31 March 2016
EMA/COMP/68326/2016
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Ex-vivo-expanded autologous fibroblasts transduced with lentiviral vector containing the *COL7A1* gene for the treatment of epidermolysis bullosa

On 17 February 2016, orphan designation (EU/3/16/1611) was granted by the European Commission to Dr Waseem Qasim, United Kingdom, for ex-vivo-expanded autologous fibroblasts transduced with lentiviral vector containing the *COL7A1* gene for the treatment of epidermolysis bullosa.

What is epidermolysis bullosa?

Epidermolysis bullosa describes a group of diseases of the skin, in which the skin is very fragile and forms severe blisters upon minor mechanical friction or injury. The condition usually is present from birth, although some forms occur in adults. The diseases are caused by abnormalities in the genes responsible for the production of certain proteins that make the skin strong and elastic, such as collagen or keratins.

Epidermolysis bullosa is a long-term debilitating and life-threatening condition because the severe blistering and associated scarring and deformities result in poor quality of life and may also reduce life expectancy.

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

At the time of designation, epidermolysis bullosa affected less than 1 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 51,000 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 to treat epidermolysis bullosa. A high standard of personal hygiene and skincare were recommended to help blisters heal, to avoid infections and to protect the skin from damage. Painkillers were also used. Surgery was

*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

sometimes necessary if there were complications such as deformed hands or the development of skin cancer.

How is this medicine expected to work?

COL7A1 is a gene that produces a protein called 'collagen 7', which helps to hold skin layers together. Mutation (change) in this gene can cause epidermolysis bullosa.

This medicine is prepared individually for patients who have epidermolysis bullosa due to the *COL7A1* mutation. It consists of patient's own cells called fibroblasts. These cells are grown in the laboratory and modified with a virus that has been engineered to carry a normal copy of the *COL7A1* gene into the cells. The cells are then returned to the patient by an injection into the skin, where they are expected to produce collagen 7, correcting the cause of the condition and preventing blister formation.

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 epidermolysis bullosa had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for epidermolysis bullosa 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 21 January 2016 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:

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	Ex-vivo-expanded autologous fibroblasts transduced with lentiviral vector containing the *COL7A1* gene	Treatment of epidermolysis bullosa
Bulgarian	Култивирани ex vivo автоложни фибробласти, трансдуцирани с лентивирусен вектор съдържащ *COL7A1* ген	Лечение на булозна епидермолиза
Croatian	Ex-vivo-ekspandirani autologni fibroblasti transducirani s lentivirusnim vektorom koji sadrži gen *COL7A1*	Liječenje bulozne epidermolize
Czech	Ex-vivo expandované autologní fibroblasty transdukované s lentivirovým ektorem obsahující gen *COL7A1*	Léčba bulózní epidermolýzy
Danish	Ex-vivo-ekspanderede autologe fibroblaster, transduceret med selv-inaktiverende lentiviral vektor, der indeholder *COL7A1*-genet	Behandling af epidermolysis bullosa
Dutch	Ex-vivo geëxpandeerde autologe fibroblasten getransduceerd met zelf-inactiverend lentiviraal vector welke het *COL7A1* gen bevat	Behandeling van epidermolysis bullosa
Estonian	Ex vivo ekspandeerunud autoloogsed fibroblastid, mida on ransdutseeritud *COL7A1* geeni sisaldava lentiviiruse vektoriga	Bulloosse epidermolüüsi ravi
Finnish	Ex-vivo monistetut autologiset fibroblastit, joihin on siirretty lentivirusvektori, joka sisältää *COL7A1* geenin	Epidermolysis bullosan hoito
French	Fibroblastes autologues amplifiés ex vivo transduits avec un vecteur lentiviral contenant le gène *COL7A1*	Traitement de l'épidermolyse bulleuse
German	Ex-vivoexpandierte autologe Fibroblasten, transduziert mit einem lentiviralem Vektor der das *COL7A1*-Gen enthält	Behandlung der Epidermolysis bullosa
Greek	Ex-vivo πολλαπλασιασμένες αυτόλογες ινοβλάστες διαμολυσμένες με λεντοϊικό φορέα που περιέχει το γονίδιο *COL7A1*	Θεραπεία της πομφολυγώδους επιδερμόλυσης
Hungarian	*COL7A1* gént tartalmazó lentivirális vektorral transzdukált, ex vivo expandált, autológ fibroblasztok	Epidermolysis bullosa kezelése
Italian	Fibroblasti autologhi espansi ex-vivo -trasdotti con vettori lentivirali auto-inattivanti contenenti il gene *COL7A1*	Trattamento della epidermolisi bollosa
Latvian	Ex-vivo pavairoti autologi fibroblasti, kas transducēti ar lentivīrusa vektoru, kas satur *COL7A1* gēnu	Bulozās epidermolīzes ārstēšanai
Lithuanian	*Ex vivo* pagausinti autologiniai fibroblastai, transdukuoti lentiviruso vektoriaus, turinčio *COL7A1* geną	Pūslinės epidermolizės gydymas
Maltese	Fibroblasts awtologi imkabbra ex vivo trasformati permezz ta' vettur lentivirali li fih il-ġene ta' *COL7A1*	Kura tal-epidermolisi bullosa
Polish	Ex-vivo ekspandowane autologiczne fibroblasty transdukowane wektorem lentiwirusowym zawierającym gen *COL7A1*	Pęcherzowe oddzielanie się naskórka

[1] At the time of designation

Language	Active ingredient	Indication
Portuguese	Fibroblastos autólogos expandidos ex-vivo transduzidos com vector lentiviral contendo o gene *COL7A1*	Tratamento da epidermólise bulhosa
Romanian	Fibroblaste autologe expandate ex vivo, transduse cu un vector lentiviral ce conţinegena *COL7A1*	Tratamentul epidermolizei buloase
Slovak	Ex vivo expandované autológne fibroblasty transdukované lentivirálnym vekotorm obsahujúcim gén *COL7A1*	Liečba epidermolysis bullosa
Slovenian	Ex-vivo gojeni avtologni fibroblasti, transducirani z genom *COL7A1*, ki je kodiran s samo-inaktivirajočim lentivirusnim vektorjem	Zdravljenje bulozne epidrmolize
Spanish	Fibroblastos autólogos expandidos ex-vivo y transducidas con el vector lentiviral SIN que contiene el gen *COL7A1*	Tratamiento de la epidermolisis bullosa
Swedish	Ex-vivo-expanderad autologa fibroblaster som transducerats med självinaktiverande lentivirusvektor innehållande *COL7A1* gen	Behandling av epidermolysis bullosa
Norwegian	Ex vivo-ekspanderte autologe fibroblaster transdusert med lentivirusvektor som inneholder *COL7A1*-gen	Behandling av epidermolysis bullosa
Icelandic	Ex-vivo auknir ed with self-inactivating auknir samgena fíbróblastar transduced með sjálf-afvirkjuðum vektor sem kóðar fyrir *COL7A1* geni	Meðferð á epidermolysis bullosa