7 November 2016
EMA/615269/2016 Corr. 1
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Human monoclonal IgG1 antibody against tissue factor pathway inhibitor for the treatment of haemophilia A

On 14 October 2016, orphan designation (EU/3/16/1752) was granted by the European Commission to Pfizer Limited, United Kingdom, for human monoclonal IgG1 antibody against tissue factor pathway inhibitor (also known as PF-06741086) 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 0.6 in 10,000 people in the European Union (EU). This was equivalent to a total of around 31,000 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, medicines containing factor VIII were authorised in the EU for the treatment of haemophilia A, to replace the missing protein. However, not all patients with haemophilia A benefitted from these medicines because the immune system (the body's natural defences) can produce 'inhibitors' (antibodies) against factor VIII and thereby stop the factor VIII medicine from

[*]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).

30 Churchill Place ● Canary Wharf ● London E14 5EU ● United Kingdom
Telephone +44 (0)20 3660 6000 **Facsimile** +44 (0)20 3660 5555
Send a question via our website www.ema.europa.eu/contact

working. In these cases, other treatments needed to be used, such as factor VIIa (the activated form of factor VII, another protein involved in blood clotting), either alone or as part of a combination treatment.

The sponsor has provided sufficient information to show that this medicine might be of significant benefit for patients with haemophilia A because results from preliminary studies show that injection of the medicine under the skin could effectively treat the condition. An injection under the skin instead of into a vein is considered more convenient for patients. 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 recognise and attach to a protein called 'tissue factor pathway inhibitor' (TFPI). An alternative process is available for blood clotting which does not need factor VIII; however, TFPI can quickly block this process. By attaching to TFPI, the medicine is expected to prevent its activity and allow blood clotting by the alternative process in patients with haemophilia A.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, the evaluation of the effects of the medicine in experimental models was ongoing.

At the time of submission of the application for orphan designation, no clinical trials with the medicine in patients with haemophilia A had been started.

At the time of submission, the 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 8 September 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	Human monoclonal IgG1 antibody against tissue factor pathway inhibitor	Treatment of haemophilia A
Bulgarian	Човешко моноклонално IgG1 антитяло срещу инхибитор на пътя на тъканния фактор	Лечение на хемофилия А
Croatian	Ljudsko monoklonalno antitijelo IgG1 protiv inhibitora puta tkivnog faktora	Liječenje hemofilije A
Czech	Lidská monoklonální protilátka IgG1 proti inhibitoru dráhy tkáňového faktoru	Léčba hemofilie A
Danish	Humant monoklonalt IgG1-antistof mod vævsfaktor pathway inhibitor (TFPI)	Behandling af hæmofili A
Dutch	Humaan IgG1-monoklonaal antilichaam tegen weefselfactor-'pathway inhibitor'	Behandeling van hemofilie A
Estonian	Koefaktori tee inhibiitori vastane inimese monoklonaalne IgG1 antikeha	Hemofiilia A ravi
Finnish	Ihmisen monoklonaalinen IgG1-luokan vasta-aine kudostekijätien estäjää (TFPI) vastaan	Hemofilia A:n hoito
French	Anticorps monoclonal humain IgG1 contre l'inhibiteur de la voie du facteur tissulaire	Traitement de l'hémophilie A
German	Humaner monoklonaler IgG1-Antikörper gegen tissue factor pathway inhibitor	Behandlung der Hämophilie A
Greek	Ανθρώπινο μονοκλωνικό αντίσωμα IgG1 έναντι αναστολέα της οδού του ιστικού παράγοντα	Θεραπεία της αιμορροφιλίας Α
Hungarian	Szövetifaktor-út inhibitora elleni humán monoklonális IgG1 antitest	A típusú hemofília kezelése
Italian	Anticorpo IgG1 monoclonale umanizzato contro l'inibitore della via del fattore tissutale	Trattamento dell'emofilia A
Latvian	Cilvēka monoklonāla IgG1 antiviela pret audu faktora ceļa inhibitoru	A tipa hemofilijas ārstēšana
Lithuanian	Žmogaus monokloninis IgG1 antikūnas prieš audinių faktoriaus kelio inhibitorių	Hemofilijos A gydymas
Maltese	Antikorp IgG1 monoklonali uman kontra inibitur tas-sensiela ta' reazzjonijiet tal-fattur tat-tessut	Kura ta' l-emofilja A
Polish	Ludzkie przeciwciało monoklonalne IgG1 przeciwko inhibitorowi drogi krzepnięcia zależnej od czynnika tkankowego	Leczenie hemofilii A
Portuguese	Anticorpo IgG1 monoclonal humano contra o inibidor da via do fator tecidual	Tratamento da hemofilia A
Romanian	Anticorp monoclonal uman IgG1 împotriva inhibitorului căii factorului tisular	Tratamentul hemofiliei A
Slovak	Ľudská monoklonálna protilátka IgG1 proti inhibítoru dráhy tkanivového faktora	Liečba hemofílie A

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	Humano monoklonsko protitelo IgG1 proti zaviralcu poti tkivnega faktorja	Zdravljenje hemofilije A
Spanish	Anticuerpo IgG1 monoclonal humano contra el inhibidor de la vía del factor tisular	Tratamiento de la hemofilia A
Swedish	Human monoklonal IgG1-antikropp mot TFPI (Tissue Factor Pathway Inhibitor)	Behandling av hemofili A
Norwegian	Humant monoklonalt IgG1-antistoff mot vevsfaktorreaksjonsveiinhibitor (Tissue Factor Pathway Inhibitor,TFPI)	Behandling av hemofili A
Icelandic	Manna IgG1 einstofna mótefni gegn hemli á vefjaþáttarferli	Meðferð við dreyrasýki A