Aprea Therapeutics Announces First Patient Dosed in ACESOT-1051 Phase 1 Trial Evaluating Oral WEE1 Inhibitor APR-1051

June 17, 2024

APR-1051 is a highly selective and potentially best-in-class oral WEE1 inhibitor

Phase 1 ACESOT-1051 clinical trial is evaluating APR-1051 as monotherapy treatment in patients with significant unmet medical need

Dosing of the first patient in the ACESOT-1051 study represents a key advancement in Aprea's clinical pipeline

DOYLESTOWN, Pa., June 17, 2024 (GLOBE NEWSWIRE) -- Aprea Therapeutics, Inc. (Nasdaq: APRE) ("Aprea", or the "Company"), a clinical-stage biopharmaceutical company focused on precision oncology through synthetic lethality, today announced that the first patient has been dosed in the ACESOT-1051 Phase 1 study evaluating daily oral WEE1 inhibitor APR-1051 as monotherapy in advanced solid tumor patients with unmet medical need.

APR-1051 was discovered and preclinically evaluated by Aprea's team of chemists and scientists. APR-1051 is a potent and highly selective small molecule designed to limit off-target toxicity that may provide good safety and tolerability and has shown a potentially favorable drug exposure in pre-clinical models.

APR-1051 targets WEE1 kinase, an enzyme involved in the DNA damage response pathway. Based on preclinical studies, we believe APR-1051 may solve liabilities associated with other WEE1 inhibitors and is differentiated based on: 1) molecular structure; 2) selectivity for WEE1 versus off-target inhibition of the polo-like kinase, or PLK, family of kinases; 3) potentially improved pharmacokinetic (PK) properties; and 4) potential absence of QT prolongation at doses that significantly inhibit WEE1. No head-to-head studies with APR-1051 have been conducted.

ACESOT-1051 is a focused biomarker-driven study with advanced/metastatic solid tumors harboring the following cancer-associated gene alterations:

- Amplification/overexpression of CCNE1 or CCNE2 regardless of tumor type, or
- Deleterious mutations in FBXW7 or PPP2R1A regardless of tumor type, or
- Colorectal cancer with KRAS-GLY12 and TP53 co-mutation, or
- Uterine serous carcinoma regardless of biomarker status

"Dosing of the first patient in the ACESOT-1051 study is an important milestone in our APR-1051 development program and represents a key advancement of our clinical pipeline," said Oren Gilad, Ph.D., President and Chief Executive Officer of Aprea. "Adding a second clinical program enriches our asset portfolio. We are initially evaluating single agent activity of APR-1051 to provide the basis for future rational combination treatments. We hope to confirm APR-1051's safety profile in this Phase 1 study and generate the necessary data that will help us understand how it can be best utilized to treat patients. We plan to provide a clinical update by year-end 2024 and generate preliminary efficacy data during 2025."

The first patient was enrolled at NEXT Oncology, San Antonio, Texas. Additional centers, including The University of Texas MD Anderson Cancer Center, are expected to participate.

Anthony Tolcher M.D., Founder of Next Oncology commented, "NEXT Oncology is committed to exploring new treatment options for cancer patients and we are pleased to begin this important clinical trial. Cancers that over express Cyclin E (CCNE1 and CCNE2) represent a high unmet medical need, and patients with Cyclin E over expression have poor prognosis and no effective therapies. WEE1 kinase is a validated oncology target and we look forward to the results of this study."

ACESOT-1051 Study Design

ACESOT-1051 (**A** Multi-**C**enter **E**valuation of WEE1 Inhibitor in Patients with Advanced **So**lid **T**umors, APR-1051) is designed to assess the safety, pharmacokinetics, pharmacodynamics, and preliminary efficacy of single-agent APR-1051 in advanced solid tumors harboring cancer-associated gene alterations. Oral APR-1051 will be administered once daily for 28-day cycles. The study consists of two parts: Part 1 is dose escalation and is expected to enroll up to 39 patients with advanced solid tumors. The first three dose levels will use accelerated titration followed by Bayesian Optimal Interval (BOIN) design for the remaining dose levels; Part 2 (up to 40 patients) is designed for dose optimization, with the goal of selecting the Recommended Phase 2 Dose (RP2D).

The primary objectives of the study are to measure safety, dose-limiting toxicities (DLTs), maximum tolerated dose or maximum administered dose (MTD/MAD), and RP2D; secondary objectives are to evaluate pharmacokinetics, preliminary efficacy according to RECIST or PCWG3 criteria; pharmacodynamics is an exploratory objective. The University of Texas MD Anderson Cancer Center is the lead site, and the study will be performed at between 3 and 10 sites in the U.S.

The ACESOT-1051 design was featured in a poster at the American Association of Cancer Research (AACR) annual meeting which took place in April 2024 in San Diego. A copy of the poster can be found here. For more information, refer to ClinicalTrials.gov NCT06260514.

About Aprea

Aprea Therapeutics, Inc. is a clinical-stage biopharmaceutical company headquartered in Doylestown, Pennsylvania, focused on precision oncology through synthetic lethality. The Company's lead program is ATRN-119, a clinical-stage small molecule ATR inhibitor in development for solid tumor indications. APR-1051, an oral, small molecule WEE1 inhibitor, recently entered the clinic. For more information, please visit the company website at www.aprea.com.

The Company may use, and intends to use, its investor relations website at https://ir.aprea.com/ as a means of disclosing material nonpublic

information and for complying with its disclosure obligations under Regulation FD.

Forward-Looking Statement

Certain information contained in this press release includes "forward-looking statements", within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended related to our study analyses, clinical trials, regulatory submissions, and projected cash position. We may, in some cases use terms such as "future," "predicts," "believes," "potential," "continue," "anticipates," "estimates," "expects," "plans," "intends," "targeting," "confidence," "may," "could," "might," "likely," "will," "should" or other words that convey uncertainty of the future events or outcomes to identify these forward-looking statements. Our forward-looking statements are based on current beliefs and expectations of our management team and on information currently available to management that involve risks, potential changes in circumstances, assumptions, and uncertainties. All statements contained in this press release other than statements of historical fact are forward-looking statements, including statements regarding our ability to develop, commercialize, and achieve market acceptance of our current and planned products and services, our research and development efforts, including timing considerations and other matters regarding our business strategies, use of capital, results of operations and financial position, and plans and objectives for future operations. Any or all of the forward-looking statements may turn out to be wrong or be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. These forward-looking statements are subject to risks and uncertainties including, without limitation, risks related to the success, timing, and cost of our ongoing clinical trials and anticipated clinical trials for our current product candidates, including statements regarding the timing of initiation, pace of enrollment and completion of the trials (including our ability to fully fund our disclosed clinical trials, which assumes no material changes to our currently projected expenses), futility analyses, presentations at conferences and data reported in an abstract, and receipt of interim or preliminary results (including, without limitation, any preclinical results or data), which are not necessarily indicative of the final results of our ongoing clinical trials, our understanding of product candidates mechanisms of action and interpretation of preclinical and early clinical results from its clinical development programs, and the other risks, uncertainties, and other factors described under "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in the documents we file with the U.S. Securities and Exchange Commission. For all these reasons, actual results and developments could be materially different from those expressed in or implied by our forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which are made only as of the date of this press release. We undertake no obligation to update such forward-looking statements for any reason, except as required by law.

Investor Contact:

Mike Moyer
LifeSci Advisors
mmoyer@lifesciadvisors.com