

## **Natpara® (parathyroid hormone) for Injection Now Available in the U.S.**

*Natpara to be distributed through select group of specialty pharmacies and supported by comprehensive patient support services*

**Lexington, Mass. – April 1, 2015** – Shire plc (LSE: SHP, NASDAQ: SHPG) today announced that Natpara® (parathyroid hormone) for injection is now available in the United States. The U.S. Food and Drug Administration (FDA) approved Natpara as an adjunct to calcium and vitamin D to control hypocalcemia in patients with hypoparathyroidism on January 23, 2015. Because of the potential risk of osteosarcoma, Natpara is recommended only for patients who cannot be well-controlled on calcium supplements and active forms of vitamin D alone. Natpara was not studied in patients with hypoparathyroidism caused by calcium-sensing receptor mutations or in patients with acute post-surgical hypoparathyroidism.

Natpara will be available through a Risk Evaluation and Mitigation Strategy (REMS) Program and a limited network of specialty pharmacies. Eligible patients who are prescribed Natpara will have access to patient support services through NPS Advantage. These services include access to NPS Advantage Care Coordinators who can provide: information about Natpara, insurance authorization, appeals and financial assistance; assistance with ordering products; and, connect patients with a Nurse Educator.

“We are proud to introduce Natpara because it fulfills a long-term unmet need for a subset of an already rare patient population who cannot be well-controlled on the standard of care, and until now, did not have an FDA-approved parathyroid hormone to help treat their condition,” said Roger Adsett, Head of the Gastrointestinal and Internal Medicines Business Unit at Shire. “The Natpara launch is an example of how we are addressing a significant unmet patient need and expanding our rare disease offerings.”

**Natpara may cause serious side effects, including possible bone cancer (osteosarcoma). During animal drug testing, Natpara caused some rats to develop a bone cancer called osteosarcoma. It is not known if people who take Natpara will have a higher chance of getting osteosarcoma. See below for additional Important Safety Information and full prescribing information about Natpara.**

Because of the potential risk of osteosarcoma associated with Natpara therapy, Natpara is available only through a restricted REMS program called the Natpara REMS Program. Under the Natpara REMS Program, only certified healthcare providers can prescribe and only certified pharmacies can dispense Natpara. Further information is available at [www.NATPARAREMS.com](http://www.NATPARAREMS.com) or by telephone at 1-855-NATPARA.

It is not known if Natpara is safe and effective for children 18 years of age or younger. Natpara should not be used in children and young adults whose bones are still growing.

In Europe, the European Medicines Agency (EMA) has validated and initiated its review of the company's marketing authorization application for Natpar™.

## About NPS Advantage

NPS Advantage is a patient support program for eligible patients prescribed Natpara. At no charge, NPS Advantage Care Coordinators can provide: information about Natpara, insurance authorization, appeals and financial assistance; assistance with ordering products; and, connect patients with a Nurse Educator. More information about services for people prescribed Natpara can be found at [NPSAdvantage.com](http://NPSAdvantage.com) or by speaking with a Care Coordinator. Shire offers a co-pay assistance program for eligible patients. Patients who are uninsured or have limited insurance coverage may be eligible to receive treatment through the Natpara Patient Assistance Program.

## About Natpara® (parathyroid hormone) for Injection

Natpara® (parathyroid hormone) for injection is indicated as an adjunct to calcium and vitamin D to control hypocalcemia in patients with hypoparathyroidism. Natpara is a bioengineered replica of human parathyroid hormone. Natpara is self-administered once daily by subcutaneous injection.

Because of the potential risk of osteosarcoma, Natpara is recommended only for patients who cannot be well-controlled on calcium supplements and active forms of vitamin D alone. Natpara was not studied in patients with hypoparathyroidism caused by calcium-sensing receptor mutations or in patients with acute post-surgical hypoparathyroidism.

In clinical studies, Natpara has been shown to help maintain serum calcium levels while reducing the need for oral calcium and active vitamin D and, in some cases, eliminate the need for active vitamin D altogether. The most common adverse reactions associated with Natpara and occurring in greater than 10% of individuals were: paresthesia, hypocalcemia, headache, hypercalcemia, nausea, and hypoesthesia, diarrhea, vomiting, arthralgia, hypercalciuria and pain in extremity.

Natpara is available in four dosage strengths: 25 mcg, 50 mcg, 75 mcg, and 100 mcg.

Natpara received orphan drug status for the treatment of hypoparathyroidism from the FDA in 2007 and the EMA in 2013.

## Important Safety Information

### What is the most important information I should know about NATPARA?

**NATPARA may cause serious side effects, including:**

#### **Possible bone cancer (osteosarcoma).**

- During animal drug testing, NATPARA caused some rats to develop a bone cancer called osteosarcoma. It is not known if people who take NATPARA will have a higher chance of getting osteosarcoma. Tell your doctor right away if you have pain in any areas of your body that does not go away, or any new or unusual lumps or swelling under your skin that is tender to touch.
- **NATPARA is only available through the NATPARA Risk Evaluation and Mitigation Strategy (REMS) Program.** The purpose of the NATPARA REMS program is to inform patients about the potential risk of osteosarcoma associated with the use of NATPARA. For more information about this REMS program, call 1-855-628-7272 or go to [www.NATPARAREMS.com](http://www.NATPARAREMS.com).

#### **High blood calcium (hypercalcemia)**

- NATPARA can cause some people to have a higher blood calcium level than normal.

- Your doctor should check your blood calcium before you start and during your treatment with NATPARA
- Tell your doctor if you have nausea, vomiting, constipation, low energy, or muscle weakness. These may be signs that you have too much calcium in your blood.

### **Low blood calcium (hypocalcemia)**

- People who stop using or miss a dose of NATPARA may have an increased risk of severe low blood calcium levels
- Tell your doctor if you have tingling of your lips, tongue, fingers and feet, twitching of face muscles, cramping of feet and hands, seizures, depression, or have problems thinking or remembering.

Tell your doctor right away if you have any of these signs and symptoms of high or low blood calcium levels.

### **Before you start using NATPARA, tell your doctor about all of your medical conditions, including if you:**

- have Paget's disease or other bone disease
- have or have had cancer in your bones
- have or have had radiation therapy
- have or had too much calcium in your blood
- have high blood levels of certain electrolytes (alkaline phosphatase)
- are pregnant or plan to become pregnant. It is not known if NATPARA will harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if NATPARA passes into your breast milk. You and your doctor should decide if you will use NATPARA or breastfeed. You should not do both.

**Tell your doctor about all the medicines you take**, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

NATPARA and other medicines may affect each other causing side effects.

Especially tell your doctor if you are taking medicines that contain digoxin, alendronate, calcium supplements or food products that contain calcium, or active Vitamin D.

Know the medicines you take. Keep a list of them to show your doctor or pharmacist each time you get a new medicine.

### **What are the most common side effects of NATPARA?**

#### **The most common side effects of NATPARA include**

- Tingling, tickling, or a burning feeling of your skin (paresthesia), headache and nausea

These are not all the possible side effects of NATPARA. For more information, ask your doctor. Call your doctor for medical advice about side effects.

You may report side effects to the NPS Adverse Event/Product Complaint Line at 1-855-215-5550 or by calling the Food and Drug Administration (FDA) at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).

[Click here](#) for the U.S. full prescribing information for Natpara, including Medication Guide and boxed warning about the potential for osteosarcoma. [Click here](#) for the Natpara Instructions For Use.

**For further information please contact:**

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**NOTES TO EDITORS**

Shire enables people with life-altering conditions to lead better lives.

Our strategy is to focus on developing and marketing innovative specialty medicines to meet significant unmet patient needs.

We focus on providing treatments in Rare Diseases, Neuroscience, Gastrointestinal and Internal Medicine and we are developing treatments for symptomatic conditions treated by specialist physicians in other targeted therapeutic areas, such as Ophthalmics.

[www.shire.com](http://www.shire.com)

**THE “SAFE HARBOR” STATEMENT UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995**

Statements included in this announcement that are not historical facts are forward-looking statements. Such forward-looking statements involve a number of risks and uncertainties and are subject to change at any time. In the event such risks or uncertainties materialize, Shire’s results could be materially adversely affected. The risks and uncertainties include, but are not limited to, that:

- Shire’s products may not be a commercial success;
- product sales from ADDERALL XR and INTUNIV are subject to generic competition;
- the failure to obtain and maintain reimbursement, or an adequate level of reimbursement, by third-party payers in a timely manner for Shire’s products may affect future revenues, financial condition and results of operations;
- Shire conducts its own manufacturing operations for certain of its products and is reliant on third party contract manufacturers to manufacture other products and to provide goods and services. Some of the Shire’s products or ingredients are only available from a single approved source for manufacture. Any disruption to the supply chain for any of the Shire’s products may result in Shire being unable to continue marketing or developing a product or may result in Shire being unable to do so on a commercially viable basis for some period of time;
- the manufacture of Shire’s products is subject to extensive oversight by various regulatory agencies. Regulatory approvals or interventions associated with changes to manufacturing sites, ingredients or manufacturing processes could lead to significant delays, an increase in operating costs, lost product sales, an interruption of research activities or the delay of new product launches;

- Shire has a portfolio of products in various stages of research and development. The successful development of these products is highly uncertain and requires significant expenditures and time, and there is no guarantee that these products will receive regulatory approval;
- the actions of certain customers could affect Shire's ability to sell or market products profitably. Fluctuations in buying or distribution patterns by such customers can adversely affect Shire's revenues, financial conditions or results of operations;
- investigations or enforcement action by regulatory authorities or law enforcement agencies relating to Shire's activities in the highly regulated markets in which it operates may result in significant legal costs and the payment of substantial compensation or fines;
- adverse outcomes in legal matters and other disputes, including Shire's ability to enforce and defend patents and other intellectual property rights required for its business, could have a material adverse effect on Shire's revenues, financial condition or results of operations;
- Shire faces intense competition for highly qualified personnel from other companies and organizations. Shire is undergoing a corporate reorganization and was the subject of an unsuccessful acquisition proposal and the consequent uncertainty could adversely affect Shire's ability to attract and/or retain the highly skilled personnel needed for Shire to meet its strategic objectives;
- failure to achieve Shire's strategic objectives with respect to the acquisition of NPS Pharmaceuticals, Inc. may adversely affect Shire's financial condition and results of operations;

and other risks and uncertainties detailed from time to time in Shire's filings with the US Securities and Exchange Commission, including its most recent Annual Report on Form 10-K.