



Grünenthal receives Breakthrough Therapy Designation from U.S. FDA for neridronic acid for the treatment of complex regional pain syndrome (CRPS), a debilitating orphan disease with high medical need

- **Neridronic acid is the first investigational medicine to receive Breakthrough Therapy Designation for the treatment of CRPS**
- **Neridronic acid was discovered and developed by Abiogen Pharma SpA, Pisa, Italy**
- **Currently in Phase III of clinical development, neridronic acid, could be the first FDA-approved treatment in the U.S. for CRPS, an orphan disease with severe, persistent pain without sufficiently effective treatment options today**

Aachen, Germany, and Pisa, Italy – 16 December 2016 – Grünenthal, an R&D-driven, privately held international pharmaceutical company with headquarters in Germany, and Abiogen Pharma, privately held Italian pharmaceutical company with headquarter in Pisa, Italy announced today that the U.S. Food and Drug Administration (FDA) has granted Breakthrough Therapy Designation to neridronic acid, an investigational medicine, for the treatment of complex regional pain syndrome (CRPS), a serious, disabling orphan disease. Today, with no FDA- or EMA-approved drug treatments, there is a clear need for effective treatment options to address this significant unmet medical need. CRPS is a debilitating condition characterized by severe, continuous, burning pain often occurring in an extremity after injury or surgery. It is one of the most painful conditions a patient can experience¹.

The Breakthrough Therapy Designation is supported by data from a randomized, double-blind, placebo-controlled phase II clinical trial showing significant reduction in pain and symptoms of CRPS-I with neridronic acid treatment². Neridronic acid is a new chemical entity (NCE) and investigational drug in the U.S. It received fast track designation in August 2015 and orphan drug designation in March 2013 by the FDA.

“The terrible burden for patients with CRPS motivates us every day to deliver true benefits to them”, said Dr. Klaus-Dieter Langner, Chief Scientific Officer of Grünenthal. “It is very encouraging to see that the FDA recognizes the urgent need for new treatments for patients with CRPS and has granted neridronic acid the status of a Breakthrough Therapy. This supports our efforts to develop an efficacious treatment option to these patients. We are committed to working closely with the FDA to bring neridronic acid to patients with CRPS as fast as possible.”

Gabriel Baertschi, CEO of the Grünenthal Group, points out, “Grünenthal is highly dedicated to improving the lives of patients with pain as well as rare diseases with limited treatment options. This is an area of high unmet medical need. As a worldwide leader in pain, our focus is to develop potentially life-changing treatments for patients with various diseases accompanied with pain. Through the acquisition of Thar Pharmaceuticals, we have recently added an orally available form of zoledronic acid to our pipeline which is to enter phase III development for treatment of CRPS. Together with neridronic acid as our lead compound in CRPS, our platform of promising development candidates for this debilitating disease is growing.”

“We are very pleased to see how the ongoing collaboration with Grünenthal on a molecule born in our Research Center is evolving, and we are looking forward to continuing our relationship”, said Dr. Massimo Di Martino, President and CEO of Abiogen Pharma. “Working to potentially improve the lives of patients with CRPS is very rewarding and we are committed to do everything supporting Grünenthal in its efforts.”

The FDA’s Breakthrough Therapy Designation is intended to expedite the development and review of medicines that treat a serious or life threatening disease and show early evidence of potential clinical benefit in such diseases, to help ensure that patients receive access to medicines as soon as possible.

Grünenthal obtained the development and commercialization rights for North America and South America in 2013.

About neridronic acid

Neridronic acid is an investigational aminobisphosphonate in phase III of development. It is not approved in the United States. Grünenthal holds the development and marketing rights for North America and South America. Neridronic acid was discovered and developed by Abiogen Pharma, Pisa, Italy. Abiogen had licensed the development and commercial rights for North America and South America to the U.S.-based company NovaPharm Therapeutics; Grünenthal had obtained these rights in 2013.

About CRPS

Complex regional pain syndrome (CRPS; formerly known as RSD or Reflex Sympathetic Dystrophy) is a debilitating condition



characterized by severe, continuous, burning or throbbing pain often occurring in an extremity after injury or surgery. The excessive pain is accompanied by changes in skin color, temperature and/or swelling/edema. It is persistent and is ranked as the most painful form of chronic pain that exists today by the McGill Pain Index. CRPS results in loss of physical function, and can lead to significant and sometimes permanent disability. There are currently no FDA- or EMA-approved treatments for patients with CRPS.

About Grünenthal

The Grünenthal Group is an independent, family-owned, international research-based pharmaceutical company headquartered in Aachen, Germany. We are an entrepreneurial specialist delivering true benefits to patients. By sustainably investing in research and development above the industrial average, we are committing to innovation in order to treat unmet medical needs and bring value-adding products to markets. Grünenthal is a fully integrated research & development company with a long track record of bringing innovative pain treatments and state-of-the-art technologies to patients. Altogether, the Grünenthal Group is present in 32 countries with affiliates in Europe, Latin America and the U.S. Grünenthal products are sold in more than 155 countries and approx. 5,400 employees are working for the Grünenthal Group worldwide. In 2015, Grünenthal achieved revenues of € 1.2 bn. Grünenthal also has a U.S. presence in Morristown, N.J. More information: www.grunenthal.com.

About Abiogen Pharma

Abiogen Pharma is a privately owned specialist pharmaceutical company focused on bone metabolism and some rare diseases. The Company was founded in 1997 as a spin-off of Istituto Gentili. Abiogen employs about 330 people with its head quarter in Pisa, Italy. The team of R&D of Abiogen Pharma had developed and continues to develop several bisphosphonates, including alendronate, clodronate ethidronate, and neridronic acid. For more information, please visit www.abiogen.it.

References

- 1 Tahmouh AJ. Causalgia: redefinition as a clinical pain syndrome. Pain. 1981 Apr;10(2):187-97
- 2 Varena M, Adami S, Rossini M, Gatti D, Idolazzi L, Zucchi F, et al. Treatment of complex regional pain syndrome type I with neridronate: a randomized, double-blind, placebo-controlled study. Rheumatology 2013; 52(3): 534-42.

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