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Echo Therapeutics Announces Positive Results with the Prelude™ SkinPrep System, the Next-Generation Skin Permeation Medium for its Symphony™ Transdermal Continuous Glucose Monitoring System

Franklin, MA – April 9, 2008 – Echo Therapeutics (OTCBB: ECTE) today announced positive results from its human feasibility study of the Prelude™ SkinPrep System, Echo's next-generation, needle-free, non-invasive skin permeation medium for its Symphony™ tCGM System, a novel transdermal continuous glucose monitoring (tCGM) system in development for diabetes home use and hospital critical care markets. Prelude incorporates Echo's patented skin permeation control feedback technology into a comfortable, wireless, hand-held device used to prepare a small area of the skin for the non-invasive, biosensor and monitoring components of its Symphony tCGM system. Results of the feasibility study on healthy subjects demonstrate that Prelude safely and effectively permeated the skin so that the Symphony tCGM System could continuously monitor blood glucose levels reliably over a 24-hour period. Echo plans to use Prelude in the remaining pilot and pivotal clinical studies necessary to commercialize the Symphony tCGM System, including clinical studies scheduled to begin in the second quarter of this year.

“Painless, needle-free, non-invasive skin permeation is critical to our development and commercial goals for Symphony. Building on the positive results from our recently completed Symphony tCGM System study at Tufts Medical Center, we are pleased to have achieved technical feasibility of Prelude in humans well ahead of schedule,” said Patrick Mooney, M.D., Echo's Chairman and CEO. “With Prelude, we now have a needle-free, safe, effective, easy-to-use and low-cost skin permeation system for Symphony. We look forward to the results of our near term clinical trials in the diabetes home use and hospital critical care settings.”

“These data demonstrate that Prelude, which incorporates our patented feedback control mechanism, can achieve precise, individually optimized skin permeation to enable Symphony to provide users with reliable and continuous blood glucose information,” said Han Chuang, Ph.D., Director of Research and Development at Echo Therapeutics. “We are very encouraged by our progress.”

Study Design

The feasibility study was designed to evaluate the performance of Prelude as part of Echo's current generation Symphony tCGM System. Six (6) adult subjects, each without a history of diabetes, were enrolled. The skin of each subject was prepared using Prelude and a Symphony tCGM System biosensor was applied to the skin site. The study subjects were free to continue their routine activities at home and at work. Blood glucose (BG) references were taken every hour, or more frequently during the waking period, for comparison with Symphony results generated from Echo's past-generation, ultrasound-based skin permeation system. The Symphony biosensor remained on the patient and analyzed glucose levels for 24 hours.

Study Analytical Methods

Continuous data from the study were compared to reference measurements from commonly-used glucometers. The reference measurements were paired with the Symphony results through a data analysis algorithm. The primary statistical analysis tools used to evaluate the performance of Symphony were Clarke Error Grid analysis and Mean Absolute Relative Difference (MARD). The Clarke Error Grid analysis was designed to evaluate the performance of glucometers and is used as an analytical tool to assess performance of continuous glucose monitoring (CGM) systems. The Clarke Error Grid is a plot of all data pairs categorized into five discrete areas: A, B, C, D and E. The A and B areas are the most clinically desirable zones and D and E are the least clinically desirable zones. Devices with a higher combined A and B percentage (closer to 100%) and lower combined D and E percentage (closer to 0) are considered to have better performance. CGM system performance is generally considered acceptable if at least ninety-five percent (95%) of the data points fall within the A/B region, along with negligible or no D/E points. MARD is an error calculation tool that was used to measure the average relative difference between Symphony and the reference measurements, on a percentage basis. A low MARD error, below 20%, is generally accepted to be consistent with an accurate device.

Study Results

Using nearly 144 hours of continuous data from Symphony and 183 reference BG measurements from the 6 study subjects in a home use setting with self-administration, Clarke Error Grid analysis of the study data showed that Symphony had 100% of the data in the combined A and B regions with approximately 90% in the "A" region. No data points showed in the C, D and E regions. The MARD for the study was 9.0%. There were no Prelude or Symphony failures and no adverse events, indicating strong reliability of Prelude as the skin permeation medium for Symphony.

About Echo Therapeutics

Echo Therapeutics is focused on medical devices and specialty pharmaceuticals. Echo is developing a non-invasive, wireless, transdermal continuous glucose monitoring (tCGM) system for people with diabetes and for use in hospital critical care units, together with a wide range of novel transdermal reformulations of FDA-approved products.

Cautionary Statement Regarding Forward Looking Statements

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. Any forward-looking statements contained herein are based on current expectations, but are subject to a number of risks and uncertainties. The factors that could cause actual future results to differ materially from current expectations include, but are not limited to, risks related to regulatory approvals and the success of Echo's ongoing studies regarding the efficacy of Echo's tCGM systems (including the Symphony tCGM System), the failure of future development and preliminary marketing efforts related to Echo's tCGM systems, risks and uncertainties relating to Echo's ability to develop, market and sell diagnostic products based on its skin permeation platform technologies, including the Prelude SkinPrep System, the availability of substantial additional equity or debt capital to support its robust research, development and product commercialization activities, and the success of its research, development, and regulatory approval, marketing and distribution plans and strategies, including those plans and strategies related to its tCGM systems. Furthermore, Echo's tCGM systems have not yet been approved for sale. The regulatory approval process for its tCGM systems involves, among other things, successfully completing pilot and pivotal clinical trials and obtaining a premarket approval, or PMA, from the FDA. The PMA process requires Echo to prove the safety and efficacy of its tCGM systems to the FDA's satisfaction. This process can be expensive and uncertain, and there is no guarantee that Echo will be able to submit a PMA for its Symphony tCGM System or that its Symphony tCGM System will be approved by the FDA in any specific timeframe or at all. In addition, clinical testing of Echo's products and eventual commercialization of its products are subject to all of the risks and uncertainties set forth in its periodic reports filed with the Securities and Exchange Commission.

These and other factors are identified and described in more detail in Echo's filings with the Securities and Exchange Commission, including, without limitation, its annual report on Form 10-KSB for the year ended December 31, 2007, its quarterly reports on Form 10-Q, and its current reports on Form 8-K. The foregoing list of factors is not exhaustive. Echo Therapeutics, Inc. undertakes no obligation to publicly update or revise any forward-looking statements.



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