November 4, 2021

Processa Pharmaceuticals

Processa Pharmaceuticals Announces Next Generation Capecitabine (Combination of PCS6422 and Capecitabine) Inhibits DPD in Phase 1b Interim Analysis

- **Next Generation Capecitabine inhibited DPD activity 24-48 hours after PCS6422 administration with < 10% of 5-FU metabolized to FBAL compared to 80% reported for FDA approved capecitabine.**
- **24-48 hours after PCS6422 administration, 5-FU potency based on systemic exposure per mg of capecitabine was at least 50 x greater than reported for FDA approved capecitabine.**
- **The improved metabolism profile and increased potency did not exist 7 days after PCS6422 administration.**
- **The timeline of DPD inhibition and de novo formation will be further evaluated in the existing study in order to identify PCS6422 regimens which may inhibit DPD throughout capecitabine dosing.**

HANOVER, MD, Nov. 04, 2021 (GLOBE NEWSWIRE) -- Processa Pharmaceuticals, Inc. (NASDAQ: PCSA), ("Processa" or the "Company"), a clinical-stage biopharmaceutical company developing products to improve the survival and/or quality of life for patients who have unmet medical need conditions, announced today that the Company's Next Generation Capecitabine dosage regimen (a combination of PCS6422 administered with capecitabine) successfully inhibited dihydropyrimidine dehydrogenase (DPD), altering the metabolism of 5-fluoruracil (5-FU) at least during the first 24-48 hours after PCS6422 administration but not throughout the 7 days of capecitabine dosing. If Next Generation Capecitabine inhibits the metabolism of 5-FU throughout capecitabine dosing, the combination product could be a more potent and safer cancer treatment than current chemotherapy drugs including FDA approved capecitabine, opening a multi-billion-dollar cancer chemotherapy market across multiple types of cancer.

From the pharmacokinetic analyses of capecitabine, 5-FU, and their metabolites on days 1 and 7 of capecitabine treatment, the one-day dosing of PCS6422 irreversibly inhibited dihydropyrimidine dehydrogenase (DPD) on day 1 of capecitabine dosing in the first 2 Cohorts of the Phase 1b trial resulting in: 1) less than 10% of 5-FU being metabolized to FBAL compared to 80% reported with FDA approved capecitabine, 2) a significantly longer half-life of 5-FU (i.e., 3-4 hours) than reported for FDA approved capecitabine (i.e., 30-60 minutes), and 3) 5-FU potency based on exposure per mg of capecitabine administered (i.e., AUC(0-inf)) being at least 50 x 5-FU potency based on the exposure reported for current FDA approved capecitabine.

There was little DPD inhibition found seven days after PCS6422 dosing allowing the 5-FU

from the Next Generation Capecitabine to be metabolized to FBAL, similar to current FDA approved capecitabine.

“Given the interim findings on the DPD activity, the Company plans to modify the Phase 1b trial to not only determine the MTD of capecitabine but also to further evaluate the timeline of DPD inhibition and de novo formation in an effort to define 6422 regimens which will maintain DPD inhibition throughout capecitabine dosing,” said Dr. David Young, Chairman and CEO of Processa. “Although in the first two cohorts, Dose Limiting Toxicities (DLTs) did not occur and drug related adverse events were only Grade 1 with no hand-foot syndrome noted, we will postpone enrolling Cohort 3 in order to modify our Phase 1b protocol and interact with the FDA regarding the modification of our trial. The aims of our proposed modifications are to develop a more precise timeline of DPD inhibition, DPD de novo formation, as well as inter-patient variability. Processa will begin to collect the data to individualize the treatment of Next Generation Capecitabine for cancer patients, leading to a more personalized or precision-based medicine approach.”

Next Generation Capecitabine (PCS6422 and Capecitabine)

Capecitabine is one of the most widely used chemotherapy agents in oncology and addresses a multi-billion-dollar market. It is an oral prodrug of 5-FU that is converted to 5-FU through a series of 3 metabolic steps. The problem with the current use of capecitabine, is that approximately 80% of 5-FU is broken down through catabolism to non-cancer killing metabolites that may cause dose limiting side effects such as hand-foot syndrome and cardiotoxicity while only 20% of 5-FU is metabolized through successive phosphorylation steps to active nucleotides which cause cell apoptosis and cancer cell death. Given the catabolism is initialized through the DPD enzyme, PCS6422 (an irreversible inhibitor of DPD) decreases the catabolism of 5-FU resulting in more of the 5-FU being metabolized to active 5-FU nucleotides which may lead to an increase in the cell death potency of each mg of capecitabine administered. Thus, combining capecitabine with PCS6422, results in lower amounts of capecitabine needed to cause cellular apoptosis and death, making the PCS6422-capecitabine combination a more potent Next Generation Capecitabine.

The Next Generation Capecitabine (PCS6422 administered with capecitabine) Phase 1b trial (NCT04861987) is multi-center, maximum tolerated dose trial. The Phase 1b trial is designed to evaluate the change in the metabolism of 5-FU when DPD has been inhibited and given the increased potency of capecitabine, the maximum tolerated dose of capecitabine within the Next Generation Capecitabine regimen. The metabolism and pharmacokinetics of capecitabine, 5-FU, and their metabolites are being evaluated as well as the dose limiting toxicities and adverse event profile. Preliminary evidence of efficacy and further confirmation of the safety of Next Generation Capecitabine will be obtained in those patients who choose to continue Next Generation Capecitabine.

More information on our clinical trials can be found on our new website.

About Processa Pharmaceuticals, Inc.

The mission of Processa is to develop products with existing clinical evidence of efficacy for patients with unmet or underserved medical conditions who need treatment options that improve survival and/or quality of life. The Company uses these criteria for selection to further develop its pipeline programs to achieve high-value milestones effectively and

efficiently. Active clinical pipeline programs include: PCS6422 (metastatic colorectal cancer and breast cancer), PCS499 (ulcerative necrobiosis lipoidica) and PCS12852 (GI motility/gastroparesis). The members of the Processa development team have been involved with more than 30 drug approvals by the FDA (including drug products targeted to orphan disease conditions) and more than 100 FDA meetings throughout their careers. For more information, visit the company's website at www.processapharma.com.

Forward-Looking Statements

This release contains forward-looking statements. The statements in this press release that are not purely historical are forward-looking statements which involve risks and uncertainties. Actual future performance outcomes and results may differ materially from those expressed in forward-looking statements. Please refer to the documents filed by Processa Pharmaceuticals with the SEC, specifically the most recent reports on Forms 10-K and 10-Q, which identify important risk factors which could cause actual results to differ from those contained in the forward-looking statements.

For More Information:

Michael Floyd
301-651-4256
mfloyd@processapharmaceuticals.com

Jason Assad
678-570-6791
jassad@processapharmaceuticals.com

Processa Pharmaceuticals

Source: Processa Pharmaceuticals, Inc.