Isis Pharmaceuticals to Investigate a Higher Dose of ISIS-SMN Rx in Children with Spinal Muscular Atrophy

November 22, 2013

CARLSBAD, Calif., Nov. 22, 2013 /PRNewswire/ -- Isis Pharmaceuticals, Inc. (NASDAQ: ISIS) announced today that it plans to add a 12 mg cohort to the ongoing Phase 1b/2a study evaluating ISIS-SMN$_{Rx}$ in children with spinal muscular atrophy (SMA). In addition, a 12 mg dose will be included in an open-label extension study for those children who have completed dosing in previous studies. The addition of the 12 mg cohort will allow for the investigation of this dose in support of the Phase 2/3 registration-directed program planned to begin next year.

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"We are pleased to be able to increase the dose of ISIS-SMN$_{Rx}$ based on the safety and tolerability data we have seen to date in both infants and children with SMA. We have already begun the infant 12 mg dose cohort and look forward to sharing data from this study early next year. Considering the encouraging safety profile we have observed in children with SMA in the lower dose cohorts, the evaluation of the 12 mg dose will provide additional information as we move into our Phase 3 program. We are also pleased that after reviewing the data, the FDA agrees that we can proceed in our investigation of a higher dose," said B. Lynne Parshall, chief operating officer at Isis. "This addition of patients to the ongoing Phase 1b/2a study does not change our plan to report data on the first three cohorts by early next year."

The Phase 1b/2a study of ISIS-SMN$_{Rx}$ is an open-label, multiple-dose, dose-escalation study designed to assess the safety, tolerability and pharmacokinetic profile of the drug in children with SMA between the ages of 2-15 who are medically stable. In the ongoing Phase 1b/2a study in children with SMA, all patients have completed dosing in the initial three dose cohorts (3 mg, 6 mg and 9 mg) and ISIS-SMN$_{Rx}$ has been well tolerated over multiple doses. Patients who have participated in the Phase 1b/2a study are eligible to enter an open-label extension study, which is designed to provide a single additional dose of 12 mg to the more than 50 children with SMA who are eligible to roll over into this study. The investigation of the 12 mg dose in both studies is anticipated to begin in December or January.

ABOUT ISIS-SMN$_{Rx}$

ISIS-SMN$_{Rx}$ is designed to alter the splicing of a closely related gene (SMN2) to increase production of fully functional SMN protein. The United States Food and Drug Administration granted orphan drug status and fast track designation to ISIS-SMN$_{Rx}$ for the treatment of patients with SMA. Isis is currently in collaboration with Biogen Idec to develop and potentially commercialize the investigational compound, ISIS-SMN$_{Rx}$, to treat all types of SMA. Under the terms of the January 2012 agreement, Isis is responsible for global development and Biogen Idec has the option to license the compound until completion of the first successful Phase 2/3 study.

Isis acknowledges support from the following organizations for ISIS-SMN$_{Rx}$: Muscular Dystrophy Association, SMA Foundation, Families of SMA and intellectual property licensed from Cold Spring Harbor Laboratory and the University of Massachusetts Medical School.

ABOUT SMA

SMA is a severe genetic disease that affects approximately 30,000-35,000 patients in the United States, Europe and Japan. SMA is caused by a loss of, or defect in, the survival motor neuron 1 (SMN1) gene leading to a decrease in the survival motor neuron (SMN) protein. SMN is critical to the health and survival of nerve cells in the spinal cord responsible for neuromuscular growth and function. One in 50 people, the equivalent of about 6 million people in the United States, are carriers of a defective SMN1 gene, which is unable to produce fully functional SMN protein. Carriers experience no symptoms and do not develop the disease. However, when both parents are carriers, there is a one in four chance that their child will have SMA. The severity of SMA correlates with the amount of SMN protein. Infants with Type I SMA, the most severe form of the disease, produce very little SMN protein and have a life expectancy of less than two years. Children with Type II have greater amounts of SMN protein but still have a shortened lifespan and are never able to stand independently. Children with Type III have a normal lifespan but accumulate life-long physical disabilities as they grow.

ABOUT ISIS PHARMACEUTICALS, INC.

Isis is exploiting its leadership position in antisense technology to discover and develop novel drugs for its product pipeline and for its partners. Isis' broad pipeline consists of 31 drugs to treat a wide variety of diseases with an emphasis on cardiovascular, metabolic, severe and rare diseases, including neurological disorders, and cancer. Isis' partner, Genzyme, is commercializing Isis' lead product, KYNAMRO™, inthe United States for the treatment of patients with HoFH. Isis' patents provide strong and extensive protection for its drugs and technology. Additional information about Isis is available at www.isispharm.com.

ISIS PHARMACEUTICALS' FORWARD-LOOKING STATEMENT

This press release includes forward-looking statements regarding Isis' alliance with Biogen Idec, the discovery, development, activity, therapeutic potential, safety and commercialization of ISIS-SMN$_{Rx}$ and the discovery, development and therapeutic potential of an antisense drug for the treatment of spinal muscular atrophy. Any statement describing Isis' goals, expectations, financial or other projections, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those inherent in the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. Isis' forward-looking statements also involve assumptions that, if they never materialize or prove correct, could cause its results to differ materially from those expressed or implied by such forward-looking statements. Although Isis' forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Isis. As a result, you are cautioned not to rely on these forward-looking statements. These and other risks concerning Isis' programs are described in additional detail in Isis' annual report on Form 10-K for the year ended December 31, 2012, and its most recent quarterly report on Form 10-Q, which are on file with the SEC. Copies of these and other documents are available from the Company.

In this press release, unless the context requires otherwise, "Isis," "Company," "we," "our," and "us" refers to Isis Pharmaceuticals and its subsidiaries.

SOURCE Isis Pharmaceuticals, Inc.

D. Wade Walke, Ph.D., Vice President, Corporate Communications and Investor Relations, 760-603-2741; Amy Blackley, Ph.D., Associate Director, Corporate Communications, 760-603-2772