



HUMAN GENOME SCIENCES ANNOUNCES SUBMISSION OF MARKETING AUTHORIZATION APPLICATION TO EMA FOR BENLYSTA® (BELIMUMAB)

ROCKVILLE, Maryland – June 7, 2010 – Human Genome Sciences, Inc. (Nasdaq: HGS) today announced that GlaxoSmithKline (GSK) has submitted a Marketing Authorization Application (MAA) to the European Medicines Agency (EMA) for approval to market BENLYSTA® (belimumab) for the treatment of systemic lupus erythematosus (SLE).

The MAA submission includes the results of two pivotal Phase 3 clinical trials in autoantibody-positive patients with SLE showing that belimumab met its primary endpoint. In the Phase 3 studies, known as BLISS-52 and BLISS-76, belimumab 10 mg/kg plus standard of care achieved a statistically significant improvement in patient response rate as measured by the SLE Responder Index at Week 52, compared with placebo plus standard of care. Study results also showed that belimumab was generally well tolerated in BLISS-52 and BLISS-76, as demonstrated by a similar rate of discontinuations due to adverse events across treatment groups, with overall adverse event rates comparable between belimumab and placebo treatment groups. The design of the two trials was similar, but the duration of therapy in the two studies was different – 52 weeks for BLISS-52 and 76 weeks for BLISS-76. HGS designed the Phase 3 program for belimumab in collaboration with GSK and leading international SLE experts. The two studies treated a total of 1,684 patients.

“Based on the results of our pivotal Phase 3 studies, we believe BENLYSTA has the potential to become the first new approved drug for systemic lupus in more than 50 years,” said H. Thomas Watkins, President and Chief Executive Officer, HGS. Mr. Watkins also said that HGS and GSK plan to submit a Biologics License Application to the U.S. Food and Drug Administration later in June.

About Belimumab

Belimumab is an investigational human monoclonal antibody drug that specifically recognizes and inhibits the biological activity of B-lymphocyte stimulator, or BLYS. BLYS is a naturally occurring protein discovered by HGS that is required for the survival and maturation of B-lymphocyte cells into plasma B cells. Plasma B cells produce antibodies, the body’s first line of defense against infection. In lupus and certain other autoimmune diseases, elevated levels of BLYS are believed to contribute to the production of autoantibodies – antibodies that attack and destroy the body’s own healthy tissues. The presence of autoantibodies appears to correlate with disease severity. Preclinical and clinical studies suggest that belimumab can reduce autoantibody levels in SLE. The results of two pivotal Phase 3 trials, BLISS-52 and BLISS-76, suggest that belimumab can reduce SLE disease activity.

About the HGS/GSK Collaboration

In 2006, HGS and GSK entered into a definitive co-development and commercialization agreement under which HGS has conducted the belimumab Phase 3 trials, with assistance from GSK. The companies will share equally in Phase 3/4 development costs, sales and marketing expenses, and profits of any product commercialized under the agreement.

About Systemic Lupus Erythematosus

Systemic lupus erythematosus (SLE) is a chronic, life-threatening autoimmune disease. Approximately five million people worldwide, including approximately 1.5 million in the United States, suffer from various

forms of lupus, including SLE. Lupus can occur at any age, but appears mostly in young people ages 15 to 45. About 90 percent of those diagnosed with lupus are women. African-American women are about three times more likely to develop lupus, and it is also more common in Hispanic, Asian and American Indian women. Symptoms may include extreme fatigue, painful and swollen joints, unexplained fever, skin rash and kidney problems. Lupus can lead to arthritis, kidney failure, heart and lung inflammation, central nervous system abnormalities, inflammation of the blood vessels and blood disorders. For more information on lupus, visit the Lupus Foundation of America at www.lupus.org, the Lupus Research Institute at www.lupusresearchinstitute.org, the National Institute of Arthritis and Musculoskeletal and Skin Diseases at www.niams.nih.gov, or Lupus Europe at www.elef.rheumanet.org.

About Human Genome Sciences

The mission of HGS is to apply great science and great medicine to bring innovative drugs to patients with unmet medical needs. The HGS clinical development pipeline includes novel drugs to treat lupus, hepatitis C, inhalation anthrax and cancer.

For more information about HGS, please visit the Company's web site at www.hgsi.com. Health professionals and patients interested in clinical trials of HGS products may inquire via e-mail to medinfo@hgsi.com or by calling HGS at (877) 822-8472.

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Safe Harbor Statement

This announcement contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements are based on Human Genome Sciences' current intent, belief and expectations. These statements are not guarantees of future performance and are subject to certain risks and uncertainties that are difficult to predict. Actual results may differ materially from these forward-looking statements because of Human Genome Sciences' unproven business model, its dependence on new technologies, the uncertainty and timing of clinical trials and regulatory approvals, Human Genome Sciences' ability to develop and commercialize products, its dependence on collaborators for services and revenue, its substantial indebtedness and lease obligations, its changing requirements and costs associated with facilities, intense competition, the uncertainty of patent and intellectual property protection, Human Genome Sciences' dependence on key management and key suppliers, the uncertainty of regulation of products, the impact of future alliances or transactions and other risks described in the Company's filings with the SEC. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of today's date. Human Genome Sciences undertakes no obligation to update or revise the information contained in this announcement whether as a result of new information, future events or circumstances or otherwise.

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