12 August 2015
EMA/COMP/431631/2015
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acetate for the treatment of amyotrophic lateral sclerosis

On 28 July 2015, orphan designation (EU/3/15/1527) was granted by the European Commission to PBS Regulatory Consulting Group Limited, United Kingdom, for hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acetate for the treatment of amyotrophic lateral sclerosis.

What is amyotrophic lateral sclerosis?

Amyotrophic lateral sclerosis (ALS) is a progressive disease of the nervous system, where nerve cells in the brain and spinal cord that control voluntary movement gradually deteriorate, causing loss of muscle function and paralysis. The exact causes are unknown but are believed to include genetic and environmental factors. The symptoms of ALS vary depending on which muscles weaken first, and include loss of balance, loss of control of hand and arm movement, and difficulty speaking, swallowing and breathing. ALS usually starts in mid-life and men are more likely to develop the disease than women.

ALS is a long-term debilitating and life-threatening disease because of the gradual loss of function and its paralysing effect on muscles used for breathing which usually leads to death due to respiratory failure.

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

At the time of designation, ALS affected not more than 1 in 10,000 people in the European Union (EU). This was equivalent to a total of not more than 51,000 people*, and 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).

*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 28), Norway, Iceland and Liechtenstein. This represents a population of 512,900,000 (Eurostat 2015).

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What treatments are available?

At the time of designation, riluzole was authorised in the EU to treat ALS. Patients also received supportive treatment to temporarily relieve the symptoms of the disease, such as physiotherapy and speech therapy.

The sponsor has provided sufficient information to show that the medicine might be of significant benefit for patients with the condition because early studies in experimental models suggest that it may delay the onset of symptoms, improve movement, grip strength and survival. This assumption will need to be confirmed at the time of marketing authorisation, in order to maintain the orphan status.

How is this medicine expected to work?

This medicine blocks a receptor called 'complement 5a receptor' (C5aR), which is normally activated by C5a, one of a group of proteins ('the complement system') that is involved in inflammation. When C5a attaches to C5aR found in brain cells, it attracts and activates certain inflammatory cells, leading to inflammation in the brain. It is thought that in people with ALS brain cells contain high amounts of C5aR. By blocking C5aR, the medicine is expected to reduce inflammation of the brain, thus improving the symptoms of the disease.

What is the stage of development of this medicine?

The effects of the medicine have been evaluated in experimental models.

At the time of submission of the application for orphan designation, no clinical trials with the medicine in patients with ALS had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for ALS. Orphan designation of the medicine had been granted in the United States for ALS.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 18 June 2015 recommending the granting of this designation.

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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 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	Hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acetate	Treatment of amyotrophic lateral sclerosis
Bulgarian	Хидроцинамат-[Orn-Pro-DCHA-Trp-Arg]ацетат	Лечение на амиотрофична латерална склероза
Croatian	Hidrocinamat-[Orn-Pro-dCha-Trp-Arg]acetat	Liječenje amiotrofične lateralne skleroze
Czech	Hydrocinnamate-[Orn-Pro-DCha-Trp-Arg]acetát	Léčba amyotrofické laterální sklerózy (ALS)
Danish	Hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acetat	Behandling af amyotrofisk lateralsklerose
Dutch	Hydrocinnamat-[Orn-Pro-Dcha-Trp-Arg]acetaat	Behandeling van amyotrofe lateraalsclerose
Estonian	Hüdrotsinnamaat-[Orn-Pro-dCha-Trp-Arg]atsetaat	Amüotroofilise lateraalskleroosi ravi
Finnish	Hydrosinnamaatti-[Orn-Pro-dCha-Trp-Arg]asetaatti	Amyotrofisen lateraaliskleroosin hoito
French	Hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acétate	Traitement de la sclérose latérale amyotrophique
German	Hydrozinnamat-[Om-Pro-dCha-Trp-Arg]Acetat	Behandlung der amyotrophen Lateralsklerose
Greek	Υδροκιναμικό-[Orn-Pro-dCha-Trp-Arg]οξεικό	Θεραπεία πλάγιας μυοατροφικής σκλήρυνσης
Hungarian	Hydrocinnamát-[Orn-Pro-DCHA-Trp-Arg]acetát	Amyotrophiás lateral sclerosis kezelése
Italian	Hydrocinnamate-[Orn-Pro-DCHA-Trp-Arg]acetato	Trattamento della sclerosi laterale amiotrofica
Latvian	Hidrocinamāta-[Orn-Pro-dCha-Trp-Arg]acetāts	Amiotrofiskās laterālās sklerozes ārstēšana
Lithuanian	Hidrocinamato-[Orn-pro-dCha-Trp-Arg]acetatas	Šoninės amiotrofinės sklerozės gydymas
Maltese	Hydrocinnamate-[Orn-Pro-dCha-Trp-Arg]acetate	Kura tas-sklerosi laterali amjotrofika
Polish	Hydrocynaman-[Orn-Pro-DCHA-Trp-Arg]octan	Leczenie stwardnienia bocznego zanikowego
Portuguese	Acetato de hidrocinamato-[Orn-Pro-DCHA-Trp-Arg]	Tratamento da esclerose lateral amiotrófica
Romanian	Hidrocinamat-[Orn-Pro-DCHA-Trp-Arg]acetat	Tratamentul sclerozei laterale amiotrofice
Slovak	Hydrocinnamate-[Orn-Pro-DCha-Trp-Arg]acetát	Liečba amyotrofickej laterálnej sklerózy

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	Hidrocinamat -[Om-Pro-DCha-Trp-Arg]acetat	Zdravljenje amiotrofične lateralne skleroze
Spanish	Hidrocinamato-[Orn-Pro-dCha-Trp-Arg]acetato	Tratamiento de la esclerosis lateral amiotrófica
Swedish	Hydrocinnamate-[Orn-Pro-DCHA-Trp-Arg]acetat	Behandling av amyotrofisk lateralskleros
Norwegian	Hydrocinnamate-[Orn-Pro-DCHA-Trp-Arg]acetat	Behandling av amyotrofisk lateralsklerose
Icelandic	Hýdrócinnamat-[Orn-Pró-dCha-Trp-Arg]asetat	Meðferð við blandaðri hreyfitaugahrörnun