



Study Results: Novel Oral PTH Formulation Using Emisphere's Eligen(R) Technology Showed Potential Therapeutical Advantages to Available Injectable PTH in Postmenopausal Osteoporotic Women

Phase I study results presented at 73rd Annual Scientific Meeting of the American College of Rheumatology

CEDAR KNOLLS, N.J., Oct 20, 2009 (BUSINESS WIRE) -- Emisphere Technologies, Inc. (OTC BB:EMIS) today announced study results demonstrating that a single dose of the novel oral parathyroid hormone PTH1-34, which utilizes Emisphere's proprietary Eligen^(R) Drug Delivery Technology and absorption-enhancer carrier molecule 5-CNAC, achieved potentially therapeutically relevant exposure and safety profiles to those of the currently available injectable formulation in healthy postmenopausal women. The results, from a single-center, partially blinded, incomplete cross-over study conducted by Emisphere's partner Novartis Pharma AG, were presented Monday, October 19, 2009 in a poster session at the 73rd Annual Scientific Meeting of the American College of Rheumatology in Philadelphia.

This Phase I single-center partially blinded incomplete cross-over, designed to assess the exposure and safety of orally administered doses of PTH1-34 and different amounts of the absorption enhancer 5-CNAC was conducted in 32 healthy postmenopausal women. The subjects were randomized to receive a single dose of placebo, 20 g of subcutaneously injected parathyroid hormone PTH1-34 (Forteo^(R)), or one of several orally administered doses of PTH1-34 formulated with either 100 or 200 mg of Emisphere's absorption-enhancer 5-CNAC. While all doses of oral PTH1-34 were rapidly absorbed and showed appreciable blood concentrations in a dose-dependent manner, the 2.5 and 5 mg doses of oral PTH1-34 containing 200 mg 5-CNAC achieved exposure levels closest to those of 20 g injectable PTH1-34, with a comparable incidence of adverse events. Ionized calcium remained within normal limits in all treatment groups.

"We are pleased with the outcome of our study. It indicates we may be able to provide women with postmenopausal osteoporosis a more convenient oral option for parathyroid hormone therapy, which is now available only as an injection," said Michael V. Novinski, President and Chief Executive Officer, Emisphere Technologies. "We look forward to continuing clinical development of PTH with the Eligen^(R) Drug Delivery Technology."

There were no serious adverse events in the study. Nine participants withdrew from the study due to treatment-related AEs. Of those, five (one on placebo, one on Forteo^(R)) and three on either 2.5 or 5 mg PTH1-34) withdrew because of symptomatic hypotension. Three patients on either 2.5 or 5 mg PTH1-34 withdrew because of delayed vomiting. One patient on 2.5mg PTH1-34 (100 mg 5-CNAC) withdrew because of symptomatic, but unconfirmed, hypercalcemia.

PTH is produced by the parathyroid glands to regulate the amount of calcium and phosphorus in the body. When used therapeutically, it increases bone density and bone strength to help prevent fractures. It is approved to treat osteoporosis, a disease associated with a gradual thinning and weakening of the bones that occurs most frequently in women after menopause. Untreated postmenopausal osteoporosis can lead to chronic back pain, disabling fractures, and lost mobility.

Emisphere's Eligen^(R) Technology makes it possible to orally deliver a therapeutic molecule without altering its chemical form or biological integrity. Eligen^(R) delivery agents, or "carriers", such as the absorption-enhancer 5-CNAC that facilitate or enable the transport of therapeutic molecules across the mucous membranes of the gastrointestinal tract, to reach the tissues of the body where they can exert their intended pharmacological effect.

About Emisphere Technologies, Inc.

Emisphere is a biopharmaceutical company that focuses on the unique and improved delivery of therapeutic molecules or nutritional supplements using its proprietary Eligen^(R) Technology. The Eligen^(R) Technology can be applied to the oral route of administration as well as other delivery pathways such as buccal, rectal, inhalation, intra-vaginal or transdermal. The company's website is www.emisphere.com.

Safe Harbor Statement Regarding Forward-Looking Statements

The statements in this release and oral statements made by representatives of Emisphere relating to matters that are not

historical facts (including without limitation those regarding the timing or potential outcomes of research collaborations or clinical trials, any market that might develop for any of Emisphere's product candidates and the sufficiency of Emisphere's cash and other capital resources) are forward-looking statements that involve risks and uncertainties, including, but not limited to, the likelihood that future research will prove successful, the likelihood that any product in the research pipeline will receive regulatory approval in the United States or abroad, the ability of Emisphere and/or its partners to develop, manufacture and commercialize products using Emisphere's drug delivery technology, Emisphere's ability to fund such efforts with or without partners, and other risks and uncertainties detailed in Emisphere's filings with the Securities and Exchange Commission, including those factors discussed under the caption "Risk Factors" in Emisphere's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, filed on March 16, 2009, and as amended on Form 10-K/A as filed on April 30, 2009, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009, filed on May 7, 2009.

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