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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant factor VIIa modified with three terminal repeats derived from the β chain of human chorionic gonadotropin for the treatment of congenital factor VII deficiency

On 22 August 2014, orphan designation (EU/3/14/1312) was granted by the European Commission to Richardson Associates Regulatory Affairs Ltd, United Kingdom, for recombinant factor VIIa modified with three terminal repeats derived from the β chain of human chorionic gonadotropin for the treatment of congenital factor VII deficiency.

What is congenital factor VII deficiency?

Congenital factor VII deficiency is an inherited bleeding disorder that is characterised by the lack of factor VII, which is one of the proteins involved in the blood coagulation (clotting) process. Patients with factor VII deficiency are more prone to bleeding than normal and have poor wound healing after injury or surgery. Bleeding can also happen within muscles or the spaces in the joints, such as the elbows, knees and ankles.

Congenital factor VII deficiency is a debilitating disease that is life long and may be life threatening because bleeding can also happen in the brain.

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

At the time of designation, congenital factor VII deficiency affected approximately 0.1 in 10,000 people in the European Union (EU). This was equivalent to a total of around 5,000 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 VII or factor VIIa (factor VII in its activated form) were authorised in the EU for the treatment of congenital factor VII deficiency. These medicines

*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 511,100,000 (Eurostat 2014).

were used to replace the missing factor VII protein. Some of these medicines had to be given frequently during bleeding episodes.

The sponsor has provided sufficient information to show that this medicine might be of significant benefit for patients with congenital factor VII deficiency because early studies in experimental models indicate that it lasts longer inside the body and thus may be given less often than existing treatments. 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 made of a copy of human factor VIIa, to which a chain made of three copies of a fragment of the 'human chorionic gonadotropin' (hCG) hormone has been added. In the body, the medicine is expected to replace the missing factor VII, making the patient less prone to bleeding.

Attaching the hCG chain to factor VIIa is expected to decrease the rate at which the factor VIIa is cleared from the body, allowing injections to be given less frequently than medicines that contain only factor VII or VIIa.

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 factor VIIa linked to a chain made of fragments of hCG.

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, no clinical trials with the medicine in patients with congenital factor VII deficiency had been started.

At the time of submission, this medicine was not authorised anywhere in the EU for congenital factor VII deficiency. Orphan designation of the medicine had been granted in the United States for the treatment and prophylaxis of bleeding episodes in patients with haemophilia A or B with inhibitors.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 10 July 2014 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 languages¹, Norwegian and Icelandic

Language	Active ingredient	Indication
English	Recombinant factor VIIa modified with three terminal repeats derived from the β chain of human chorionic gonadotropin	Treatment of congenital factor VII deficiency
Bulgarian	Рекомбинантен фактор VIIa модифициран с три терминални повторения получени от β верига на човешки хорион гонадотропин	Лечение на вроден дефицит на Фактор VII
Croatian	Rekombinantni faktor VIIa modificiran s tri terminalna ponavljanja dobivena iz β -lanca ljudskog korionskog gonadotropina	Liječenje prirođenog nedostatka faktora VII
Czech	Rekombinantní koagulačního faktoru VIIa upravené s třemi terminál opakuje z řetězce β lidský choriový gonadotropin	Léčba vrozeného nedostatku faktoru VII
Danish	Rekombinant koagulationsfaktor VIIa modificeret med tre terminale kopier stammende fra β -kæden af humant choriongonadotropin	Behandling af medfødt faktor VII-mangel
Dutch	Recombinant stollingsfactor VIIa bewerkt met drie terminal herhalingen afgeleid van de β -keten van humaan choriongonadotrofine	Behandeling van aangeboren factor VII tekort
Estonian	Rekombinantne VIIa hüübimisfaktor, mida on modifitseeritud kolme terminaalkorduse osas saadud inimese kooriongonadotropiini β ahelast	Kaasasündinud VII hüübimisfaktori puudulikkuse ravi
Finnish	Rekombinantti hyttymistekijä VIIa, muunnettu kolmella ihmisperäisen koriongonadotropiinin β -ketjusta johdetun terminaalin toistolla	Syynynnäisen hyttymistekijä VII:n puutoksen hoito
French	Facteur VIIa recombinant modifié avec trois répétitions terminales dérivées de la chaîne β de la gonadotrophine chorionique humaine	Traitement des déficits congénitaux en facteur VII
German	Modifizierter rekombinanter Blutgerinnungsfaktor VIIa mit drei aus der β -Kette von humanem Choriongonadotropin abgeleiteten terminalen Repeats	Behandlung von angeborenem Faktor VII Mangel
Greek	Ανασυνδυασμένος παράγοντας VIIa τροποποιημένος με τρεις τερματικές επαναλήψεις που προέρχονται από τη β αλυσίδα της ανθρώπινης χοριακής γοναδοτροπίνης	Θεραπεία συγγενούς έλλειψης παράγοντα VII

¹ At the time of designation

Language	Active ingredient	Indication
Hungarian	Humán chorion gonadotropin β -láncából származó három terminális ismétlődéssel módosított rekombináns VIIa véralvadási faktor	Veleszületett VII-es véralvadási faktor hiány kezelése
Italian	Fattore VIIa di coagulazione del sangue ricombinante modificato con tre ripetizioni terminali derivati dalla catena β della gonadotropina corionica umana	Trattamento del deficit congenito del fattore VII
Latvian	Rekombinants VIIa asinsreces faktors, kas modificēts ar trim termināliem atkārtojumiem, kas iegūti no cilvēka horiongonadotropīna β ķēdes	Iedzimta VII faktora deficīta ārstēšana
Lithuanian	Rekombinantinis VIIa krešėjimo faktorius modifikuotas trimis terminaliniais pasikartojimais, išgautais iš žmogaus chorioninio gonadotropino β grandinės	Įgimtos VII faktoriaus stokos gydymas
Maltese	Fattur VIIa rikombinanti modifikat bi tliet trufijiet ripetuti imnisslin mill-katina β tal-gonadotropina korjonika umana	Kura ta' nuqqas kongenitali ta' fattur VII
Polish	Rekombinowany czynnik krzepnięcia VIIa zmodyfikowany trzema powtórzeniami terminalnymi otrzymanymi z łańcucha β ludzkiej gonadotropiny kosmówkowej	Leczenie wrodzonego niedoboru czynnika VII
Portuguese	Fator VIIa da coagulação recombinante modificado com três repetições terminais derivadas da cadeia β da gonadotrofina coriônica humana	Tratamento da deficiência congénita de Fator VII
Romanian	Factorul de coagulare VIIa recombinant modificat cu trei repetiții terminale derivate din lanțul β al gonadotropinei corionice umane	Tratamentul deficienței congenitale de Factor VII
Slovak	Rekombinantný koagulačný faktor VIIa upravený troma terminálnymi sekvenciami odvodenými z β reťazca ľudského chóriového gonadotropínu	Liečba vrodeného nedostatku faktora VII
Slovenian	Rekombinantni koagulacijski faktor VIIa modificiran s tremi terminalnimi ponovitvami, ki izvirajo iz β verige humanega horionskega gonadotropina	Zdravljenje prirojenega pomanjkanja faktorja VII
Spanish	Factor VIIa de coagulación recombinante modificada con tres repeticiones terminales derivadas de la cadena β de la gonadotropina coriónica humana	Tratamiento de déficit del factor VII
Swedish	Rekombinant koagulationsfaktor VIIa modifierad med tre terminala upprepningar härledda från β -kedjan av humant koriongonadotropin	Behandling av medfödd faktor VII-brist

Language	Active ingredient	Indication
Norwegian	Rekombinant koagulasjonsfaktor VIIa modifisert med tre terminale repeterende enheter avledet fra β -kjeden av humant koriongonadotropin	Behandling av medfødt faktor VII-mangel
Icelandic	Raðbrigða storkupáttur VIIa breyttur með þremur endaendurtekningum og dregnum af β keðju manna chóríónic gónadótrópíni	Meðferð við meðfæddum skorti á storkupætti VII