Endo Pharmaceuticals and BioDelivery Sciences Present Pivotal Data from Two Phase 3 Trials Demonstrating Safety and Efficacy of Buprenorphine HCl Buccal Film for the Management of Chronic Pain

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DUBLIN and RALEIGH, N.C., May 14, 2015 /PRNewswire/ -- Endo Pharmaceuticals Inc., a subsidiary of Endo International plc (NASDAQ: ENDP) (TSX: ENL), and BioDelivery Sciences International, Inc. (NASDAQ: BDSI) today presented pivotal data from two Phase 3 studies for investigational study drug buprenorphine HCL buccal film utilizing BDSI's patented BioErodible MucoAdhesive (BEMA®) drug delivery technology. The findings, presented at the American Pain Society's 34th Annual Scientific Meeting in Palm Springs, CA, showed BEMA® buprenorphine consistently decreased pain scores compared to placebo. The drug is currently under review by the U.S. Food and Drug Administration (FDA) with a PDUFA action date in October 2015, for use in patients with pain severe enough to require daily, around-the-clock, long-term opioid treatment and for which alternative treatment options are inadequate.

"In these studies, the investigational study drug BEMA® buprenorphine demonstrated a consistent, statistically significant improvement in patient-reported pain relief," said Joseph S. Gimbel, M.D., Arizona Research Center, Phoenix, and a principal investigator and lead author in one of the studies. "In both trials, BEMA® buprenorphine was effective in reducing pain at every week studied, and in the opioid-experienced trial, the responder analysis was more than twice the rate of placebo. Additionally, the adverse event (AE) profiles were encouraging – the percentage of patients reporting any AE was similar between patients treated with BEMA® buprenorphine or placebo. I am excited at the potential this new product will bring to the medical community if approved."

The Phase 3 studies were both double-blind, randomized, placebo-controlled, enriched-enrollment studies in patients with chronic lower back pain. A total of 971 randomized patients completed both trials, including pain sufferers who either had received opioid therapy (study EN3409-307; abstract 437) or were opioid-naive at the start of the study (study EN3409-308; abstract 439). The studies included an open-label period in which patients were titrated to a tolerated, effective dose of BEMA® buprenorphine then randomized to either continue on BEMA® buprenorphine or receive a placebo buccal film. The primary endpoint of both studies was change in the average daily pain score from baseline to week 12 of double-blind treatment following the open-label titration period. BEMA® buprenorphine is delivered using BDSI's patented BEMA® drug delivery technology, which efficiently and conveniently delivers buprenorphine across the buccal mucosa (inside lining of the cheek).

Overall, average pain scores increased more in the placebo arm versus BEMA® buprenorphine at week 12 from baseline, and the difference between the two groups was statistically significant:

- (EN3409-307/opioid experienced population) mean score change: 1.92, placebo versus 0.88, BEMA® buprenorphine; p<0.00001
- (EN3409-308/opioid naive population) mean score change:1.59, placebo versus 0.94, BEMA® buprenorphine; p=0.0012

A statistically significant percentage of patients on BEMA® buprenorphine experienced pain reductions of greater than 30 percent compared to placebo (EN3409-307: 64.2 percent versus 30.6 percent; p<0.0001; EN3409-308: 62.7 percent versus 46.9 percent; p=0.0012).

"Prescribers often struggle with decisions to initiate treatment for chronic pain, a condition that imposes a significant burden on patients and our society," said Sue Hall, Ph.D., Executive Vice President, Chief Scientific Officer and Global Head of Research & Development and Quality at Endo. "We are pleased with these positive Phase 3 data as they suggest that BEMA® buprenorphine may be an appropriate, effective pain relief option for patients who require around-the-clock treatment. The development of BEMA® buprenorphine builds on Endo's long-standing heritage in meeting unmet needs in pain management, and we look forward to continuing discussions with FDA regarding our accepted regulatory submission."

In study EN3409-307, the most commonly reported adverse events (AEs) – those occurring in greater than 3 percent of patients – included nausea (7.5 percent), vomiting (5.5 percent), and drug withdrawal syndrome (3.5 percent) in the BEMA® buprenorphine group, and nausea (7.4 percent), diarrhea (3.1 percent), drug withdrawal syndrome (9.8 percent) and headache (3.1 percent) in the placebo group. In study EN3409-308, the most commonly reported AEs included nausea (10 percent), constipation (3.9 percent), and vomiting (3.9 percent) with BEMA buprenorphine and nausea (7.3 percent), upper respiratory tract infection (3.9 percent), headache (3.4 percent), and diarrhea (3.0 percent) with placebo.

During the open-label titration phase in EN3409-307, 2 reported serious AEs (ileus and abdominal pain) were considered related to buprenorphine. During the double-blind treatment phase, no serious AEs were considered related to study treatment. There were no deaths during the study. In EN3409-308, no serious AEs that occurred during open-label or double-blind treatment were considered related to study treatment and there were no deaths during the study.

"We believe BEMA® buprenorphine has the potential to be an important treatment option because it combines FDA-approved buprenorphine with BDSI's proprietary BEMA® technology," said Andrew Finn, Pharm.D., Executive Vice President of Product Development for BDSI. "We are excited about these pivotal data results and we believe that, if approved, BEMA® buprenorphine will be a significant step forward for patients and healthcare providers."

Last year, Endo Pharmaceuticals submitted a New Drug Application (NDA) for BEMA® buprenorphine, which was accepted by the FDA in February 2015. At that time, the FDA also granted conditional acceptance for BELBUCA™ as the proposed proprietary name for buprenorphine HCl buccal film. A PDUFA action date has been set for October 2015.

About BEMA® buprenorphine
Buprenorphine is a Schedule III controlled substance, meaning that it has been designated as having lower abuse potential than Schedule II drugs, a category which includes most opioid analgesics. Buprenorphine is a mu-opioid receptor partial agonist and a potent analgesic with a relatively long duration of action. BEMA® buprenorphine is being developed under the proprietary name BELBUCA™ (buprenorphine HCl) buccal film and will be commercialized through a worldwide license and development agreement between Endo Pharmaceuticals and BDSI.

About Endo International plc
Endo International plc is a global specialty pharmaceutical company focused on improving patients' lives while creating shareholder value. Endo develops, manufactures, markets and distributes quality branded pharmaceutical and generic pharmaceutical products as well as over-the-counter medications though its operating companies. Endo has global headquarters in Dublin, Ireland, and U.S. headquarters in Malvern, PA. Learn more at www.endo.com.

About Endo Pharmaceuticals Inc.
Endo Pharmaceuticals Inc. is focused on developing and delivering high-value branded pharmaceutical products that meet the unmet needs of patients. Endo Pharmaceuticals is an operating company of Endo International plc (NASDAQ: ENDP) (TSX: ENL), a global specialty pharmaceutical company focused on improving patients' lives while creating shareholder value. Learn more at www.endo.com or www.endopharma.com.

About BioDelivery Sciences International
BioDelivery Sciences International, Inc. (NASDAQ: BDSI) is a specialty pharmaceutical company with a focus in the areas of pain management and addiction medicine. BDSI is utilizing its novel and proprietary BioErodible MucoAdhesive (BEMA®) technology and other drug delivery technologies to develop and commercialize, either on its own or in partnership with third parties, new applications of proven therapies aimed at addressing important unmet medical needs.

BDSI's headquarters is located in Raleigh, North Carolina. For more information visit www.bdsi.com.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and Canadian securities legislation, including the statements by Dr. Gimbel, Dr. Hall and Dr. Finn, and other statements regarding research and development outcomes, efficacy, adverse reactions, market and product potential and product availability. Statements including words such as "believes," "expects," "anticipates," "intends," "estimates," "plan," "will," "may," "look forward," "intend," "guidance," "future" or similar expressions are forward-looking statements. Because these statements reflect Endo's and BDSI's current views, expectations and beliefs concerning future events, these forward-looking statements involve risks and uncertainties. Although Endo and BDSI believe that these forward-looking statements and information are based upon reasonable assumptions and expectations, readers should not place undue reliance on them, or any other forward-looking statements or information in this news release. Investors should note that many factors, as more fully described in the documents filed by Endo with the Securities and Exchange Commission ("SEC") and with securities regulators in Canada on the System for Electronic Document Analysis and Retrieval ("SEDAR"), and by BDSI with the SEC, including under the caption "Risk Factors" in Endo Health Solutions Inc.'s Form 10-K and Endo's Form 10-Q and Form 8-K filings, and in BDSI's Form 10-K, Form 10-Q and Form 8-K filings, as applicable, and as otherwise enumerated herein or therein, could affect Endo's and/or BDSI's future financial results and could cause Endo's and/or BDSI's actual results to differ materially from those expressed in forward-looking statements contained in this communication. The forward-looking statements in this press release are qualified by these risk factors. These are factors that, individually or in the aggregate, could cause Endo's and/or BDSI's actual results to differ materially from expected and historical results. Neither Endo nor BDSI assume any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise, except as may be required under applicable securities law.

To view the original version on PR Newswire, visit:http://www.prnewswire.com/news-releases/endo-pharmaceuticals-and-biodelivery-sciences-present-pivotal-data-from-two-phase-3-trials-demonstrating-safety-and-efficacy-of-buprenorphine-hcl-buccal-film-for-the-management-of-chronic-pain-300083390.html

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