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Zafgen Announces New Weight Loss and Safety Data from Phase 2 Study of Beloranib in Obesity at Obesity Week 2013

Final Study Results Demonstrate Treatment with Beloranib Led to Significant Weight Loss and Improvements in Multiple Cardiometabolic Risk Factors in 147 Obese Subjects

Atlanta, November 15, 2013 – Zafgen, Inc., a leading biopharmaceutical company dedicated to addressing the unmet needs of severely obese patients, today announced final efficacy and safety data from its recently completed Phase 2 study of beloranib, a selective inhibitor of methionine aminopeptidase 2 (MetAP2). These findings, presented for the first time at Obesity Week 2013 on November 15, 2013, demonstrated significant weight loss and improvements in cardiometabolic risk markers in 147 obese individuals over 12 weeks of treatment, the largest and longest trial to date for the beloranib program.

“The latest results from this robust, larger scale trial represent the first full set of Phase 2 data for beloranib in severely obese patients,” said Thomas Hughes, Ph.D., President and CEO of Zafgen. “This patient population often remains beyond the reach of existing pharmacotherapy and there is a major unmet medical need for treatment of this serious disease. We are very encouraged by the extent of weight loss observed in this trial and will continue to pursue beloranib as a pharmacological alternative to bariatric surgery.”

Beloranib, a novel obesity therapy that utilizes a unique mechanism of action, is being studied for its ability to reduce body weight and improve cardiometabolic risk factors in obese patients. The study presented was a randomized, double-blind, placebo-controlled trial to evaluate the efficacy and safety of a dose range of beloranib administered as twice-weekly subcutaneous injections for 12 weeks. The trial enrolled 147 patients, of which 122 completed the study. Subjects were mostly obese women with mean age 48.4 years, body weight (BW) 100.9 kg, and body mass index (BMI) 37.6 kg/m^2, who were enrolled into one of the four arms of the trial (N=37 in 0.6 mg, 37 in 1.2 mg, 35 in 2.4 mg and 38 in placebo arm). Patients were allowed to eat normally and were not counseled to change their diet or exercise habits.

Results from this study showed that after 12 weeks of treatment, subjects on 0.6 mg, 1.2 mg, or 2.4 mg of beloranib lost on average (± standard error of mean) -5.5±0.5 kg, -6.9±0.6 kg, and -10.9±1.1 kg, respectively vs. -0.4±0.4 kg for those on placebo (all $p<0.0001$ vs. placebo). The study also showed that weight loss with beloranib was progressive and continuing at week 12, reduced sense of hunger, improved cardiometabolic risk markers, and was generally well-tolerated. In addition to confirming the findings from previous studies that showed improvements in LDL-cholesterol, HDL-cholesterol and triglycerides, this study also demonstrated beloranib’s effects to lower blood pressure. Using 24-hour Ambulatory Blood Pressure Monitoring, clinically and statistically significant improvements in systolic blood pressure were observed for the 1.2 mg and 2.4 mg doses, showing reductions of 7.6 mmHg and 12.0 mmHg, respectively.

There were no serious adverse events (AEs) deemed to be related to the study drug and no clinically significant abnormal laboratory measures, vital signs, or electrocardiography (ECG) findings. The most common adverse events with a higher incidence rate in those taking beloranib vs. placebo were nausea, diarrhea, headache, injection site bruising, and insomnia. These adverse events were generally mild, transient and self-limiting in nature.

“These full Phase 2 results are an exciting prospect for the treatment of severely obese patients,” said Louis Aronne, M.D., Clinical Professor of Medicine at Weill Cornell Medical College.[1] “Beloranib continues to demonstrate a unique ability to deliver rapid and significant weight loss as well as meaningful improvements in key cardiometabolic risk markers. Based on this supporting data, beloranib has the potential to be a highly effective and promising treatment option for life-threatening, severe obesity.”

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1. Dr. Aronne has been granted stock option grants from Zafgen and also serves on the Company’s Clinical Advisory Board

About Fat Metabolism
Research continues to show that obese and lean individuals metabolize fat differently. Studies indicate that once a person becomes obese, the body undergoes certain metabolic changes and is “programmed” to make and store more fat, making it much more difficult to reduce body weight. These metabolic adaptations that take place in obese people impair the normal release and breakdown of fatty acids from adipose tissue. Simultaneously, the body becomes much more efficient in diverting calories from food and storing them as fat, making it difficult for obese patients to lose weight.

About Beloranib

Beloranib is the first compound in its class that works by targeting a key enzyme called methionine aminopeptidase 2 (MetAP2) that controls the production and utilization of fatty acids. Inhibitors of MetAP2 reduce hunger while also reducing the production of new fatty acid molecules by the liver and helping to convert stored fats into useful energy. Beloranib is being developed as a twice-weekly subcutaneous injection for severe obesity. Zafgen holds exclusive worldwide rights (exclusive of Korea) for development and commercialization of beloranib.

About Zafgen, Inc.
Zafgen is an innovative company dedicated to addressing the unmet need of severely obese patients by bringing beloranib, a first-in-class novel medicine, to market. Founded in 2005 as a virtual company, Zafgen brings together leading experts in obesity and metabolic disease to address the underserved and growing population of patients who are severely obese. Zafgen's singular focus is on advancing novel therapeutics for patients suffering from severe obesity and obesity-related disorders. The company is located in Cambridge, MA. For more information, visit zafgen.com.