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EMA/COMP/645261/2014
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamate for the treatment of Gaucher disease

On 19 November 2014, orphan designation (EU/3/14/1374) was granted by the European Commission to Genzyme Europe BV, the Netherlands, for (3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamate for the treatment of Gaucher disease.

What is Gaucher disease?

Gaucher disease is an inherited disorder that is caused by the lack of an enzyme called glucocerebrosidase. This enzyme normally breaks down a fatty waste product called glucocerebroside. Without the enzyme, glucocerebroside builds up in the body, typically in the liver, spleen and bone marrow. This causes a wide range of symptoms, including anaemia (low red blood cell counts), tiredness, easy bruising and a tendency to bleed, an enlarged spleen and liver, and bone pain and fractures. Some severe forms of the disease affecting children also involve the brain, which may cause problems such as abnormal eye and head movements and seizures (fits).

Gaucher disease is a long-term debilitating and life-threatening disease that is associated with a reduced life expectancy if left untreated.

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

At the time of designation Gaucher disease affected less than 0.5 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 26,000 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 511,100,000 (Eurostat 2014).

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What treatments are available?

At the time of designation, three medicines (imiglucerase, miglustat and velaglucerase alfa) were authorised for the treatment of Gaucher disease in the EU. Imiglucerase and velaglucerase alfa are 'enzyme replacement therapies' that work by replacing the missing enzyme. Miglustat blocks the production of glucocerebroside and is used in patients who cannot receive enzyme replacement therapy.

The sponsor has provided sufficient information to show that the medicine might be of significant benefit for patients with Gaucher disease because early studies in experimental models have reported that the medicine is able to cross from the blood into brain cells, which may be beneficial for patients with the form of the disease affecting the brain. These assumptions 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 is expected to work in patients with Gaucher disease by blocking the action of an enzyme (glucosylceramide synthase) involved in the production of glucocerebroside. This is expected to help reduce glucocerebroside production and so help limit the extent of the damage and improve the symptoms of the disease. Because the medicine is thought to cross the 'blood-brain barrier' (a membrane barrier that prevents substances from the blood entering the brain), it is expected to be also able to reach cells in the brain where glucocerebroside accumulates in severe forms 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, clinical trials with the medicine in patients with Gaucher disease had not started.

At the time of submission, the medicine was not authorised anywhere in the EU for Gaucher disease 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 9 October 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:

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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	(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamate	Treatment of Gaucher disease
Bulgarian	(3S)-1-азабицикло[2.2.2]окт-3-ил{2-[2-(4-флуорофенил)-1,3-тиазол-4-ил]пропан-2-ил}карбамат	Лечение на болест на Гоше
Croatian	(3S)-1-azabiciklo[2.2.2]okt-3-il{2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}karbamat	Liječenje Gaucherove bolesti
Czech	(3S)-1-azabicyklo[2.2.2]okt-3-yl{2-[2-(4-fluorofenyl)-1,3-thiazol-4-yl]propan-2-yl}karbamát	Léčba Gaucherovy choroby
Danish	(3s)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamat	Behandling af Gauchers sygdom
Dutch	(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propaan-2-yl}carbamaat	Behandeling van de ziekte van Gaucher
Estonian	(3S)-1-asabitsüklo[2.2.2]okt-3-üül{2-[2-(4-fluorofenüül)-1,3-tiasool-4-üül]propaan-2-üül}karbamaat	Gaucher' tõve ravi
Finnish	(3S)-1-atsabisyklo[2.2.2]okt-3-yyli-{2-[2-(4-fluorifenyyli)-1,3-tiatsol-4-yyli]propan-2-yyli}karbamaatti	Gaucherin taudin hoito
French	(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophényl)-1,3-thiazol-4-yl]propan-2-yl}carbamate	Traitement de la maladie de Gaucher
German	(3S)-1-Azabicyclo[2,2,2]oct-3-yl {2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamat	Behandlung der Gaucher-Krankheit
Greek	(3S)-1-αζαδϊκυκλο[2.2.2]όκτα-3-υλο-{2-[2-(4-φθοροφαίνυλο)-1,3-θειαζολ-4-υλο]προπαν-2-υλοκαρβαμικό	Θεραπευτική αγωγή για την νόσο του Gaucher
Hungarian	(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propán-2-yl}karbamát	Gaucher-kór kezelése
Italian	(3S)-1-azabiciclo[2.2.2]oct-3-il {2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}carbamato	Trattamento della malattia di Gaucher
Latvian	(3S)-1-azabiciklo[2.2.2]okt-3-il{2-[2-(4-fluorfenil)-1,3-tiazol-4-il]propān-2-il}karbamāts	Gošē slimības ārstēšana
Lithuanian	(3S)-1-azabiciklo[2.2.2]okt-3-il{2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}karbamatas	Gošė ligos gydymas

[1] At the time of designation

Language	Active ingredient	Indication
Maltese	(3S)-1-azabicyclo[2.2.2]oct-3-yl{2-[2-(4-fluorophenyl)-1,3-thiazol-4-yl]propan-2-yl}carbamate	Kura tal-marda ta' Gaucher
Polish	(3S)-1-azabicyklo[2.2.2]okt-3-yl{2-[2-(4-fluorofenyl)-1,3-tiazol-4-yl]propan-2-ylo}karbaminian	Leczenie choroby Gaucher'a
Portuguese	(3S)-1-azabiciclo[2.2.2]oct-3-il{2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}carbamato	Tratamento da doença de Gaucher
Romanian	(3S)-1-azabiciclo[2.2.2]oct-3-il {2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}carbamat	Tratamentul bolii Gaucher
Slovak	(3S)-1-azabicyklo[2,2,2]okt-3-yl {2-[2-(4-fluorofenyl)-1,3-tiazol-4-yl]propán-2-yl}karbamát	Liečba Gaucherovej choroby
Slovenian	(3S)-1-azabiciklo[2.2.2]oct-3-il{2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}karbamat	Zdravljenje Gaucherove bolezni
Spanish	(3S)-1-azabiciclo[2.2.2]oct-3-il{2-[2-(4-fluorofenil)-1,3-tiazol-4-il]propan-2-il}carbamato	Tratamiento de la enfermedad de Gaucher
Swedish	(3S)-1-azabicyklo[2.2.2]okt-3-yl-{2-[2-(4-fluorofenyl)-1,3-tiazol-4-yl]propan-2-yl}karbamat	Behandling av Gauchers sjukdom
Norwegian	(3S)-1-azabisyklo[2.2.2]okt-3-yl{2-[2-(4-fluorofenyl)-1,3-tiazol-4-yl]propan-2-yl}karbamat	Behandling av Gauchers sykdom
Icelandic	(3S)-1-azabícýcló[2.2.2]oct-3-ýl{2-[2-(4-flúórófenýl)-1,3-thíazól-4-ýl]própan-2-ýl}carbamat	Meðferð á Gauchersveiki