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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Plitidepsin for the treatment of post-essential thrombocythaemia myelofibrosis

Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in June 2011 on request of the sponsor.

On 23 February 2011, orphan designation (EU/3/10/838) was granted by the European Commission to Pharma Mar S.A. Sociedad Unipersonal, Spain, for plitidepsin for the treatment of post-essential thrombocythaemia myelofibrosis.

What is post-essential thrombocythaemia myelofibrosis?

Myelofibrosis is a disease in which the bone marrow (the spongy tissue inside the large bones) becomes dense and fibrous, and starts producing abnormal immature blood cells that replace the normal blood cells. It can develop as a reaction to essential thrombocythaemia (overproduction of platelets, components that help the blood to clot). 'Essential' means that the thrombocythaemia is not caused by any known condition.

In myelofibrosis, some immature blood cells migrate from the bone marrow to other organs, such as the spleen and liver, where they mature. This causes the organs to become enlarged. Patients with myelofibrosis can develop several symptoms, including pain in the bones, fever, tiredness, weakness, weight loss, infections and bleeding.

Post-essential thrombocythaemia myelofibrosis is a debilitating disease that is long lasting and may be life threatening because it can lead to severe anaemia (low red blood cell counts) and infections, and can result in leukaemia (cancer of the white blood cells).

What is the estimated number of patients affected by the condition?

At the time of designation, post-essential thrombocythaemia myelofibrosis affected less than 0.05 in 10,000 people in the European Union (EU)*. This is equivalent to a total of less than 2,500 people, and

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed on the basis of data from the European Union (EU 27), Norway, Iceland and Liechtenstein. This represents a population of 506,500,000 (Eurostat 2010).

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is below the ceiling for orphan designation, which is 5 people in 10,000. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

What treatments are available?

At the time of designation, although hydroxyurea and busulfan were authorised in the EU for primary myelofibrosis (myelofibrosis of unknown cause), there were no treatments authorised specifically for post-essential thrombocythaemia myelofibrosis.

Treatments for this disease were aimed at relieving symptoms. They included androgens (male hormones), glucocorticoids (a type of steroid) and erythropoietin (a hormone that stimulates the production of red blood cells) to treat anaemia, and surgery or radiation to remove or shrink the enlarged spleen. In some patients, allogeneic stem-cell transplantation was used. This is a complex procedure where the patient receives stem cells from a matched donor to help restore the bone marrow.

How is this medicine expected to work?

Plitidepsin is a cytotoxic (cell-killing) substance. In myelofibrosis, it is expected to work mainly by stimulating the production of an enzyme known as p27, whose main activity is to slow down or stop cell division. Around 50% of myelofibrosis patients have reduced amounts of this enzyme. By stimulating the production of p27, plitidepsin is expected to slow down the reproduction and abnormal growth of blood cells in the bone marrow of patients with myelofibrosis, thus slowing down the symptoms of the disease.

What is the stage of development of this medicine?

The effects of plitidepsin have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with plitidepsin in patients with myelofibrosis were ongoing.

At the time of submission, plitidepsin was not authorised anywhere in the EU for post-essential thrombocythaemia myelofibrosis or designated as an orphan medicinal product elsewhere for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 10 November 2010 recommending the granting of this designation.

Opinions on orphan medicinal product designations are based on the following three criteria:

- the seriousness of the condition;
- the existence of alternative methods of diagnosis, prevention or treatment;
- either the rarity of the condition (affecting not more than 5 in 10,000 people in the EU) or insufficient returns on investment.

Designated orphan medicinal products are products that are still under investigation and are considered for orphan designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

For more information

Sponsor's contact details:

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For contact details of patients' organisations whose activities are targeted at rare diseases see:

- Orphanet, a database containing information on rare diseases which includes a directory of patients' organisations registered in Europe.
- European Organisation for Rare Diseases (EURORDIS), a non-governmental alliance of patient organisations and individuals active in the field of rare diseases.

Translations of the active ingredient and indication in all official EU languages[1], Norwegian and Icelandic

Language	Active ingredient	Indication
English	Plitidepsin	Treatment of post-essential thrombocythemia myelofibrosis
Bulgarian	Плитидепсин	Лечение на миелофиброза след есенциална тромбоцитемия
Czech	Plitidepsin	Léčba post-esenciální trombocytémické myelofibrózy
Danish	Plitidepsin	Behandling af post essentiel thrombocythæmi myelofibrose
Dutch	Plitidepsine	Behandeling van myelofibrosis volgend op essentiële trombocytemie
Estonian	Plitidepsiin	Postessentsiaalse trombotsüteemia müelofibroosi ravi
Finnish	Plitidepsiini	Essentiaalisen trombosytemian jälkeisen myelofibroosin hoito
French	Plitidepsine	Traitement de la myélofibrose consécutive à une thrombocytémie essentielle
German	Plitidepsin	Behandlung einer Myelofibrose nach essentieller Thrombozythämie
Greek	Πλιτιδεψίνη	Θεραπεία της μυελοϊνωσης από ιδιοπαθή θρομβοκυττάρωση
Hungarian	Plitidepszin	Esszenciális thrombocytaemiát követő mielofibrózis kezelésére
Italian	Plitidepsina	Trattamento della mielofibrosi post-trombocitemia essenziale
Latvian	Plitidepsīns	Pēc-esenciālas trombocitēmijas mielofibrozes ārstēšana
Lithuanian	Plitidepsinas	Mielofibrozės gydymas po esencialinės trombocitemijos
Maltese	Plitidepsin	Kura tal-mjelofibrożi konsegwenti għal trombożitemija essenzjali
Polish	Plitydepsyna	Leczenie mielofibrozy wywołanej nadpłytkowością samoistną
Portuguese	Plitidepsina	Tratamento da mielofibrose devida a trombocitémia essencial
Romanian	Plitidepsină	Tratamentul mielofibrozei post-trombocitemie esenţială
Slovak	Plitidepsín	Liečba myelofibrózy po esenciálnej trombocytémii
Slovenian	Plitidepsin	Zdravljenje mielofibroze, nastale po esecialni trombocitemiji
Spanish	Plitidepsina	Tratamiento de la mielofibrosis secundaria a trombocitemia esencial
Swedish	Plitidepsin	Behandling av post-essentiell trombocytemi myelofibros
Norwegian	Plitidepsin	Behandling av myelofibrose sekundært til essensiell trombocytemi
Icelandic	Plítidepsín	Meðferð á mýelófíbrósu í kjölfar eðlislægs blóðflagnadreyra

[1] At the time of designation