31 March 2016
EMA/COMP/61236/2016
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

DNA plasmid encoding a recombinant fusion protein consisting of the extracellular domain of human TNFα p55 receptor linked to the human IgG1 Fc domain for the treatment of non-infectious uveitis

On 17 February 2016, orphan designation (EU/3/16/1619) was granted by the European Commission to Eyevensys SA, France, for DNA plasmid encoding a recombinant fusion protein consisting of the extracellular domain of human TNFα p55 receptor linked to the human IgG1 Fc domain for the treatment of non-infectious uveitis.

What is non-infectious uveitis?

Uveitis is inflammation of the uvea, the middle layer of the eye, just beneath the white part of the eye. The inflammation can affect one or both eyes, and may cause discomfort, pain, and blurring of vision. Non-infectious uveitis is usually caused by the body's immune system (the body's natural defences) attacking normal tissue and not by an infection.

Non-infectious uveitis is a long-term debilitating disease because it may lead to partial or complete loss of vision (blindness).

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

At the time of designation, non-infectious uveitis affected approximately 4.6 in 10,000 people in the European Union (EU). This was equivalent to a total of around 236,000 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 Member States of the EU for the treatment of non-infectious uveitis. The first treatment option was corticosteroids, which were used to reduce the inflammation by lowering the activity of the immune system. Other immunosuppressant

*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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agents (that reduce the activity of the immune system) such as ciclosporin were also authorised for use in non-infectious uveitis.

The sponsor has provided sufficient information to show that this medicine might be of significant benefit for patients with non-infectious uveitis because, since the medicine is expected to be given as an injection into the eye, it is expected to have only a local effect in the eye. Use of this medicine may reduce the need to use corticosteroids that have effects on the whole body. 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 contains genetic material responsible for making the TNFα p55 receptor. This receptor is normally present on the surface of cells of the immune system and attaches to TNFα, a substance that plays a key role in regulating inflammatory processes in non-infectious uveitis. The medicine is expected to be delivered into cells in the eye, where it produces the TNFα p55 receptor. These new receptors attach to TNFα thereby preventing it from attaching to the natural receptor on immune cells and stopping its effect. This is expected to reduce symptoms of inflammation.

The medicine will be given by electrotransfer, a technique where the medicine is first injected into the eye, after which electric pulses are applied to the eye. This will disrupt the cell walls in the eye and allow the medicine to enter cells where it becomes active.

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 this medicine in experimental models was ongoing.

At the time of submission, no clinical trials with the medicine in patients with non-infectious uveitis had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for non-infectious uveitis or designated as an orphan medicinal product elsewhere for non-infectious uveitis.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 21 January 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	DNA plasmid encoding a recombinant fusion protein consisting of the extracellular domain of human TNFα p55 receptor linked to the human IgG1 Fc domain	Treatment of non-infectious uveitis
Bulgarian	ДНК плазмид, кодиращ рекомбинантен фузионен протеин, състоящ се от екстрацелуларния домейн на рецептор p55 за човешки TNFα, свързан към Fc домейна на човешки IgG1	Лечение на хроничен неинфекциозен увеит
Croatian	DNK plazmid koji kodira rekombinantni fuzijski protein koji se sastoji od ekstracelularne domene humanog TNFα p55 receptora povezane na humanu IgG1 Fc domenu	Liječenje neinfektivnog uveitisa
Czech	DNA plasmid kódující rekombinantní fúzní protein sestávající z extracelulární domény lidskéhoTNFa p55 receptoru vázaného na doménu Fc lidského IgG1	Léčba neinfekční uveitidy
Danish	DNA-plasmid, der koder et rekombinant fusionsprotein, som består af det ekstracellulære domæne for human TNFα p55-receptor forbundet med det humane IgG1 Fc-domæne	Behandling af non-infektiøs uveitis
Dutch	DNA-plasmide die codeert voor een recombinant fusie-eiwit dat bestaat uit het extracellulaire domein van de humane TNFα-p55-receptor gekoppeld aan het humane IgG1 Fc-domein	Behandeling van niet-infectieuze uveïtis
Estonian	Inimese IgG1 Fc domeeniga seotud inimese TNFα p55 retseptori rakuvälisest domeenist koosnevat rekombinantset liitvalku kodeeriv DNA plasmiid	Mitte-infektsioosse uveiidi ravi
Finnish	DNA-plasmidi, joka koodaa rekombinanttia fuusioproteiinia. Tämä koostuu ihmisen TNFα p55 -reseptorin solunulkoisesta domeenista yhdistettynä ihmisen IgG1 Fc -domeeniin	Ei-infektioperäisen uveiitin hoito
French	Plasmide d'ADN codant pour une protéine de fusion recombinante composée du domaine extracellulaire du récepteur TNFα p55 humain lié au domaine Fc de l'IgG1 humaine	Traitement de l'uvéite non infectieuse
German	DNA-Plasmid, das für ein rekombinantes Fusionsprotein kodiert, das aus der extrazellulären Domäne des humanen TNFα-p55-Rezeptors besteht , wleches verknüpft mit der humanen IgG1-Fc-Domäne ist	Behandlung der nicht-infektiösen Uveitis
Greek	Πλασμίδιο DNA που κωδικοποιεί μια ανασυνδυασμένη πρωτεΐνη σύντηξης που αποτελείται από την εξωκυτταρική περιοχή του ανθρώπινου υποδοχέα p55 του TNFα α που συνδέεται με την περιοχή Fc της ανθρώπινης IgG1	Θεραπεία της μη μολυσματικής ραγοειδίτιδας.

[1] At the time of designation

Language	Active ingredient	Indication
Hungarian	A humán IgG1 Fc doménhez kötődő humán TNFα p55 receptor extracelluláris doménjéből álló rekombináns fúziós fehérjét kódoló DNS-plazmid	Nem fertőzéses eredetű uveitis kezelése
Italian	Plasmide di DNA che codifica per una proteina di fusione ricombinante costituita dal dominio extracellulare del recettore p55 del TNFα umano connesso al dominio Fc delle IgG1 umane	Trattamento dell'uveite non infettiva
Latvian	DNS plazmīda, kas kodē rekombinantu fūzijas proteīnu, kas sastāv no cilvēka TNFα p55 receptora ekstracelulārā domēna, kas saistīts ar cilvēka IgG1 Fc domēnu	Ne-infekciozā uveīta ārstēšana
Lithuanian	DNR plazmidė, koduojanti rekombinantinį jungiamąjį baltymą, susidedantį iš ekstraląstelinio žmogaus TNFα p55 receptoriaus domeno, susieto su žmogaus IgG1 Fc domenu	Neinfekcinio uveito gydymas
Maltese	Plasmid tad-DNA li jikkodifika proteina ta' fużjoni rikombinanti li tikkonsisti minn qasam extraċellulari tar-riċettur TNFα p55 uman marbut mal-qasam Fc tal-IgG1 uman	Kura ta' uveite mhux infettiva
Polish	Plazmidowe DNA kodujące rekombinowane białko fuzyjne składające się z zewnątrzkomórkowej domeny ludzkiego receptora TNFα p55 powiązanego z domeną ludzkiej IgG1 Fc	Leczenie nieinfekcyjnego zapalenia błony naczyniowej oka
Portuguese	Plasmídeo de ADN codificando uma proteína de fusão recombinante composta pelo domínio extracelular do recetor p55 do TNFα humano ligado ao domínio Fc da IgG1 humana	Tratamento da uveíte não infecciosa
Romanian	Plasmidă ADN care codifică o proteină recombinantă de fuziune formată din domeniul extracelular al receptorului p55 a TNF-α uman legat de domeniul Fc al IgG1 umane	Tratamentul uveitei non-infectioase
Slovak	Plazmid DNA kódujúci rekombinantný fúzny proteín skladajúci sa z extracelulárnej domény receptora p55 ľudského TNFα spojenej s Fc doménou ľudského IgG1	Liečba neinfekčnej uveitídy
Slovenian	DNK plazmid, s kodiranjem rekombinantne fuzijske beljakovine iz zunajcelične domene človeškega receptorja TNFα p55, povezanega s humano IgG1 Fc domeno	Zdravljenje neinfekcijskega uveitis
Spanish	Plásmido de ADN que codifica una proteína de fusión recombinante compuesta del dominio extracelular del receptor p55 del TNFα humano unido al dominio Fc de la IgG1 humana	Tratamiento de la uveítis no infecciosa
Swedish	DNA-plasmid som kodar för ett rekombinant fusionsprotein bestående av den extracellulära domänen av human TNFα p55-receptor bunden till den humana IgG1 Fc-domänen	Behandling av icke-infektiös uveit

Language	Active ingredient	Indication
Norwegian	DNA-plasmid som koder for et rekombinant fusjonsprotein bestående av det ekstracellulære domenet av human TNFα-p55-reseptor bundet til det humane lgG1-Fc-domenet	Behandling av ikke-infeksiøs uveitt
Icelandic	DNA-plasmíð sem kóðar fyrir raðbrigða tengipróteini sem er samsett úr utanfrumuléni p55 viðtaka fyrir manna TNFα tengdu við Fc lén manna IgG1	Meðferð á æðahjúpsbólgu án sýkingar