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Zafgen Completes Enrollment of U.S. Phase 3 Trial of Beloranib in Prader-Willi Syndrome

On Track to Report Top Line Data in Early Q1 2016

BOSTON, May 28, 2015 (GLOBE NEWSWIRE) -- Zafgen, Inc. (Nasdaq:ZFGN), a biopharmaceutical company dedicated to significantly improving the health and well-being of patients affected by obesity and complex metabolic disorders, today announced that the Company has completed enrollment of ZAF-311, also known as the Beloranib Efficacy Safety and Tolerability in Prader-Willi syndrome (bestPWS) study, a Phase 3 clinical trial of beloranib for the treatment of patients with Prader-Willi syndrome (PWS). The objective of the study is to evaluate the efficacy and safety of beloranib in PWS patients over 6 months of randomized treatment, followed by a six-month open label extension. The trial includes 108 patients with PWS enrolled across 15 sites in the U.S.; the planned enrollment target number was 102 patients.

PWS is the most common known genetic cause of life-threatening obesity and results in constant and unrelenting hunger that drives patients with PWS to engage in problematic hunger-related behaviors, known as hyperphagia, and to gain excessive weight. As a result, many of those affected become morbidly obese and suffer significant mortality. There is currently no cure or effective treatment for PWS.

"We're pleased to announce that we have met and ultimately exceeded our enrollment target for this important Phase 3 trial of beloranib in patients with Prader-Willi syndrome," said Thomas Hughes, Ph.D., Chief Executive Officer of Zafgen. "We remain committed to advancing beloranib and further exploring its potential as an effective treatment option for patients and families living with this challenging condition. We expect the first data readout from this trial early in the first quarter next year."

BestPWS is a six-month trial consisting of randomized, double-blind, placebo controlled, twice-weekly subcutaneous injections of 1.8 mg or 2.4 mg of beloranib or placebo in 108 patients with PWS. The primary efficacy endpoints for this trial are hyperphagia-related behaviors and body weight. Secondary endpoints include changes in total body fat mass, LDL-c, HDL-c, C-reactive protein (CRP) which is a marker of systemic inflammation, among others, and quality of life.

At the time of screening, patients enrolled in the trial are, on average, ~20 years old, morbidly obese (BMI ~40 kg/m^2), roughly equal number of males and females, and have a hyperphagia total score consistent with moderate to severe hyperphagia. Thus, the enrolled population is representative of the general PWS population and what was intended for this Phase 3 clinical trial.

"BestPWS is the first of two pivotal clinical trials of beloranib in PWS patients," said Dennis Kim, M.D., Chief Medical Officer of Zafgen. "Patients with PWS and their families are in need of a novel and effective treatment option, and beloranib has the potential to be the first therapy to help improve hyperphagia and body weight, improving the lives of patients, families and caretakers alike. This is the first time that a double-blind, randomized placebo controlled Phase 3 clinical trial in PWS has been conducted."

For more information about this trial, please visit www.clinicaltrials.gov.

About Beloranib

Beloranib is a novel, first-in-class injectable small molecule therapy with a unique mechanism of action that reduces hunger while stimulating the use of stored fat as an energy source. Beloranib is a potent inhibitor of methionine aminopeptidase 2, or MetAP2, an enzyme that modulates the activity of key cellular processes that control metabolism. MetAP2 inhibitors work, at least in part, by directing MetAP2 binding to cellular stress mediators, and, thus, reducing the tone of signals that drive lipid synthesis by the liver and fat storage throughout the body. In this manner, MetAP2 inhibition increases metabolism of fat as an energy source. Zafgen holds exclusive worldwide rights (exclusive of South Korea) for the development and commercialization of beloranib. Zafgen exclusively licensed beloranib from Chong Kun Dang (CKD) Pharmaceutical Corp. of South Korea.

About Prader-Willi Syndrome (PWS)

Prader-Willi syndrome (PWS), the most common known genetic cause of life-threatening obesity, results in constant and unrelenting hunger that drives patients with PWS to engage in problematic hunger-related behaviors and gain excessive weight. As a result, many of those affected become morbidly obese and suffer significant mortality. There is currently no cure for this disease. Although the cause is complex, it results from a deletion or loss of function of a cluster of genes on the 15th chromosome. PWS typically causes low muscle mass and function, short stature, incomplete sexual development, and a

chronic feeling of hunger that, coupled with a metabolism that utilizes drastically fewer calories than normal, can lead to excessive eating and life-threatening obesity. PWS occurs in males and females equally and in all races, with the same incidence around the world. Prevalence estimates have ranged from 1:8,000 to 1:50,000.

About Zafgen

Zafgen (Nasdaq:ZFGN) is a biopharmaceutical company dedicated to significantly improving the health and well-being of patients affected by obesity and complex metabolic disorders. Zafgen is focused on developing novel therapeutics that treat the underlying biological mechanisms through the MetAP2 pathway. Beloranib, Zafgen's lead product candidate, is a novel, first-in-class, twice-weekly subcutaneous injection being developed for the treatment of multiple indications, including severe obesity in two rare diseases, Prader-Willi syndrome and obesity caused by hypothalamic injury, including craniopharyngioma-associated obesity; and severe obesity in the general population. Zafgen is also developing ZGN-839, a liver-targeted MetAP2 inhibitor, for the treatment of nonalcoholic steatohepatitis, or NASH, and abdominal obesity. Zafgen aspires to improve the lives of patients through targeted treatments and has assembled a team accomplished in bringing therapies to patients with both rare and prevalent metabolic diseases.

Safe Harbor Statement

Various statements in this release concerning Zafgen's future expectations, plans and prospects, including without limitation, Zafgen's expectations regarding beloranib as a treatment for HIAO, Prader-Willi syndrome, and severe obesity in the general population, its expectations with respect to the timing and success of its clinical trials, the expected requirements and timing of additional clinical trials and pre-clinical studies, and its plans regarding commercialization of beloranib may constitute forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995 and other federal securities laws. Forward-looking statements can be identified by terminology such as "anticipate," "believe," "could," "could increase the likelihood," "estimate," "expect," "intend," "is planned," "may," "should," "will," "will enable," "would be expected," "look forward," "may provide," "would" or similar terms, variations of such terms or the negative of those terms. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including, without limitation, Zafgen's ability to successfully demonstrate the efficacy and safety of its product candidates, the pre-clinical and clinical results for its product candidates, which may not support further development, actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials, obtaining, maintaining and protecting its intellectual property, Zafgen's ability to enforce its patents against infringers and defend its patent portfolio against challenges from third parties, competition from others developing products for similar uses, Zafgen's ability to manage operating expenses, Zafgen's ability to obtain additional funding to support its business activities and establish and maintain strategic business alliances and new business initiatives, Zafgen's dependence on third parties for development, manufacture, marketing, sales and distribution of products, the outcome of litigation, and unexpected expenditures, as well as those risks more fully discussed in the section entitled "Risk Factors" in Zafgen's most recent Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, as well as discussions of potential risks, uncertainties, and other important factors in Zafgen's subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent Zafgen's views only as of today and should not be relied upon as representing its views as of any subsequent date. Zafgen explicitly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

CONTACT: Media Relations Contact:

Shauna Elkin

(212) 850-5613

Shauna.Elkin@fticonsulting.com

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