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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Mixture of two adeno-associated viral vectors of serotye 8 containing the 5'-half sequence of human *ABCA4* gene and the 3'-half sequence of human *ABCA4* gene for the treatment of Stargardt's disease

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Disclaimer

Please note that revisions to the Public Summary of Opinion are purely administrative updates. Therefore, the scientific content of the document reflects the outcome of the Committee for Orphan Medicinal Products (COMP) at the time of designation and is not updated after first publication.

On 4 July 2014, orphan designation (EU/3/14/1283) was granted by the European Commission to Fondazione Telethon, Italy, for mixture of two adeno-associated viral vectors of serotye 8 containing the 5'-half sequence of human *ABCA4* gene and the 3'-half sequence of human *ABCA4* gene for the treatment of Stargardt's disease.

What is Stargardt's disease?

Stargardt's disease is a genetic (hereditary) disorder of the eye that leads to progressive loss of sight. Stargardt's disease is caused by abnormalities in a gene called *ABCA4*. The *ABCA4* gene is responsible for the production of a protein called ABCR that regulates the transport of substances in and out of some cells in the retina (the light-sensitive surface at the back of the eye). In patients with Stargardt's disease, ABCR does not work properly. This causes deposits to build up inside the retina cells, which become damaged and eventually die.

Stargardt's disease is a long-term debilitating disease because the patient's sight becomes progressively worse and eventually leads to blindness.

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

At the time of designation, Stargardt's disease affected approximately 1.5 in 10,000 people in the European Union (EU). This was equivalent to a total of around 77,000 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, no satisfactory methods were authorised in the EU for the treatment of Stargardt's disease.

How is this medicine expected to work?

This medicine is made of two viruses, each containing half of the normal human *ABCA4* gene as the gene is too large to be contained within one virus. When injected into the eye of patients with Stargardt's disease, it is expected that the viruses will carry the two halves of the *ABCA4* gene into the cells of the retina, where these two halves are expected to re-assemble into the normal *ABCA4* gene. The retina cells are then expected to produce normal ABCR protein, thereby relieving the symptoms of the disease and preventing loss of sight.

The type of virus used in this medicine (adeno-associated virus) does not cause disease in humans.

What is the stage of development of this medicine?

The effects of the 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 Stargardt's disease had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for Stargardt's disease 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 14 May 2014 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.

[*]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.
At the time of designation, this represented a population of 512,900,000 (Eurostat 2014).

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	Mixture of two adeno-associated viral vectors of serotype 8 containing the 5'-half sequence of human *ABCA4* gene and the 3'-half sequence of human *ABCA4* gene	Treatment of Stargardt's disease
Bulgarian	Смес от два адено-свързани вирусни вектора серотип 8, съдържащи половината 5'-последователност на човешки *ABCA4* ген и половината 3'-последователност на човешки *ABCA4* ген	Лечение на болест на Stargardt
Croatian	Smjesa dvaju adeno-povezanih virusnih vektora serotipa 8 koji sadrže 5'-kraj sekvencu ljudskog gena *ABCA4* i 3'-kraj sekvencu ljudskog gena *ABCA4*	Liječenje Stargardtove bolesti
Czech	Směs dvou adeno-asociovaných virových vektorů serotye 8 obsahující 5'-polovinu sekvenci *ABCA4* genu lidského a 3'-poloviny sekvenci *ABCA4* genu lidského	Léčba Stargardtovy choroby
Danish	Blanding af to adenoassocierede virale vektorer af serotye 8 indeholdende 5'-halvdelen sekvens af human *ABCA4* genet og 3'-halvdelen sekvens af human *ABCA4* genet	Behandling af Stargardt sygdom
Dutch	Mengsel van twee adeno-geassocieerde virale vectoren serotye 8 die de 5'-helft sequentie van humaan *ABCA4* gen en de 3'-helft sequentie van humaan *ABCA4* gen bevat	Behandeling van de ziekte van Stargardt
Estonian	Segu kahest adeno-assotsieerunud viiruse vektori serotüüp 8, mis sisaldavad inimese *ABCA4* geeni 5'-poolset järjestust ja 3'-poolset järjestust	Stargardt'tõve ravi
Finnish	Kahden adenoassosioidun virusvektorin, serotyyppi 8, seos, joka sisältää 5'-pään *ABCA4*-geenin sekvenssin ja 3'-pään ihmisen *ABCA4*-geenin sekvenssin.	Stargardtin taudin hoito
French	Mélange de deux vecteurs viraux adéno-associés de sérotype 8 contenant la moitié de la séquence 5' du gène humain *ABCA4* et la moitié de la séquence 3' du gène humain *ABCA4*	Traitement de la maladie de Stargardt
German	Mischung von zwei Adeno-assoziierten viralen Vektoren Serotyp 8, die die Sequenzen der 5'-Hälfte des menschlichen *ABCA4*-Gens und der3'-Hälfte des menschlichen Gens *ABCA4 enthalten*	Behandlung der Stargardt-Krankheit

[1] At the time of designation

Language	Active ingredient	Indication
Greek	Μίγμα δύο αδενο-σχετιζόμενων ιικών φορέων οροτύπου 8 που περιέχουν την 5' μισή αλληλουχία του ανθρώπινου γονιδίου *ABCA4* και την 3' μισή αλληλουχία του ανθρώπινου γονιδίου *ABCA4*	Θεραπευτική αγωγή για την νόσο του Stargardt
Hungarian	Két 8-as szerotípusú adeno-asszociált virus vektor keveréke, melyek a human *ABCA4* gén szekvenciájának 5'-felét és a human *ABCA4* gén szekvenciájának 3'-felét hordozzák	Stargardt-kór kezelése
Italian	Miscela di due vettori virali adeno-associati di sierotipo 8 contenenti la metà al 5' del gene *ABCA4* e la metà al 3' del gene *ABCA4*	Trattamento della malattia di Stargardt
Latvian	Divu ar adenovīrusu saistītu 8. serotipa vīrusu vektoru, kas satur cilvēka *ABCA4* gēna 5'-puses secību un cilvēka *ABCA4* gēna 3'-puses secību, maisījums	Stargardta slimības ārstēšana
Lithuanian	Mišinys, iš dviejų su adenovirusu -susijusių 8 serotipo virusinių vektorių, turinčių žmogaus *ABCA4* geno 5' galo ir žmogaus *ABCA4* geno 3'-galo sekas	Stargardt ligos gydymas
Maltese	Taħlita ta' żewg vetturi imnisslin mill-adenovirus ta' serotip 8 li fihom in-nofs sekwenza 5' tal-ġene ABCA4 uman u in-nofs sekwenza 3' tal-ġene ABCA4 uman	Kura tal-marda ta' Stargardt
Polish	Mieszanina dwóch wektorów adenowirusowych serotypu 8 zawierających sekwencję 5'-połowy udzkiego genu *ABCA4* i 3'-połowy udzkiego genu *ABCA4*	Leczenie choroby Stargardta
Portuguese	Mistura de dois vectores virais adeno-associados de serotipo 8 contendo metade da sequência 5' do gene *ABCA4* humano e metade da sequência 3' do gene *ABCA4* humano	Tratamento da doença de Stargardt
Romanian	Amestec de doi vectori virali adeno-asociaţi de serotip 8 ce conţin secvenţele jumătăţii 5'-a genei *ABCA4* umane și jumătăţii 3' a genei *ABCA4* umane	Tratamentul bolii Stargardt
Slovak	Zmes dvoch adeno-asociovaných vírusových vektorov sérotypu 8 obsahujúca 5'-polovicu sekvencie ľudského *ABCA4* génu a 3'-polovicu sekvencie ľudského *ABCA4* génu	Liečba Stargardtovej choroby
Slovenian	Zmes dveh adeno-asociiranih virusnih vektorjev serotipa 8, ki vsebujeta 5'-polovico sekvence humanega gena *ABCA4* in 3'-polovico sekvence humanega gena *ABCA4*	Zdravljenje Stargardtjeve bolezni

Language	Active ingredient	Indication
Spanish	Mezcla de dos vectores virales adeno-asociados de serotipo 8 que contienen la secuencia 5'-medio de gen *ABCA4* humana y la secuencia 3'-medio de gen *ABCA4* humana	Tratamiento de la enfermedad de Stargardt
Swedish	Blandning av två adenoassocierade virala vektorer för serotyp 8 innehållande sekvensen av 5'-halvan för humana *ABCA4*-genen och sekvensen av 3'-halvan för humana *ABCA4* genen	Behandling av Stargardts sjukdom
Norwegian	Blanding av to adenoassosierte virale vektorer serotype 8 inneholdende 5'-halvdelen sekvens av humant *ABCA4*-genet og 3'-halvdelen sekvens av humant *ABCA4* genet	Behandling av Stargardts sykdom
Icelandic	Blanda tveggja adenótengdra veiruferja sermisgerð 8 sem innihalda 5'-hálfa röðina af manna *ABCA4* geninu og 3'-hálfa röðina af manna *ABCA4* geninu	Meðferð við Stargardts sjúkdómi