14 June 2010
EMA/COMP/2732/2002 Rev.4
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

3,4 diaminopyridine phosphate for the for the treatment of Lambert-Eaton myasthenic syndrome

On 18 December 2002, orphan designation (EU/3/02/124) was granted by the European Commission to Agence Générale des Equipements et produits de santé - Etablissement Pharmaceutique des Hôpitaux de Paris (AGEPS - EPHP), France, for 3,4 diaminopyridine phosphate for the treatment of Lambert-Eaton myasthenic syndrome.

The sponsorship was transferred to OPi, France, in April 2006. OPi changed its name to EUSA Pharma SAS in February 2008.

The sponsorship was subsequently transferred to BioMarin Europe Ltd, United Kingdom, in June 2010.

What is Lambert-Eaton myasthenic syndrome?

Lambert-Eaton myasthenic syndrome is characterised by weakness of the muscles. The weakness can be so severe that it becomes difficult to climb the stairs, or even walk. The disease is chronically debilitating, and life-threatening. In some patients the disease occurs in the presence of cancer, often a cancer of the lung.

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

At the time of designation, Lambert-Eaton myasthenic syndrome affected approximately 0.1 in 10,000 people in the European Union (EU)*. This is equivalent to a total of around 4,000 people, and is below the threshold 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?

Several products have been used to treat this condition, however none of them has been authorised for Lambert-Eaton myasthenic syndrome in the European Union.

*Disclaimer: The number of patients affected by the condition is estimated and assessed for the purpose of the designation, for a European Community population of 377,000,000 (Eurostat 2001) and may differ from the true number of patients affected by the condition. This estimate is based on available information and calculations presented by the sponsor at the time of the application.

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How is this medicine expected to work?

Muscles are made up of fibres. The fibres of muscles are connected to the nerves. When activated, nerves release a substance into the space between the nerve and the muscle. This substance is called acetylcholine. It causes the muscle fibres to shrink. As a result, the muscle contracts. The release of acetylcholine occurs through a complex mechanism. The mechanism is based on the different flows of potassium and calcium across the surface of nerve cells. The flow is controlled by certain proteins called potassium channels. 3,4-diaminopyridine phosphate is able to block these proteins. As a result, more calcium is taken up by the cells. This in turn causes release of acetylcholine. This is expected to increase muscle strength.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, clinical trials were ongoing.

Another sponsor has received orphan designation in the United States FDA for Lambert-Eaton myasthenic syndrome in 1990.

The medicinal product was not marketed anywhere worldwide for Lambert-Eaton myasthenic syndrome.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 15 November 2002 recommending the granting of this designation.

Update: 3,4 diaminopyridine phosphate (Firdapse) has been authorised in the EU since 23 December 2009 for symptomatic treatment of Lambert-Eaton myasthenic syndrome (LEMS) in adults.

For more information on Firdapse, see:
http://www.ema.europa.eu/humandocs/Humans/EPAR/firdapse/firdapse.htm

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

Language	Active Ingredient	Indication
English	3,4-diaminopyridine phosphate	Treatment of Lambert-Eaton myasthenic syndrome
Bulgarian	3,4 диаминопиридин фосфат	Лечение на миастенен синдром на Lambert-Eaton
Czech	3,4 diaminopyridine phosphate	Léčba myastenického syndromu Lambert- Eaton
Danish	3,4-diaminopyridinfosfat	Behandling af Lambert-Eaton myastheni syndrom.
Dutch	3,4-diaminopyridine-fosfaat	Behandeling van het myasthenie syndroom van Lambert-Eaton
Estonian	3,4-diaminopüridiinfosfaat	Lambert-Eatoni müasteenilise sündroomi ravi
Finnish	3,4-diaminopyridiinifosfaatti	Lambert-Eatonin lihasheikkoussyndrooman hoito
French	Phosphate de 3,4-diaminopyridine	Traitement du syndrome myasthénique de Lambert-Eaton
German	3,4-Diaminopyridin-Phosphat	Behandlung des Lambert-Eaton-Myasthenie-Syndroms
Greek	Φωσφορικό άλας 3,4-διαμινοπυριδίνη	Θεραπεία του μυασθενικού συνδρόμου Lambert-Eaton
Hungarian	3,4-diaminopiridin foszfát	Eaton-Lambert szindróma kezelése
Italian	Fosfato di 3,4-diaminopiridina	Trattamento della sindrome miastenica di Lambert-Eaton
Latvian	3,4 diaminopiridīnfosfāts	Lamberta-Ītona miastēniskais sindroms
Lithuanian	3,4 diaminopiridino fosfatas	Lambert-Eaton'o miasteninio sindromo gydymas
Maltese	3,4-diaminopyridine phosphate	Kura tas-sindrome miasteniku ta' Lambert-Eaton
Polish	3,4-diaminopirydyny fosforan	Leczenie zespołu mistanicznego Lambert-Eaton'a
Portuguese	Fosfato de 3,4-diaminopiridina	Tratamento do síndroma miasténico de Lambert-Eaton
Romanian	Fosfat de 3,4 diaminopiridină	Tratamentul sindromului miastenic Lambert-Eaton
Slovak	3,4-diaminopyridínfosfát	Liečba Lambertovho-Eatonovho myastenického syndrómu
Slovenian	3,4 diaminopiridinfosfat	Zdravljenje miasteničnega sindroma Lambert-Eaton
Spanish	Fosfato de 3,4-diaminopiridina	Tratamiento del síndrome de Eaton-Lambert.
Swedish	3,4-diaminopyridinfosfat	Behandling av Lambert-Eatons myastenisyndrom

[1] At the time of transfer of sponsorship