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EMA/COMP/447608/2016
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant human monoclonal antibody to insulin receptor for the treatment of congenital hyperinsulinism

On 14 July 2016, orphan designation (EU/3/16/1702) was granted by the European Commission to XOMA UK Limited, United Kingdom, for the recombinant human monoclonal antibody to insulin receptor (also known as XOMA 358) for the treatment of congenital hyperinsulinism.

What is congenital hyperinsulinism?

Congenital hyperinsulinism is an inherited disorder in which the pancreas releases insulin even when it is not needed. Insulin is a hormone that helps control blood glucose (sugar) levels by driving glucose into the cells of the body. In hyperinsulinism, the increased amount of insulin causes hypoglycaemia (low blood glucose levels). The severity of congenital hyperinsulinism varies among patients and some patients develop episodes of hypoglycaemia shortly after birth. Repeated episodes of hypoglycaemia increase the risk of serious complications such as seizures (fits), mental disability, breathing difficulties and coma.

Congenital hyperinsulinism is a long-term debilitating condition because of the effects of long-term hypoglycaemia on the brain, such as mental disability and seizures.

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

At the time of designation, congenital hyperinsulinism affected less than 0.2 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 10,000 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, there were no satisfactory methods of treatment in the EU for congenital hyperinsulinism. Some patients were treated by surgical removal of part or all of the pancreas.

[*]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 513,700,000 (Eurostat 2016).

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Products such as diazoxide and octreotide were used to reduce insulin secretion, and glucagon injections were used in emergencies to release glucose from the liver and thereby increase blood glucose levels. However, these medicines were not authorised for use in the condition.

How is this medicine expected to work?

This medicine is a monoclonal antibody (a type of protein) that has been designed to recognise and attach to a receptor on the surface of cells, called insulin receptor. When insulin normally attaches to this receptor, it causes the cells to take up glucose from the blood. By attaching to insulin receptor, this medicine prevents insulin from attaching to it. By blocking the effects of insulin, this medicine is expected to prevent serious complications of hypoglycaemia such as fits, mental disability, breathing difficulties and coma.

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 congenital hyperinsulinism were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for congenital hyperinsulinism. 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 June 2016 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:

Contact details of the current sponsor for this orphan designation can be found on EMA website, on the medicine's rare disease designations page.

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 monoclonal antibody to insulin receptor	Treatment of congenital hyperinsulinism
Bulgarian	Рекомбинантно човешко моноклонално антитяло към инсулиновите рецептори	Лечение на вроден хиперинсулинизъм
Croatian	Rekombinantno ljudsko monoklonalno protutijelo za inzulinski receptor	Liječenje prirođene hiperinzulinemije
Czech	Rekombinantní lidská monoklonální protilátka proti receptoru inzulínu	Léčba kongenitálního hyperinzulinismu
Danish	Rekombinant humant monoklonalt antistof til insulinreceptor	Behandling af kongenit hyperinsulinisme
Dutch	Recombinant humaan insulinereceptor monoklonaal antilichaam	Behandeling van congenitaal hyperinsulinisme
Estonian	Insuliini retseptori rekombinantne inimese monoklonaalne antikeha	Kaasasündinud hüperinsulinismi ravi
Finnish	Rekombinantti ihmisen monoklonaalinen insuliinireseptorin vasta-aine	Synnynnäisen hyperinsulinismin hoito
French	Anticorps monoclonal humain recombinant dirigé contre le récepteur de l'insuline	Traitement de l'hyperinsulinisme congénital
German	Rekombinanter humaner monoklonaler Antikörper gegen den Insulinrezeptor	Behandlung des kongenitalen Hyperinsulinismus
Greek	Ανασυνδυασμένο ανθρώπινο μονοκλωνικό αντίσωμα κατά του υποδοχέα ινσουλίνης	Θεραπεία του συγγενούς υπερινσουλινισμού
Hungarian	Inzulinreceptor-elleni rekombináns humán monoklonális antitest	Congenitalis hyperinsulinismus kezelése
Italian	Anticorpo monoclonale ricombinante per il recettore dell'insulina umana	Trattamento dell' iperinsulinemia congenita
Latvian	Rekombinanta cilvēka monoklonāla antiviela pret insulīna receptoru	Iedzimtas hiperinsulinēmijas ārstēšana
Lithuanian	Rekombinantinis žmogaus monokloninis antikūnas prieš insulino receptorių	Įgimto hiperinsulinizmo gydymas
Maltese	Antikorp monoklonali uman rikombinanti għar-riċettur tal-insulina	Kura ta' iperinsulinimja konġenitali
Polish	Rekombinowane ludzkie przeciwciało monoklonalne przeciwko receptorowi insuliny	Leczenie wrodzonego hiperinsulinizmu
Portuguese	Anticorpo monoclonal humano recombinante contra o recetor da insulina	Tratamento do hiperinsulinismo congénito
Romanian	Anticorp monoclonal uman recombinant anti-receptor insulinic	Tratamentul hiperinsulinismului congenital
Slovak	Rekombinantná ľudská monoklonálna protilátka proti inzulínovému receptoru	Liečba kongenitálneho hyperinzulinizmu

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	Rekombinantno človeško monoklonsko protitelo za insulinski receptor	zdravljenje prirojenega hiperinzulinizma
Spanish	Anticuerpo monoclonal humano recombinante del receptor de insulina	Tratamiento del hiperinsulinismo congénito
Swedish	Rekombinant human monoklonal antikropp mot insulinreceptor	Behandling av medfödd hyperinsulinism
Norwegian	Rekombinant humant monoklonalt antistoff til insulinreseptoren.	Behandling av medfødt hyperinsulinisme
Icelandic	Raðbrigða manna einstofna mótefni gegn insúlínviðtaka	Meðferð á meðfæddu insúlínóhófi