

Zafgen Secures \$33 Million Series C Financing

Proceeds to Advance Zafgen's Lead Compound for Severe Obesity into Phase 2 Clinical Studies

CAMBRIDGE, Mass., July 7, 2011— Zafgen, Inc., a pharmaceutical company pioneering novel obesity therapeutics to help the body regain and sustain a lean, healthy state by targeting imbalances in fat metabolism, today announced the closing of a \$33 million Series C financing. The financing is being led by the existing investor syndicate, which includes Atlas Venture and Third Rock Ventures. Proceeds from the financing will be used to support development of Zafgen's pipeline and to advance its lead methionine aminopeptidase 2 (MetAP2) inhibitor for the treatment of severe obesity into Phase 2 clinical studies.

"This Series C funding provides further validation of the promise of MetAP2 inhibitor treatment as a pharmacological alternative to bariatric surgery in the treatment of severe obesity and is a testament to the progress we have made in advancing our drug development efforts," said Thomas Hughes, Ph.D., president and chief executive officer, Zafgen, Inc. "We appreciate the tremendous support we have received from our current investors over the years, and we are pleased to gain their endorsement of our plans and continuing efforts to develop new therapies for severe obesity and related diseases."

Zafgen is pioneering novel obesity therapeutics to help the body regain and sustain a lean, healthy state by targeting imbalances in 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.

"As the incidence of obesity continues to grow exponentially worldwide, there remains a critical unmet need for new therapies for patients," said Kevin Starr, partner, Third Rock Ventures. "Zafgen has a unique approach to tackling obesity by targeting imbalances in fat metabolism through MetAP2 inhibition. The company's recent Phase 1b study results showed that, in addition to rapid weight loss averaging 1 kg per week, a significant improvement in cardiovascular risk markers was seen in severely obese subjects. These results further demonstrate that Zafgen has the potential to bring to market a promising new drug for the treatment of severe obesity."

"We remain particularly impressed with the Zafgen team as it continues to provide scientific validation supporting its view that the „root cause“ of obesity is biological in nature and the role of fat metabolism in treating the disease," said Peter Barrett, Ph.D., chairman of Zafgen's board of directors and partner, Atlas Venture. "Zafgen is a perfect example of how breakthrough science and a unique business model, when married with top-tier management and scientific

teams, create the recipe for a successful clinical-stage biopharmaceutical company. We are pleased to support Zafgen as it prepares to enter Phase 2 trials in the next six to 12 months.”

About MetAP2 Inhibition and ZGN-433

MetAP2 inhibitor treatment has emerged as a new peripheral mechanism driving rapid and substantial weight loss and improvements in cardiometabolic risk factors. MetAP2 inhibitors have the potential to be the first new class of obesity therapeutics to provide the severe obese population with significant weight loss efficacy. Zafgen’s lead molecule is being developed as a twice-weekly subcutaneous injection for severe obesity. The company expects to enter Phase 2 trials in obese patients and obese diabetic patients in the next six to 12 months. Zafgen is also developing new compounds suitable for oral administration for use in broader indications as part of its second generation program. ZGN-433 (beloranib hemioxalate) was initially developed by CKD Pharmaceuticals. The molecule was originally profiled for efficacy in the treatment of solid tumors. Zafgen holds exclusive worldwide rights (exclusive of Korea) for development and commercialization of ZGN-433.

About Obesity

Obesity continues to be one of the world’s most costly and underserved growing medical conditions. It is a complex condition with numerous causes, many of which are largely beyond an individual’s control¹. There exists a tremendous unmet medical need for effective drug therapies to treat this serious disease, which has reached epidemic proportions and is increasing at an alarming rate. Obesity leads to many serious health consequences. As BMI increases, so does one’s risk for chronic diseases such as cardiovascular disease, diabetes, musculoskeletal disorders and some cancers². Currently available weight loss treatments function by blocking fat absorption or signalling feelings of fullness or diminished appetite in the brain. These drugs are often associated with undesirable side effects and limited efficacy that fails to provide sustainable weight loss in many patients.

According to a recent Gallup poll, Americans are making no progress in the fight against obesity, with a slight increase in obesity rates across all key demographic groups between January 1, 2008 through April 30, 2010. The study found that adult obesity rates did not decrease between 2009 and 2010, with the rate of obesity remaining stable at 26.7 percent in the first quarter of 2010, compared to 26.2 percent in the last quarter of 2009, and that fewer Americans are maintaining a “normal” weight as measured by BMI³.

About Zafgen, Inc.

Zafgen is pioneering novel obesity therapeutics that directly target fat metabolism to help the body regain and sustain a lean, healthy state. The company’s approach focuses on restoring control of key metabolic processes, releasing stored fat which then is used by the body as fuel. Zafgen’s first generation product, ZGN-433, is being studied its use as a pharmacological alternative to bariatric surgery in the treatment of severe obesity. Zafgen's leadership and scientific advisors include leading experts in obesity, metabolic disorders and medicinal

chemistry. Founded in 2005, the company is located in Cambridge, Mass. For more information, visit www.zafgen.com.

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¹OBESITY, Volume 16, Number 6, June, 2008;

http://www.obesity.org/images/pdf/Publications/TOS%20OBY_disease_05_19_08.pdf

²World Health Organization, <http://www.who.int/mediacentre/factsheets/fs311/en/index.html>

³Gallup, <http://www.gallup.com/poll/127610/americans-making-no-progress-obesity.aspx>