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EMA/COMP/359565/2014
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Cysteamine bitartrate for the treatment of Huntington's disease

On 29 July 2014, orphan designation (EU/3/14/1306) was granted by the European Commission to Raptor Pharmaceuticals Europe BV, the Netherlands, for cysteamine bitartrate for the treatment of Huntington's disease.

What is Huntington's disease?

Huntington's disease is a hereditary disease that causes brain cells to die. This leads to symptoms such as involuntary jerky movements, behavioural problems and dementia (loss of intellectual function). The disease is usually first noticed between 35 and 45 years of age, and gets worse over time.

Huntington's disease is caused by defects in the gene responsible for the production of a protein called huntingtin. The gene abnormalities result in an abnormal form of the protein being produced, which causes damage to the cells in specific areas of the brain.

Huntington's disease is a debilitating and life-threatening condition because it causes severe behavioural and mental problems, a progressive loss of the ability to move and potentially life-threatening complications.

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

At the time of designation, Huntington's disease affected approximately 1 in 10,000 people in the European Union (EU). This was equivalent to a total of around 51,000 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?

At the time of designation, the treatments authorised in the EU for Huntington's disease were aimed at relieving the symptoms of the disease. In some Member States, haloperidol, pimozide, tetrabenazine and tiapride were authorised for the abnormal involuntary movements that occur in Huntington's

*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 511,100,000 (Eurostat 2014).

30 Churchill Place ● Canary Wharf ● London E14 5EU ● United Kingdom
Telephone +44 (0)20 3660 6000 **Facsimile** +44 (0)20 3660 5555
Send a question via our website www.ema.europa.eu/contact

disease. In addition, benzodiazepines were used for anxiety, and antidepressants and lithium to treat depression and mood swings.

The sponsor has provided sufficient information to show that cysteamine bitartrate might be of significant benefit for patients with Huntington's disease because early studies in patients indicate that the medicine may be able to slow progression of the disease. 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?

Although its mechanism of action is not fully understood, cysteamine bitartrate is expected to work by blocking the activity of certain enzymes thought to be involved in the development of nerve damage in Huntington's disease patients, in particular an enzyme called transglutaminase (TGase), which is increased in patients with the disease. Blocking the action of the enzyme is expected to improve the motor function of patients and to increase their life span.

What is the stage of development of this medicine?

The effects of cysteamine bitartrate have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with the medicine in patients with Huntington's disease were ongoing.

At the time of submission, cysteamine was authorised as Cystagon (cysteamine bitartrate immediate release capsules) and Procysbi (cysteamine bitartrate gastro-resistant capsules) in the EU for the treatment of nephropathic (kidney) cystinosis.

At the time of submission, cysteamine bitartrate was not authorised anywhere in the EU for Huntington's disease. Orphan designation had been granted in the United States for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 12 June 2014 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:

Raptor Pharmaceuticals Europe BV
Naritaweg 165
1043 BW Amsterdam
The Netherlands
Tel. +31 205 7265 16
Fax +1 415 2239 252
E-mail: info@raptorpharma.com

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	Cysteamine bitartrate	Treatment of Huntington's disease
Bulgarian	Цистеамин битартрат	Лечение на болест на Хънтингтон
Croatian	Cisteaminhidrogentartarat	Liječenje Huntingtonove bolesti
Czech	Cystamin bitartat	Léčba Huntingtonovy nemoci
Danish	Cysteaminbitartrat	Behandling af Huntington's sygdom
Dutch	Cysteaminebitartraat	Behandeling van de ziekte van Huntington
Estonian	Tsüsteamiinbitartraat	Huntington'i tõve ravi
Finnish	Kysteamiinibitartraatti	Huntingtonin taudin hoito
French	Bitartrate de cystéamine	Traitement de la maladie d'Huntington
German	Cysteamin-Bitartrat	Behandlung der Huntington Erkrankung
Greek	Διτρυγική κυστεαμίνη	Θεραπεία της νόσου Huntington
Hungarian	Ciszteamin bitartarát	Huntington kór kezelése
Italian	Cisteamina bitartrato	Trattamento della malattia di Huntington
Latvian	Cisteamīna bitartrāts	Hantingtona slimības ārstēšanai
Lithuanian	Cisteamino bitartratas	Huntington'o ligos gydymas
Maltese	Cysteamine bitartrate	Kura tal-marda ta' Huntington
Polish	Cysteaminy dwuwinian	Leczenie pląsawicy Huntingtona
Portuguese	Bitartarato de cisteamina	Tratamento da doença de Huntington
Romanian	Bitartrat de cisteamină	Tratamentul bolii Huntington
Slovak	Cysteamínbitartarát	Liečba Huntingtonovej choroby
Slovenian	Cisteaminijev bitartrat	Zdravljenje Huntingtonove bolezni
Spanish	Bitartrato de cisteamina	Tratamiento de la enfermedad de Huntington
Swedish	Cysteaminbitartrat	Behandling av Huntingtons sjukdom
Norwegian	Cysteaminbitartrat	Behandling av Huntingtons sykdom.
Icelandic	Cýsteamín bítartrat	Meðferð við Huntingtons sjúkdómi

[1] At the time of designation