14 November 2012
EMA/COMP/619502/2012
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Humanised monoclonal IgG4 antibody against tissue factor pathway inhibitor for the treatment of haemophilia A

On 10 October 2012, orphan designation (EU/3/12/1052) was granted by the European Commission to Novo Nordisk A/S, Denmark, for humanised monoclonal IgG4 antibody against tissue factor pathway inhibitor for the treatment of haemophilia A.

What is haemophilia A?

Haemophilia A is an inherited bleeding disorder that is caused by the lack of factor VIII, which is one of the proteins involved in the blood coagulation (clotting) process. Patients with haemophilia A are more prone to bleeding than normal and have prolonged bleeding after injury or surgery. Bleeding can also happen within muscles or the spaces in the joints, such as the elbows, knees and ankles. This can lead to permanent injury if it happens repeatedly.

Haemophilia A is a debilitating disease that is life-long and may be life threatening because bleeding can happen in the brain, the spinal cord or the gut.

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

At the time of designation, haemophilia A affected approximately 0.7 in 10,000 people in the European Union (EU)*. This is equivalent to a total of around 35,000 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 submission of the application for orphan drug designation, medicines containing factor VIII were authorised in the EU for the treatment of haemophilia A, to replace the missing protein. Some patients needed other treatments, such as medicines containing other substances involved in blood clotting.

*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).

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The sponsor has provided sufficient information to show that the medicine 'humanised monoclonal IgG4 antibody against tissue factor pathway inhibitor' might be of significant benefit for patients with haemophilia A because it works in a different way to existing treatments, and early studies in experimental models show that it might prevent bleeding in patients with this condition. In addition, the medicine will also be available as a solution for subcutaneous (under the skin) injection, which will be more convenient to use than currently authorised treatments, which are given as injections into a vein. 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 a monoclonal antibody (a type of protein) that has been designed to recognise and attach to a molecule in the body called 'tissue factor pathway inhibitor' (TFPI). TFPI blocks the production of factor Xa, a protein central to the clotting process. The production of factor Xa is controlled by two separate pathways, one involving factor VIII, the other involving TFPI. By attaching to TFPI, this medicine is expected to block its action, resulting in a prolonged production of factor Xa. This is expected to increase the ability of the blood to clot and help control the bleeding disorder, bypassing the need for factor VIII.

What is the stage of development of this medicine?

The effects of humanised monoclonal IgG4 antibody against tissue factor pathway inhibitor have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with the medicine including patients with haemophilia A were ongoing.

At the time of submission, this medicine was not authorised anywhere in the EU for haemophilia A 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 12 September 2012 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:

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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	Humanised monoclonal IgG4 antibody against tissue factor pathway inhibitor	Treatment of haemophilia A
Bulgarian	Хуманизирано моноклонално IgG$_4$ антитяло срещу инхибитор на пътя на тъканния фактор (TFPI)	Лечение на хемофилия А
Czech	Humanizovaná monoklonální IgG$_4$ protilátka proti inhibitoru tkáňového faktoru	Léčba hemofilie A
Danish	Humaniseret monoklonalt IgG$_4$ antistof imod vævsfaktor pathway inhibitor (TFPI)	Behandling af hæmofili A
Dutch	Gehumaniseerd monoklonaal IgG$_4$ antilichaam tegen "Tissue factor pathway inhibitor"	Behandeling van hemofilie A
Estonian	Humaniseeritud monoklonaalne IgG$_4$ antikeha koefaktori raja inhibiitori vastu	Hemofiilia A ravi
Finnish	Humanisoitu monoklonaalinen IgG$_4$-luokan vasta-aine kudostekijätien estäjää (TFPI) vastaan	Hemofilia A:n hoito
French	Anticorps monoclonal humain IgG$_4$ contre l'inhibiteur de la voie du facteur tissulaire (TFPI)	Traitement de l'hémophilie A
German	Humanisierter monoklonaler IgG$_4$ Antikörper gegen Gewebefaktor-Inhibitor	Behandlung der Hämophilie A
Greek	Εξανθρωποποιημένο μονοκλωνικό αντίσωμα IgG4 έναντι του αναστολέα της οδού του Ιστικού παράγοντα	Θεραπεία της αιμορροφιλίας Α
Hungarian	Humanizált monoklonális IgG$_4$ antitest a szöveti faktor út inhibitor (TFPI) ellen	A típusú hemofília kezelése
Italian	Anticorpo monoclonale umanizzato IgG4 contro l'inibitore della via del fattore tissutale (TFPI)	Trattamento dell'emofilia A
Latvian	Humanizēta monoklonāla IgG$_4$ veida antiviela pret audu faktora ceļa inhibitoru	A tipa hemofilijas ārstēšana
Lithuanian	Humanizuoti monokloniniai IgG4 antikūnai prieš audinių kelio faktoriaus inhibitorių (AFKI)	Hemofilijos A gydymas
Maltese	Antikorp tal-IgG4 monoklonali umanizzat kontra l-inibitur tal-proċess tal-fattur tat-tessut	Kura ta' l-emofilja A
Polish	Humanizowane przeciwciało monoklonalne IgG$_4$ przeciw inhibitorowi drogi krzepnięcia zależnej od czynnika tkankowego	Leczenie hemofilii A
Portuguese	Anticorpo monoclonal IgG4 humanizado anti-via do inibidor do factor tecidular	Tratamento da hemofilia A
Romanian	Anticorp monoclonal IgG4 umanizat împotriva inhibitorului căii factorului tisular (TFPI)	Tratamentul hemofiliei A
Slovak	Humanizovaná monoklonálna IgG$_4$ protilátka proti inhibítoru tkanivového faktora (TFPI)	Liečba hemofílie A

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	Humanizirano monoklonsko protitelo IgG4 proti zaviralcu tkivnega faktorja	Zdravljenje hemofilije A
Spanish	Anticuerpo monoclonal humanizado IgG4 contra el Inhibidor de la Vía del Factor Tisular (TFPI)	Tratamiento de la hemofilia A
Swedish	Humaniserad monoklonal IgG_4 antikropp mot TFPI (Tissue factor pathway inhibitor)	Behandling av hemofili A
Norwegian	Humanisert monoklonalt IgG_4 antistoff mot "Tissue factor pathway inhibitor (TFPI)"	Behandling av hemofili A
Icelandic	Mannaaðlagað einstofna IgG_4 mótefni gegn TFPI (Tissue factor pathway inhibitor)	Meðferð við dreyrasýki A