22 June 2015
EMA/COMP/276402/2015
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

5,7-dichloro-2-dimethylaminomethyl-8-hydroxyquinoline hydrochloride for the treatment of Huntington's disease

On 21 May 2015, orphan designation (EU/3/15/1497) was granted by the European Commission to Prana Biotechnology UK Limited, United Kingdom, for 5,7-dichloro-2-dimethylaminomethyl-8-hydroxyquinoline hydrochloride 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, leading 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 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, 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

*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).

30 Churchill Place ● Canary Wharf ● London E14 5EU ● United Kingdom
Telephone +44 (0)20 3660 6000 **Facsimile** +44 (0)20 3660 5555
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and tiapride were authorised for the abnormal involuntary movements that occur in Huntington's 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 this medicine might be of significant benefit for patients with Huntington's disease because early studies showed an improvement in the outcome of patients when the medicine was used in combination with tetrabenazine. 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?

In Huntington's disease, the abnormal huntingtin proteins stick together (aggregate) and damage brain cells. It is thought that the formation of huntingtin aggregates is linked to the accumulation of metals such as copper inside cells. This medicine is expected to attach to copper inside cells, thereby reducing the aggregation of the abnormal huntingtin proteins and the associated damage to brain cells.

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, a clinical trial with the medicine in patients with Huntington's disease had been completed and further studies were planned.

At the time of submission, the medicine was not authorised anywhere in the EU for Huntington's disease. Orphan designation of the medicine 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 16 April 2015 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:

Prana Biotechnology UK Limited
c/o Mills & Reeve LLP
Botanic House
100 Hills Road
Cambridge CB2 1PH
United Kingdom
Tel. +44 (0)1603 660 155
Fax +44 (0)1603 633 027
E-mail: info@pranabio.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	5,7-dichloro-2-dimethylaminomethyl-8-hydroxyquinoline hydrochloride	Treatment of Huntington's disease
Bulgarian	5,7-дихлоро-2-диметиламинометил-8-хидроксихинолин хидрохлорид	Лечение на болест на Хънтингтон
Croatian	5,7-dikloro-2-dimetilaminometil-8-hidroksikinolinklorid	Liječenje Huntingtonove bolesti
Czech	5,7-dichlor-2-dimethylaminomethyl-8-hydroxychinolin hydrochlorid	Léčba Huntingtonovy nemoci
Danish	5,7-dichloro-2-dimethylaminomethyl-8-hydroxyquinolinhydrochlorid	Behandling af Huntington's sygdom
Dutch	5,7-dichloor-2-dimethylaminomethyl-8-hydroxychinoline-hydrochloride	Behandeling van de ziekte van Huntington
Estonian	5,7-dikloro-2-dimetüülaminometüül-8-hüdroksükinoliinhüdrokloriid	Huntington'i tõve ravi
Finnish	5,7-dikloori-2-dimetyyliaminometyyli-8-hydroksikinoliinihydrokloridi	Huntingtonin taudin hoito
French	Chlorhydrate de 5,7-dichloro-2-diméthylaminométhyl-8-hydroxyquinoléine	Traitement de la maladie d'Huntington
German	5,7-Dichlor-2-Dimethylaminomethyl-8-Hydroxychinolin Hydrochlorid	Behandlung der Huntington Erkrankung
Greek	Υδροχλωρική 5,7-διχλωρο-2-διμεθυλαμινομεθυλ-8-υδροξυκινολίνη	Θεραπεία της νόσου Huntington
Hungarian	5,7-diklór-2-dimetil-amino-metil-8-hidroxi-kinolin hidroklorid	Huntington kór kezelése
Italian	5,7-dicloro-2-dimetilaminometil-8-idrossichinolina cloridrato	Trattamento della malattia di Huntington
Latvian	5,7-dihlor-2-dimetilaminometil-8-hidroksihinolīna hidrohlorīds	Hantingtona slimības ārstēšanai
Lithuanian	5,7-dichloro-2-dimetilaminometil-8-hidroksikvinolino hidrochloridas	Huntington'o ligos gydymas
Maltese	5,7-dichloro-2-dimethylaminomethyl-8-hydroxyquinoline hydrochloride	Kura tal-marda ta' Huntington
Polish	Chlorowodorek 5,7-dichloro-2-dimetyloaminometylo-8-hydroksychinoliny	Leczenie pląsawicy Huntingtona
Portuguese	5,7-dicloro-2-dimetilaminometil-8-hidroxiquinoleína cloridrato	Tratamento da doença de Huntington
Romanian	Clorhidrat de 5,7-dicloro-2-dimetilaminometil-8-hidroxichinolină	Tratamentul bolii Huntington
Slovak	5,7-dichlór-2-dimetylamínometyl-8-hydroxychinolín hydrochlorid	Liečba Huntingtonovej choroby

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	5,7-dikloro-2-dimetilaminometil-8-hidroksikinolin hidroklorid	Zdravljenje Huntingtonove bolezni
Spanish	5,7-dicloro-2-dimetilaminometil-8-hidroxi-quinoleína clorhidrato	Tratamiento de la enfermedad de Huntington
Swedish	5,7-dikloro-2-dimetylaminometyl-8-hydroxikvinolinhydroklorid	Behandling av Huntingtons sjukdom
Norwegian	5,7-diklor-2-dimetylaminometyl-8-hydroksykinolinhydroklorid	Behandling av Huntingtons sykdom
Icelandic	5,7–díklóró-2-dímetýlamínómetýl-8-hýdroxýkínólín hýdróklóríð	Meðferð við Huntingtons sjúkdómi