Poseida Therapeutics Announces Dosing of First Patient in Phase 1 Clinical Trial of P-PSMA-101 Autologous CAR-T for Metastatic Castration-Resistant Prostate Cancer

SAN DIEGO, May 20, 2020 /PRNewswire/ -- Poseida Therapeutics, Inc., a clinical-stage biopharmaceutical company dedicated to utilizing proprietary non-viral gene engineering platform technologies to create next generation cell and gene therapeutics with the capacity to cure, today announced the first patient has been dosed in its Phase 1 clinical trial evaluating P-PSMA-101, its autologous CAR-T therapeutic candidate, in metastatic castration-resistant prostate cancer. The study represents a promising advancement in evolving cell therapies to treat solid tumors.

"Extending our gene engineering technology to solid tumors represents the next opportunity in oncology where we believe our proprietary platforms and approach have advantages over others in the space," said Eric Ostertag, M.D., Ph.D., Chief Executive Officer of Poseida. "Our platform technologies, which include the piggyBac DNA Modification System and Cas-CLOVER site-specific gene editing system, are driving our diverse pipeline of next-generation CAR-T treatments for hematologic and solid tumors, as well as gene therapies addressing rare diseases."

As part of its research, Poseida's Phase 1 open label, multi-center, dose-escalating trial will include cohorts receiving single and multiple doses of P-PSMA-101, with the goal of determining the best dose with the fewest side effects.

P-PSMA-101 is designed to target prostate-specific membrane antigen (PSMA), which is expressed on metastatic castration-resistant prostate cancer cells. It was developed using Poseida's proprietary piggyBac DNA Modification System, which produces product candidates with a high percentage of stem cell memory T (T_{SCM}) cells. T_{SCM} cells are long-lived, self-renewing and multipotent, with the capacity to reconstitute the entire spectrum of T cell subsets, including effector T (T_{EFF}) cells, the most maturated cells which are tumor killing.

Poseida believes this higher composition of T_{SCM} cells is central in addressing the challenges associated with earlier generation CAR-T therapies, including safety and duration of response. Based upon clinical data to date, the Company has observed a strong correlation between the percentage of T_{SCM} cells in the product candidate and best clinical response. In addition to these observations, there is a growing body of scientific evidence and recognition that T_{SCM} is correlated with efficacy in the clinic.

Metastatic castration-resistant prostate cancer spreads to other parts of the body and is an indication where new advancements like CAR-T therapy are needed. Most prostate cancer deaths are typically the result of metastatic castration-resistant prostate cancer and, historically, the median survival has been less than two years.

Poseida is also developing a fully allogeneic, or "off-the-shelf," CAR-T product candidate targeting PSMA, P-PSMA-ALLO1, currently in preclinical development. This could bring the additional advantages of the Company's allogeneic platform to prostate cancer patients once preliminary tolerability and clinical activity with P-PSMA-101 are established.

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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. For more information, visit www.poseida.com.

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