

Elixir Pharmaceuticals Presents Preclinical Data Highlighting Its  
Ghrelin Antagonist Program at the American Diabetes Association's  
Annual Meeting

CAMBRIDGE, Mass.--June 25, 2007--Elixir Pharmaceuticals, Inc., today announced the presentation of two sets of preclinical data demonstrating that ghrelin antagonism may be a potential method for future treatment of a range of metabolic disorders. These data demonstrated a variety of beneficial metabolic effects, notably decreasing body weight, improvements in blood glucose and insulin levels, and reductions in fatty liver. The data were presented in poster sessions on Sunday, June 24th, during the American Diabetes Association's 67th Annual Scientific Sessions meeting, being held in Chicago, IL. Elixir is focused on the development of drugs to treat and prevent metabolic disease, as well as prevent age-related diseases, based on targets identified in the pathways regulating aging.

Ghrelin, which has been identified as a key metabolic regulator, is known to stimulate appetite and food consumption and is believed to play a key role in metabolism and energy storage. A naturally occurring hormone produced in the stomach, ghrelin is believed to act primarily at the level of the hypothalamus in the brain, which governs metabolism.

Elixir scientists have previously demonstrated that, compared to normal (control) mice, ghrelin receptor (GhrR) knockout mice resist the development of diabetes and obesity associated with a high-fat diet. After fifteen weeks of eating a high fat diet the normal (control) mice gained 10% more weight than GhrR knockout mice. Importantly, the knockout mice also had significantly lower blood glucose, insulin and HbA1c levels. These results illustrate the knockout mice resist the development of type 2 diabetes.

In the first poster Elixir presents data in which scientists compared the results of the GhrR knockout mice to those obtained with mice treated twice a day for up to 56 days with one of Elixir's potent, small molecule, oral GhrR antagonists. As with the GhrR knockout mice, the antagonist-treated mice on a high-fat diet showed decreased body weight, as well as improved glucose and insulin control compared to the mice treated with vehicle. In addition, GhrR antagonist treatment resulted in a significant reduction in liver fat content and improved liver function (as measured by liver enzyme levels) relative to the vehicle-treated mice. The results demonstrate that GhrR antagonist treatment of normal high fat-fed mice completely recapitulates the phenotype of the high fat fed GhR knockout mice.

A second poster presentation explored whether ghrelin exerts a direct effect on adipocytes (fat cells) and if the effect is mediated through ghrelin receptor mRNA expression in these cells. To assess this, the scientists first examined ghrelin signaling by measuring insulin sensitivity in mouse adipocyte cell lines that were treated with ghrelin for four days. Scientists also assessed the expression of GhrR mRNA in adipose tissue, isolated adipocytes from mice, and the mouse adipocyte cell-line. The results showed GhrR was detected in the isolated adipocytes and mouse adipocyte cell lines, suggesting ghrelin acts directly through its receptor on adipocytes to regulate energy homeostasis. Moreover, the reduction of insulin signaling in adipocytes

by chronic ghrelin treatment provides a possible mechanism for increased insulin sensitivity in GhrR knockout mice.

"Ghrelin antagonism represents one of the most fascinating and promising therapeutic approaches in diabetes and obesity research today because of its integral role in regulating metabolism. These preclinical data validate our hypothesis that by inhibiting ghrelin's normal function with a potent, small molecule therapeutic, one can effectively improve glucose control, manage body weight, and regulate metabolism. Should this approach be confirmed in clinical testing, we believe ghrelin inhibition could represent a significant advance for the treatment of serious and debilitating metabolic disorders such as Type 2 diabetes and obesity," stated Peter DiStefano, Ph.D., Chief Scientific Officer. "We are rapidly advancing our EX-1350 ghrelin antagonist and plan to initiate Phase I testing early next year."

According to the International Diabetes Federation, Type 2 diabetes affects 195 million people worldwide, and the number of sufferers could top 330 million by 2025.

Elixir has filed broad intellectual property protection on all aspects of the ghrelin antagonist program including composition of matter protection covering five novel compound classes and their therapeutic uses.

#### About Elixir Pharmaceuticals

Elixir is a Cambridge, MA-based biopharmaceutical company focused on developing and commercializing drugs to treat and prevent metabolic disease, prevent age-related diseases, ultimately extending the quality and length of human life.

In addition to its ghrelin antagonist program, the Company has leveraged its knowledge of ghrelin biology and pharmacology by licensing a small molecule ghrelin agonist (designated EX-1314) from Bristol-Myers Squibb Company in April 2005. EX-1314 binds selectively to the ghrelin receptor and mimics the body's naturally occurring ghrelin. In doing so this novel, orally available agent is capable of stimulating appetite, gastric motility and the release of growth hormone. Elixir is currently in IND-enabling studies with EX-1314 targeting a variety of therapeutic indications.

Further, in March 2006, Elixir in-licensed North and South American rights to Glufast(R) (mitiglinide calcium hydrate), an insulin secretagogue, which lowers post-meal glucose levels by improving the body's own ability to produce insulin. Already marketed in Japan, Glufast has undergone extensive clinical development demonstrating the product's ability to safely and effectively treat Type 2 diabetes.

Elixir has also developed expertise and a broad IP portfolio of more than twenty patents and patent applications related to the Sirtuin class of proteins, including small molecular weight SIRT1 activators and inhibitors. The Company's own R&D efforts and those of its numerous research partners utilizing modulators of SIRT1 (a human sirtuin) have significantly extended the SIRT knowledge base in recent years. Elixir is also actively pursuing drug discovery efforts focused on other key targets, such as AMP-activated kinase (AMPK), which Elixir

has shown to be implicated in the regulation of aging and metabolism in a variety of organisms.

More information about Elixir is available at <http://www.elixirpharm.com/>

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