's scientific team members to be held today, at 10:00am ET / 7:00am PT

SAN DIEGO, Feb. 24, 2021 /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 that the Company plans to highlight its clinical and preclinical pipeline progress during a virtual R&D Day to be held today, February 24, 2021 beginning at 10am ET.

"Over the past year, we have made tremendous progress as we continue to validate our novel technology platforms and advance our broad and deep clinical and preclinical programs," commented Eric Ostertag, M.D., Ph.D., Chief Executive Officer. "During today's R&D Day, we will take a deep dive into Poseida's novel cell and genetic engineering platform technologies, differentiated CAR-T programs and innovative approaches to cell and gene therapy. We look forward to highlighting our progress to date, introducing a new potential pipeline product candidate, as well as several emerging discovery programs, and discussing our corporate strategy."

Specific highlights will include an early look at the ongoing P-PSMA-101 clinical trial; demonstration of the potential for single treatment cures with a completely non-viral nanoparticle-based gene therapy system; an extensive study of our Cas-CLOVER™ Site-Specific Gene Editing System demonstrating best-in-class gene editing specificity; and a look at our CAR-NK, and induced pluripotent stem cell, or iPSC, capabilities.

Key Program Highlights

Autologous CAR-T Update
P-BCMA-101 is an autologous CAR-T product candidate in an ongoing Phase 1 dose expansion trial and Phase 2 trial in development for the treatment of relapsed/refractory multiple myeloma to treat patients with multiple myeloma. Today's discussion will include data demonstrating the importance of T stem cell memory in CAR-T. The Company intends to provide an update on this program later in 2021.

P-PSMA-101 is a solid tumor autologous CAR-T product candidate in an ongoing Phase 1 dose escalation trial in development to treat patients with metastatic castrate resistant prostate cancer, or mCRPC. Today's presentation will include a case study of a patient with mCRPC treated with P-PSMA-101 at a dose of 0.25 x 10e6 cells/kg (~20 x 10e6 total cells) who showed a marked decrease in PSA expression levels of more than 50% in the first three weeks post treatment and is continuing on trial. The patient was reported to have Grade 1 CRS in the second week which was treated to resolution. The Company intends to provide an additional update on this program later in 2021.

Allogeneic CAR-T Update (including Cas-CLOVER off-target analysis)
P-BCMA-ALLO1 is the Company's first allogeneic CAR-T product candidate in development for the treatment of relapsed/refractory multiple myeloma. The Company will present updated preclinical data and ongoing IND enabling work, with an expected filing in the first half of 2021. Data utilizing Cas-CLOVER™, the Company's high-precision gene editing technology to eliminate knock out TCR and B2M to address alloreactivity in P-BCMA-ALLO1, will also be presented.

P-MUC1C-ALLO1 is the Company's allogeneic CAR-T product candidate currently in preclinical development, with the potential to treat a wide range of solid tumors, including breast and ovarian cancers. The Company will share updated preclinical data demonstrating complete tumor elimination in triple negative breast and ovarian cancer models. P-MUC1C-ALLO1 will be the first clinical product to be manufactured at Poseida's pilot manufacturing facility in San Diego, with an IND filing expected by the end of 2021.

piggyBac® Delivery in vivo for Liver Directed Gene Therapies

P-OTC-101 is the Company's first liver-directed gene therapy program for in vivo treatment of urea cycle disease caused by congenital mutations in the OTC gene, a condition characterized by high unmet medical need. Preclinical data from ongoing IND enabling studies will be presented by Bruce Scharschmidt, M.D., an expert in OTC deficiency and a consultant to Poseida.

Denise Sabatino, Ph.D., a recognized expert in Factor VIII therapy for Hemophilia, will present the Company's piggyBac Factor VIII program for hemophilia A, P-FVIII-101, delivered by Poseida's proprietary nanoparticle technology. Nanoparticle plus piggyBac delivery of Factor VIII demonstrates near normal levels of Factor VIII expression in juvenile mice with a single treatment in preclinical models.

Emerging Programs
TCR-T: Poseida's TCR-T platform combines the Company's piggyBac DNA delivery and Cas-CLOVER gene editing technologies in order to generate effective and functional off-the-shelf TCR-T product candidates with a high percentage of highly desirable Tscm cells. The TCR-T platform could be leveraged to increase the number of potential indications in oncology and beyond, including infectious diseases and autoimmunity.

Anti-cKit CAR-T: Safer non-genotoxic conditioning regimens are potentially possible with the Company's anti-cKit CAR-T program for hematopoietic stem cell, or HSC, conditioning, which may reduce transplant morbidity and mortality, resulting in better outcomes and a greatly expanded number of potential indications. Data include results from preclinical experiments demonstrating the ability of anti-cKit CAR-T cells to deplete human stem cell grafts in NSG mice and to prolong survival in a mouse model of AML.

Genetically Modified HSCs: HSCs can be modified via the piggyBac DNA Delivery System and/or the Cas-CLOVER Site-Specific Gene Editing System. Today's presentation will show data confirming that genetically modified HSCs engraft in the bone marrow and demonstrate long-term persistence. CAR-HSC has the potential to be a highly effective CAR-T approach, as it theoretically could provide an inexhaustible supply of effector cells to eradicate tumor and can be differentiated to generate high yields of CAR-T, CAR-NK and CAR-myeloid cells.

iPSCs: Cas-CLOVER is also efficient for creating knockouts and knock-ins in induced pluripotent stem cells, or iPSCs, with very low toxicity. Data will be presented showing the greater efficiencies of Cas-CLOVER as compared to an industry standard editing platform for therapeutic knock-in using plasmid DNA.

Genetically Modified NK Cells: The Company will also present data on efficient genetic modification of NK Cells using piggyBac and Cas-CLOVER platform technologies. The Cas-CLOVER gene editing system can be used to efficiently edit NK cells, or CAR-NK cells, while piggyBac can be used to effectively deliver large therapeutic transgenes to activated or un-activated peripheral blood NK cells which maintain CAR expression, phenotype, and function. Several emerging potential CAR-NK cell product candidates will be revealed, all of which demonstrate specific killing of cancer cells.

R&D Day Webcast Information
A live webcast of the Company's R&D Day event will be available on the Investors & Media section of Poseida's website, www.poseida.com. A replay of the webcast will be available for 30 days following the presentation.

About Poseida Therapeutics, Inc.
Poseida Therapeutics is a clinical-stage biopharmaceutical company dedicated to utilizing our proprietary gene 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 Modification 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 wholly-owned 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 the clinical data presented, the potential benefits of Poseida's technology platforms and product candidates and Poseida's plans and strategy with respect to developing its technologies and product candidates. 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, the fact that future clinical results could be inconsistent with results observed to date 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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