



## Phase 4 IMPROVE Publication Finds EXPAREL®- Based Multimodal Analgesia Reduces Opioid Use, Adverse Events and Hospital Stay Following Laparoscopic Surgery

January 7, 2014

-- Results Reinforce Findings from IMPROVE Trial Series Demonstrating the Opioid-Sparing and Economic Benefits of EXPAREL Compared to Standard Opioid-Based Regimen --

PARSIPPANY, N.J.--(BUSINESS WIRE)--Jan. 7, 2014-- [Pacira Pharmaceuticals, Inc.](#) (NASDAQ: PCRX) today announced results from the IMPROVE study in laparoscopic colectomy. IMPROVE represents a series of open-label prospective Phase 4 clinical studies to assess the differences in postsurgical opioid use and health economic outcomes between patients receiving [EXPAREL®](#) (bupivacaine liposome injectable suspension) as the foundation of a multimodal analgesic regimen versus a standard opioid-based regimen for postsurgical pain control. The results were published in the January issue of *Current Therapeutic Research*.

The study evaluated 82 patients who underwent laparoscopic colectomy, a minimally invasive surgery to remove all or part of the colon using several small incisions in the abdomen. Compared to patients in the standard opioid-based treatment arm—who received intravenous (IV) opioids via patient-controlled analgesia (PCA) devices—patients undergoing the same procedure and receiving an EXPAREL-based multimodal regimen experienced:

- **A 64 mg reduction in mean opioid consumption** (32 mg in the EXPAREL group compared with 96 mg in the IV opioid-based PCA group;  $P<0.0001$ )
- **A 1-day reduction in median length of hospital stay** (3.0 days in the EXPAREL group compared with 4.0 days in the IV opioid-based PCA group;  $P=0.0019$ )
- **Significantly fewer opioid-related adverse events (ORAEs)** (8 percent of patients in the EXPAREL group experienced ORAEs, compared with 41 percent of patients in the IV opioid-based PCA group;  $P=0.0019$ )
- **A \$1,784 reduction in mean hospitalization costs** (\$11,234 in the EXPAREL group compared with \$13,018 in the IV opioid-based PCA group)

"With a growing emphasis on minimizing the drawbacks of opioids, clinicians are increasingly looking for effective analgesic agents that can anchor an opioid-sparing multimodal pain management regimen while demonstrating measurable advantages over the current standard of care," said Keith A. Candiotti, M.D., the study's lead author and vice chair of clinical research, chief of the Division of Perioperative Medicine, and professor of clinical anesthesiology at the University of Miami Leonard Miller School of Medicine. "Based on our findings, an EXPAREL-based multimodal approach demonstrated significant improvements in length of stay, opioid consumption and incidence of opioid-related adverse events, all of which are key drivers of a successful and expedited recovery."

This study was conducted at six sites across the United States; 26 patients were treated with an EXPAREL-based multimodal treatment regimen, while 56 patients received opioid-based intravenous (IV) patient-controlled analgesia (PCA).

"There are millions of laparoscopic inpatient procedures performed annually in the United States, with the goal of reducing postsurgical pain and speeding patient recovery. This study has successfully demonstrated that even in minimally invasive procedures, EXPAREL makes a strong positive impact on both opioid use and hospital economics," said Dave Stack, president, chief executive officer and chairman of Pacira. "The results of this and all of the IMPROVE studies underscore the value of EXPAREL, not only as an effective and long-lasting non-opioid analgesic, but also as an integral component of a hospital or provider's efforts to improve both the patient recovery experience and hospital economics."

The full IMPROVE laparoscopic colectomy study publication is available online [here](#).

EXPAREL is indicated for single-dose administration into the surgical site to produce postsurgical analgesia.

### About Pacira

Pacira Pharmaceuticals, Inc. (NASDAQ: PCRX) is an emerging specialty pharmaceutical company focused on the clinical and commercial development of new products that meet the needs of acute care practitioners and their patients. The company's current emphasis is the development of non-opioid products for postsurgical pain control, and its lead product, EXPAREL® (bupivacaine liposome injectable suspension), was commercially launched in the United States in April 2012. EXPAREL and two other products have utilized the Pacira proprietary product delivery technology DepoFoam®, a unique platform that encapsulates drugs without altering their molecular structure and then releases them over a desired period of time. Additional information about Pacira is available at [www.pacira.com](http://www.pacira.com).

### About EXPAREL®

EXPAREL (bupivacaine liposome injectable suspension) is indicated for single-dose infiltration into the surgical site to produce postsurgical analgesia. The product combines bupivacaine with DepoFoam, a proven product delivery technology that delivers medication over a desired time period. EXPAREL represents the first and only multivesicular liposome local anesthetic that can be utilized in the peri- or postsurgical setting in the same fashion as current local anesthetics. By utilizing the DepoFoam platform, a single dose of EXPAREL delivers bupivacaine over time, providing analgesia with reduced opioid requirements for up to 72 hours. Pivotal studies have demonstrated the safety and efficacy of EXPAREL in patients undergoing bunionectomy or hemorrhoidectomy procedures and additional studies are underway to further demonstrate the safety and efficacy in other procedures. Additional information is available at [www.EXPAREL.com](http://www.EXPAREL.com).

## Important Safety Information

EXPAREL is contraindicated in obstetrical paracervical block anesthesia. EXPAREL has not been studied for use in patients younger than 18 years of age. Non-bupivacaine-based local anesthetics, including lidocaine, may cause an immediate release of bupivacaine from EXPAREL if administered together locally. The administration of EXPAREL may follow the administration of lidocaine after a delay of 20 minutes or more. Other formulations of bupivacaine should not be administered within 96 hours following administration of EXPAREL. Monitoring of cardiovascular and neurological status, as well as vital signs should be performed during and after injection of EXPAREL as with other local anesthetic products. Because amide-type local anesthetics, such as bupivacaine, are metabolized by the liver, EXPAREL should be used cautiously in patients with hepatic disease. Patients with severe hepatic disease, because of their inability to metabolize local anesthetics normally, are at a greater risk of developing toxic plasma concentrations. In clinical trials, the most common adverse reactions (incidence greater-than or equal to 10%) following EXPAREL administration were nausea, constipation, and vomiting.

Please see the full Prescribing Information for more details available at [http://www.exparel.com/pdf/EXPAREL\\_Prescribing\\_Information.pdf](http://www.exparel.com/pdf/EXPAREL_Prescribing_Information.pdf).

## Forward Looking Statements

Any statements in this press release about our future expectations, plans and prospects, including statements about our plans and expectations regarding EXPAREL, and other statements containing the words “believes,” “anticipates,” “plans,” “expects,” and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including risks relating to: the success of our sales and manufacturing efforts in support of the commercialization of EXPAREL; the rate and degree of market acceptance of EXPAREL; the size and growth of the potential markets for EXPAREL and our ability to serve those markets; our plans to expand the indications of EXPAREL to include nerve block; our plans to continue to manufacture and provide support services for our commercial partners who have licensed DepoCyt(e); our commercialization and marketing capabilities; and other factors discussed in the “Risk Factors” of our most recent Annual Report on Form 10-K for the fiscal year ended December 31, 2012, and in other filings that we periodically make with the SEC. In addition, the forward-looking statements included in this press release represent our views as of the date of this press release. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this press release.

Source: Pacira Pharmaceuticals, Inc.

Company Contact:

Pacira Pharmaceuticals, Inc.

Jessica Cho, 973-254-3574

[Jessica.Cho@pacira.com](mailto:Jessica.Cho@pacira.com)

or

Media Contact:

Pure Communications, Inc.

Susan Heins, 864-286-9597

[sjheins@purecommunicationsinc.com](mailto:sjheins@purecommunicationsinc.com)