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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant humanised monoclonal antibody against human complement component C5a for the treatment of graft-versus-host disease

On 29 August 2016, orphan designation (EU/3/16/1728) was granted by the European Commission to Alexion Europe SAS, France, for recombinant humanised monoclonal antibody against human complement component C5a for the treatment of graft-versus-host disease.

What is graft-versus-host disease?

Graft-versus-host disease is a complication that can affect patients who have had allogeneic haematopoietic (blood) stem-cell transplantation to treat diseases of the blood such as leukaemia (a cancer of the white blood cells). The procedure involves a patient receiving stem cells from a matched donor to help restore the bone marrow, which produces new blood cells.

Graft-versus-host disease occurs when transplanted cells recognise the patient's body as 'foreign' and attack the patient's organs, such as the stomach, gut, skin and liver, leading to organ damage. The disease may happen shortly after transplantation or later on, in which case a wider range of organs can be involved.

Graft-versus-host disease is a serious and life-threatening disease with a high mortality rate.

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

At the time of designation, graft-versus-host disease affected less than 1 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 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, several medicines were authorised in the European Union (EU) for the treatment of graft-versus-host disease, such as ciclosporin and corticosteroids. Treatment aimed to

*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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reduce the activity of transplanted cells involved in graft-versus-host disease, thereby reducing their ability to attack the patient's organs.

The sponsor has provided sufficient information to show that this medicine might be of significant benefit for patients with graft-versus-host disease because preliminary studies suggest that adding the medicine to standard treatments can produce good responses compared with those reported in the published literature. 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?

This medicine is a monoclonal antibody (a type of protein) that has been designed to attach to and block a protein of the complement system called C5a. The complement system is a group of proteins in the blood that help the immune system (the body's natural defence system) to fight infections. It is thought that activation of the complement system plays a critical role in the development of graft-versus-host disease.

By blocking C5a, the medicine is expected to reduce inflammatory responses caused by the activation of the complement system, thus reducing the organ damage seen in graft-versus-host disease.

The medicine is made by a method known as 'recombinant DNA technology': it is made by cells into which a gene (DNA) has been introduced that makes them able to produce the medicine.

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 graft-versus-host disease were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for graft-versus-host 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 13 July 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 humanised monoclonal antibody against human complement component C5a	Treatment of graft-versus-host disease
Bulgarian	Рекомбинантно хуманизирано моноклонално антитяло срещу C5a компонента на човешкия комплемент	Лечение на болестта на присадката срещу приемателя
Croatian	Rekombinantno humanizirano monoklonsko protutijelo protiv komponente ljudskog komplementa C5a	Liječenje reakcije presatka protiv primatelja
Czech	Rekombinantní humanizovaná monoklonální protilátka proti složce lidského komplementu C5a	Léčba reakce štěpu proti hostiteli
Danish	Rekombinant monoklonalt humaniseret antistof mod human komplementkomponent C5a	Behandling af graft versus host reaktion
Dutch	Recombinant gehumaniseerd monoklonaal antilichaam tegen humane complement-component C5a	Behandeling van graft versus host ziekte
Estonian	Inimese komplemendi komponendi C5a vastane rekombinantne humaniseeritud monoklonaalne antikeha	Graft versus host haiguse ravi
Finnish	Rekombinantti, monoklonaalinen humanisoitu vasta-aine ihmisen komplementin komponenttia C5a:ta vastaan	Käänteishyljintäreaktion hoito
French	Anticorps monoclonal recombinant humanisé contre le composant C5a du complément humain	Traitement de la réaction du greffon contre l'hôte
German	Rekombinanter humanisierter monoklonaler Antikörper gegen die humane Komplementkomponente C5a	Behandlung der Graft-versus-Host-Reaktion
Greek	Ανασυνδυασμένο ανθρωποποιημένο μονοκλωνικό αντίσωμα ενάντια στοκλάσμα C5a του συμπληρώματος	Θεραπεία της αντίδρασης του μοσχεύματος
Hungarian	Humán C5a komplement komponens elleni rekombináns humanizált monoklonális antitest	Graft-versus-host betegség kezelése
Italian	Anticorpo monoclonale umanizzato ricombinante contro il componente del complemento umano C5a	Trattamento della reazione del trapianto contro l'ospite
Latvian	Rekombinanta humanizēta monoklonāla antiviela pret cilvēka komplementa komponentu C5a	Saimnieka-transplantāta slimības ārstēšana
Lithuanian	Rekombinantinis humanizuotas monokloninis antikūnas prieš žmogaus komplemento komponentą C5a	Transplantato atmetimo ligos gydymas
Maltese	Antikorp monoklonali umanizzat rikombinanti kontra l-komponent C5a tal-komplement uman	Kura tal-marda tat-tessut għat-trapjant kontra dak li jirċievih

[1] At the time of designation

Language	Active ingredient	Indication
Polish	Rekombinowane humanizowane przeciwciało monoklonalne przeciw składowej C5a ludzkiego dopełniacza	Leczenie choroby przeszczep przeciw gospodarzowi
Portuguese	Anticorpo monoclonal humanizado recombinante contra o componente C5a do complemento humano	Tratamento da reacção do enxerto contra o hospedeiro
Romanian	Anticorp monoclonal umanizat recombinant împotriva componentei C5a a complementului uman	Tratamentul reacţiei grefei contra gazdei
Slovak	Rekombinantná humanizovaná monoklonálna protilátka proti zložke ľudského komplementu C5a	Liečba reakcie štepu proti hostiteľovi
Slovenian	Humanizirana rekombinantna monoklonska protitelesa proti sestavini humanega komplementa C5a	Zdravljenje bolezni presadka proti gostitelju
Spanish	Anticuerpo monoclonal recombinante humanizado contra el componente del complemento humano C5a	Tratamiento de la enfermedad de injerto contra huésped
Swedish	Rekombinant humaniserad monoklonal antikropp mot human komplementkomponent C5a	Behandling av graft-värd host reaktion
Norwegian	Rekombinant humanisert monoklonalt antistoff mot human komplementkomponent C5a	Behandling av graft-versus-host -reaksjon
Icelandic	Raðbrigða, mannaaðlagað einstofna mótefni gegn manna komplementþætti C5a	Til meðferðar á hýsilssótt