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Five Prime Therapeutics Advances into Phase 1b Portion of Trial Evaluating the Immunotherapy Combination of Cabiralizumab (FPA008) and OPDIVO (nivolumab) in Multiple Tumor Types

Phase 1a/1b trial on track to enroll approximately 280 patients

Phase 1b portion of the trial will assess safety, tolerability and initial efficacy in multiple tumor types

SOUTH SAN FRANCISCO, Calif., Oct. 04, 2016 (GLOBE NEWSWIRE) -- Five Prime Therapeutics, Inc. (Nasdaq:FPRX) a clinical-stage biotechnology company focused on discovering and developing innovative immuno-oncology protein therapeutics, today announced that it has initiated the Phase 1b portion of the clinical trial evaluating the immunotherapy combination of cabiralizumab (FPA008), Five Prime's investigational monoclonal antibody that inhibits colony stimulating factor-1 receptor (CSF1R), with OPDIVO® (nivolumab), Bristol-Myers Squibb's PD-1 immune checkpoint inhibitor, in multiple tumor types.

"We are very pleased to progress to the Phase 1b portion of this trial evaluating cabiralizumab in combination with nivolumab as a treatment for patients with multiple types of tumors, many of whom currently have no effective treatment options," said Robert Sikorski, M.D., Ph.D., Chief Medical Officer, at Five Prime. "Our goal is to develop new therapeutics that unleash the immune system's natural anti-cancer activity. Based on the science, we believe that targeting both the CSF1R and PD-1 pathways has the potential to produce a synergistic treatment effect."

Five Prime initiated the Phase 1a/1b trial, which is expected to enroll approximately 280 patients, in September 2015. During Phase 1a, Five Prime evaluated the safety, pharmacokinetics and biomarkers of escalating doses of cabiralizumab as a monotherapy, as well as in combination with the approved 3 mg/kg dose of nivolumab.

Five Prime will continue to run the Phase 1b portion of the trial and will evaluate the safety, tolerability and preliminary efficacy of the selected dose of cabiralizumab in combination with nivolumab for the treatment of advanced solid tumors, including but not limited to non-small cell lung cancer, squamous cell carcinoma of the head and neck, pancreatic cancer, glioblastoma, renal cell carcinoma and ovarian cancer.

About Cabiralizumab (FPA008)
Cabiralizumab is an investigational antibody that inhibits the CSF-1 receptor and has been shown in preclinical models to block the activation and survival of monocytes and macrophages. Inhibition of CSF1R in preclinical models of several cancers reduces the number of immunosuppressive tumor-associated macrophages (TAMs) in the tumor microenvironment, thereby facilitating an immune response against tumors. Cabiralizumab is currently in a Phase 2 clinical trial in pigmented villonodular synovitis (PVNS) and a Phase 1 clinical trial in oncology indications. Cabiralizumab is being developed under an exclusive worldwide license and collaboration agreement entered into with BMS in October 2015.

About Five Prime
Five Prime Therapeutics, Inc. discovers and develops innovative therapeutics to improve the lives of patients with serious diseases. Five Prime's comprehensive discovery platform, which encompasses virtually every medically relevant extracellular protein, positions it to explore pathways in cancer, inflammation and their intersection in immuno-oncology, an area with significant therapeutic potential and a growing focus of the company's R&D activities. Five Prime has entered into strategic collaborations with leading global pharmaceutical companies and has promising product candidates in clinical and late preclinical development. For more information, please visit www.fiveprime.com.

Cautionary Note on Forward-looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "plan," "anticipate," "estimate," "intend" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements are based on Five Prime's expectations and assumptions as of the date of this press release. Each of these forward-looking statements involves risks and uncertainties. Actual results may differ materially from these forward-looking statements. Forward-looking statements contained in this press release include statements regarding the planned clinical development of cabiralizumab (FPA008), including in combination with OPDIVO (nivolumab). Many factors may cause differences between current expectations and actual results including unexpected

safety or efficacy data observed during preclinical or clinical studies, clinical trial site activation or enrollment rates that are lower than expected, changes in expected or existing competition, changes in the regulatory environment, BMS's decision to not support or advance the development of cabiralizumab, and unexpected litigation or other disputes. Other factors that may cause Five Prime's actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in Five Prime's filings with the U.S. Securities and Exchange Commission, including the "Risk Factors" sections contained therein. Except as required by law, Five Prime assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

Heather Rowe

Investor Relations

415-365-5737

heather.rowe@fiveprime.com

Amy Kendall

Corporate Communications

415-365-5776

amy.kendall@fiveprime.com


Primary Logo

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