13 October 2011
EMA/COMP/584544/2011
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant human galactocerebrosidase for the treatment of globoid cell leukodystrophy (Krabbe disease)

On 27 September 2011, orphan designation (EU/3/11/911) was granted by the European Commission to ACE Biosciences A/S, Denmark for recombinant human galactocerebrosidase for the treatment of globoid cell leukodystrophy.

What is globoid cell leukodystrophy?

Globoid cell leukodystrophy (also known as Krabbe disease) is a hereditary disease that is caused by the lack of an enzyme (a specialised type of protein) called galactocerebrosidase (GALC). This enzyme is needed to break down certain fatty substances in the brain including two lipid substances called galactosylceramide and psychosine. The accumulation of these substances is thought to destroy the cells that produce myelin, the protective sheath that surround the nerve cells, resulting in nerve damage in the brain and other parts of the body. The disease can occur in infancy (early onset) or later in life (late onset). The symptoms can include extreme irritability, seizures, loss of vision, developmental delay, and problems controlling and coordinating muscular movements.

Globoid cell leukodystrophy is a long-term debilitating disease that can be life-threatening particularly in the early onset form which typically leads to death in early infancy.

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

At the time of designation, globoid cell leukodystrophy affected less than 0.1 in 10,000 people in the European Union (EU)*. This is equivalent to a total of fewer than 5,000 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 27), Norway, Iceland and Liechtenstein. This represents a population of 506,300,000 (Eurostat 2011).

7 Westferry Circus ● Canary Wharf ● London E14 4HB ● United Kingdom
Telephone +44 (0)20 7418 8400 **Facsimile** +44 (0)20 7523 7040
E-mail info@ema.europa.eu **Website** www.ema.europa.eu
An agency of the European Union

What treatments are available?

At the time of designation, no satisfactory methods were authorised in the EU for treating globoid cell leukodystroghy. Haematopoietic (blood) stem-cell transplantation (a complex procedure where the patient receives stem cells from a matched donor) had been used in some patients to replace the missing enzyme.

How is this medicine expected to work?

Recombinant human galactocerebrosidase is an enzyme replacement therapy that is expected to work by replacing the missing enzyme in globoid cell leukodystrophy, helping to break down galactosylceramide and stopping it building up in the body. The medicine is produced by a method known as 'recombinant DNA technology': it is made by human cells that have received a gene (DNA), which make them able to produce the enzyme.

What is the stage of development of this medicine?

The effects of recombinant human galactocerebrosidase 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 globoid cell leukodystrophy had started.

At the time of submission, the medicine was not authorised anywhere in the EU for the treatment of globoid cell leukodystrophy 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 8 July 2011 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:

ACE BioSciences A/S
Roskildevej 12C
DK-3400 Hillerød
Denmark
Telephone: + 45 4825 0054
Telefax: + 45 4825 1054
E-mail: zxmail@zymenex.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	Recombinant human galactocerebrosidase	Treatment of globoid cell leukodystrophy (Krabbe disease)
Bulgarian	Рекомбинантна човешка галактоцереброзидаза	Лечение на глобоидна клетъчна левкодистрофия (Болест на Krabbe)
Czech	Rekombinantní lidská galaktocerebrosidáza	Léčba globoidní leukodystrofie (Krabbeova nemoc)
Danish	Rekombinant human galaktocerebrosidase	Behandling af globoid celle leukodystrofi (Krabbes sygdom)
Dutch	Recombinant humaan galactocerebrosidase	Behandeling van globoïdcel leukodystrofie (ziekte van Krabbe)
Estonian	Rekombinantne inimese galaktotserebrosidaas	Globoidrakulise leukodüstroofia (Krabbe tõbi) ravi
Finnish	Rekombinantti humaani galaktoserebrosidaasi	Globoidsoluleukodystrofian (Krabben taudin) hoito
French	Galactocérébrosidase humaine recombinante	Traitement de la leucodystrophie à cellules globoïdes (maladie de Krabbe)
German	Rekombinante humane Galaktozerebrosidase	Behandlung der Globoidzellen-Leukodystrophie (Krabbe-Krankheit)
Greek	Ανθρώπινη ανασυνδυασμένη γαλακτοσερεμπροσιδάση	Θεραπεία της λευκοδυστροφίας σφαιροειδών κυττάρων (νόσος Krabbe)
Hungarian	Rekombináns humán galaktocerebrozidáz	Globoid-sejtes leucodistrophia (Krabbe-kór) kezelése
Italian	Galattocerebrosidasi ricombinante umana	Trattamento della leucodistrofia a cellule globoidi (malattia di Krabbe)
Latvian	Rekombinēta cilvēku galaktocerebrozidāze	Globoidālo šūnu leikodistrofijas (Kraba slimības) ārstēšana
Lithuanian	Rekombinantinė žmogaus galaktocerebrozidazė	Globoidinių ląstelių leukodistrofijos (*Krabbe* ligos) gydymas
Maltese	Galactocerebrosidase rikombinanti uman	Kura tal-lewkodistrofija ta' ċelluli globojdi (marda ta' Krabbe)
Polish	Rekombinowana ludzka galaktocerebrozydaza	Leczenie leukodystrofii globoidalnej (choroby Krabbego)
Portuguese	Galactocerebrosidase humana recombinante	Tratamento da leucodistrofia de células globóides (doença de Krabbe)
Romanian	Galactocerebrozidază umană recombinantă	Tratamentul leucodistrofiei cu celule globoide (boala Krabbe)
Slovak	Rekombinantná ľudská galaktocerebrozidáza	Liečba leukodystrofie globoidných buniek (Krabbeho choroba)
Slovenian	Rekombinantna humana galaktocerebrozidaza	Zdravljenje globoidne celične levkodistrofije (Krabbejeva bolezen)
Spanish	Galactocerebrosidasa humana recombinante	Tratamiento de la leucodistrofia de células globoides (enfermedad de Krabbe)

[1] At the time of designation

Language	Active ingredient	Indication
Swedish	Rekombinant mänskligt galaktocerebrosidas	Behandling av globoidcellsleukodystrofi (Krabbes sjukdom)
Norwegian	Rekombinant human galaktocerebrosidase	Behandling av globoidcelleleukodystrofi (Krabbes sykdom)
Icelandic	Raðbrigða manna galaktóserebrósídasi	Meðferð á glóbóíð-frumu hjarnahvítukyrkingi (Krabbesjúkdómur)