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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Humanised fusion protein consisting of extracellular domain of CD24 linked to IgG1 Fc domain for the prevention of graft-versus-host disease

On 11 November 2015, orphan designation (EU/3/15/1575) was granted by the European Commission to Enpharma Ltd, United Kingdom, for humanised fusion protein consisting of extracellular domain of CD24 linked to IgG1 Fc domain for the prevention of graft-versus-host disease.

What is graft-versus-host disease?

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

In GvHD, the transplanted cells recognise the patient as 'foreign' and attack the patient's organs, such as the stomach, gut, skin and liver, leading to organ damage. GvHD may happen shortly after transplantation or later on, in which case a wider range of organs can be involved.

GvHD is a serious and life-threatening disease with a high mortality rate.

What is the estimated number of patients at risk of developing the condition?

At the time of designation, the number of patients at risk of GvHD was estimated to be approximately 0.3 people in 10,000 in the European Union (EU). This was equivalent to a total of around 15,000 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 at risk of developing 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).

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What methods of prevention are available?

At the time of designation, several medicines were authorised in the EU for the prevention of GvHD, such as cyclosporine and antilymphocyte immunoglobulins (ATG). Treatment aimed to reduce the activity of immune cells involved in GvHD, thereby reducing their ability to attack the patient's organs.

The sponsor has provided sufficient information to show that the medicine might be of significant benefit for patients with GvHD because it works in a different way to existing preventive treatment and results in experimental models suggest it could improve survival. 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?

Following stem-cell transplantation, damage caused by the procedure may cause the body to produce substances called cytokines. These stimulate the transplanted cells to attack the body and cause GvHD. The medicine contains a fragment of a protein called CD24, which helps to reduce the release of cytokines, thereby helping to prevent the development of GvHD.

What is the stage of development of this medicine?

The effects of this 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 at risk of GvHD were planned.

At the time of submission, the medicine was not authorised anywhere in the EU for prevention of GvHD. Orphan designation of the medicine had been granted in the United States for prevention of this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 8 October 2015 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	Humanised fusion protein consisting of extracellular domain of CD24 linked to IgG1 Fc domain	Prevention of graft-versus-host disease
Bulgarian	Хуманизиран фузионен протеин, състоящ се от извънклетъчен домейн CD24, свързан с домейна IgG1 Fc	Профилактика на болест на присадката срещу приемателя
Croatian	Humanizirani fuzijski protein sastavljen od od izvanstanične domene CD24 povezane s Fc domenom IgG1	Prevencija reakcije presatka protiv primatelja
Czech	Humanizovaný fúzní protein složený z extracelulární domény CD24 vázané na Fc doménu IgG1	Prevence onemocnění štěpu proti hostiteli
Danish	Humaniseret fusionsprotein bestående af ekstracellulært domæne af CD24 forbundet med IgG1 Fc-domæne	Forebyggelse af graft versus host reaktion
Dutch	Gehumaniseerd fusieproteïne bestaande uit het extracellulair domein van CD24 gekoppeld aan IgG1 Fc-domein	Preventie van “graft versus host” ziekte
Estonian	IgG1 Fc domeeniga ühendatud CD24 rakuvälisest domeenist koosnev humaniseeritud fusioonvalk	*Graft versus host* haiguse preventsioon
Finnish	Humanisoitu fuusioproteiini, joka koostuu solunulkoisesta CD24-domeenista yhdistettynä IgG1 Fc -domeeniin	Käänteishyljintäreaktion esto
French	Protéine de fusion humanisée constituée du domaine extracellulaire de CD24 lié au domaine Fc de l’IgG1	Prévention de la réaction du greffon contre l'hôte
German	Humanisiertes Fusionsprotein mit extrazellulärer CD24-Domäne, gebunden an die IgG1 Fc-Domäne	Prävention der Graft-versus-Host-Reaktion
Greek	Ανθρωποποιημένη πρωτεΐνη σύντηξης που αποτελείται από την εξωκυττάρια περιοχή του CD24 συνδεδεμένη με την περιοχή Fc της IgG1	Πρόληψη της αντίδρασης του μοσχεύματος
Hungarian	CD24 extracelluláris doménjét és az ehhez kapcsolt IgG1 Fc domént tartalmazó humanizált fúziós fehérje	Graft-versus-host betegség megelőzése
Italian	Proteina di fusione umanizzata consistente del dominio extracellulare di CD24 legato al dominio Fc di IgG1	Prevenzione della reazione del trapianto contro l’ospite
Latvian	Humanizēts fūzijas proteīns, kas sastāv no CD24 ekstracelulārā domēna, kas piesaistīts IgG1 Fc domēnam	Saimnieka-transplantāta slimības novēršana

[1] At the time of designation

Language	Active ingredient	Indication
Lithuanian	Humanizuotas susiliejimo baltymas, kurį sudaro ekstraceliulinis CD24 domenas, sujungtas su IgG1 Fc domenu	Transplantato atmetimo ligos prevencija
Maltese	Proteina tal-fużjoni umanizzata li tikkonsisti minn qasam extraċellulari ta' CD24 marbut ma' qasam ta' IgG1 Fc	Kura tal-marda tat-tessut għat-trapjant kontra dak li jirċievih
Polish	Humanizowane białko fuzyjne złożone z domeny zewnątrzkomórkowej CD24 połączonej z domeną Fc IgG1	Zapobieganie chorobie przeszczep przeciw gospodarzowi
Portuguese	Proteína de fusão humanizada constituída pelo domínio extracelular de CD24 ligado ao domínio Fc da IgG	Prevenção da doença do enxerto contra o hospedeiro
Romanian	Proteină de fuziune umanizată constând din domeniul extracelular al CD24 legat de domeniul Fc al IgG1	Prevenirea bolii grefă contra gazdă
Slovak	Humanizovaný fúzny proteín skladajúci sa z extracelulárnej domény antigénu CD24 spojenej s Fc doménou imunoglubulínu IgG1	Prevencia reakcie štepu proti hostiteľovi
Slovenian	Humaniziran fuzijski protein, sestavljen iz ekstracelularne domene CD24, vezane na domeno IgG1 Fc	Preprečevanje reakcije presadka proti gostitelju
Spanish	Proteína de fusión humanizada constituida de un dominio extracelular de CD24 unido al dominio Fc IgG1	Prevención de la enfermedad de injerto contra huésped
Swedish	Humant fusionsprotein bestående av den extracellulära domänen hos CD24 som kopplats till domänen IgG1 Fc	Förebyggande av graft-värd host reaktion
Norwegian	Humanisert fusjonsprotein som består av ekstracellulært domene av CD24 lenket til IgG2 Fc-domene	Forebygging av graft-versus-host -reaksjon
Icelandic	Mannaðlagað samrunaprótein sem samanstendur af utanfrumusvæði CD24 tengdu við Fc-svæði IgG1	Forvörn gegn hýsilssótt