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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Autologous adipose tissue-derived stromal vascular fraction cells for the treatment of systemic sclerosis

On 19 March 2015, orphan designation (EU/3/15/1464) was granted by the European Commission to Assistance Publique Hôpitaux de Marseille, France, for autologous adipose tissue-derived stromal vascular fraction cells for the treatment of systemic sclerosis.

What is systemic sclerosis?

Systemic sclerosis is a complex disease in which the immune system (the body's natural defences) is overactive, causing inflammation and excess production of various proteins, particularly collagen. The reason why the immune system is overactive is not known. Collagen is an important component of connective tissue (the tissue that supports the skin and internal organs).

The overproduction of collagen leads to the abnormal growth of connective tissue, causing the skin to become thick and hard (fibrosis). Initial symptoms include swollen fingers and hands, followed by thickened skin over the arms, legs, face and trunk. The disease can also damage the walls of the blood vessel of the internal organs, such as the heart, lungs and kidneys. This makes it more difficult for the blood to flow, causing tissue damage and circulation problems.

Systemic sclerosis is a long-lasting, debilitating disease and may be life threatening because of its possible effects on the gut, heart, lungs and kidneys.

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

At the time of designation, systemic sclerosis affected less than 3.5 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 180,000 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).

*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 512,900,000 (Eurostat 2015).

What treatments are available?

At the time of designation, there were no treatments for systemic sclerosis that could stop the build-up of collagen. Treatments authorised in the EU were aimed at relieving the symptoms of the disease and limiting the damage it causes. Several medicines were used to reduce inflammation and circulation problems. Bosentan was authorised in the EU specifically to treat patients with systemic sclerosis in whom poor blood circulation caused by the disease has led to the development of 'digital ulcers' (sores on the fingers and toes).

The sponsor has provided sufficient information to show that the medicine might be of significant benefit for patients with systemic sclerosis because early studies showed that it may be beneficial to patients who did not respond to other 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?

The medicine is prepared from the patient's own body fat (adipose tissue). The fat is broken down in the laboratory using digestive enzymes, and the resulting tissue is devoid of fat cells but contains other cells such as leukocytes and macrophages (types of white blood cells), and stem cells (cells that can develop into different types of cell). When these remaining cells are injected back into the patient's hands, it is expected that they will help promoting tissue repair in the damaged areas, helping to slow down or stop the progression of the disease in the treated area.

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, clinical trials with the medicine in patients with systemic sclerosis were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for systemic sclerosis 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 12 February 2015 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	Autologous adipose tissue-derived stromal vascular fraction cells	Treatment of systemic sclerosis
Bulgarian	Стромални клетки от съдова фракция получени от автоложна мастна тъкан	Лечение на системна склероза
Croatian	Stanice stromalne vaskularne frakcije dobivene iz autolognog masnog tkiva	Liječenje sistemske skleroze
Czech	Vaskulární frakce buněk z autologní tukové stromální tukové tkáně	Léčba systémové sklerodermie
Danish	Autolog fedtvæv-afledt stromale vaskulære fraktion celler	Behandling af systemisk sklerose
Dutch	Autologe vetweefsel-afgeleide stromale vasculaire fractie cellen	Behandeling van systeem sclerose
Estonian	Autoloogsed rasvkoest lähtunud strooma vaskulaarse fraktsiooni rakud	Süsteemse sklerodermia ravi
Finnish	Autologiset rasvakudoksesta peräisin olevat stromaalisen vaskulaarisen fraktion solut	Systeemisen skleroosin hoito
French	Cellules de fraction vasculaire stromale dérivées du tissu adipeux autologue	Traitement de la sclérose systémique
German	Gefäßstromazellen aus autologem Fettgewebe	Behandlung der systemischen Sklerose
Greek	Κλάσμα στρωματικών αγγειακών κυττάρων προερχόμενο από αυτόλογο λιπώδη ιστό	Θεραπεία της συστηματικής σκλήρυνσης
Hungarian	Autológ zsírszövetből származó sztromális vaszkuláris frakció sejtek	Szisztémás scleroderma kezelése
Italian	Cellule della frazione vascolare stromale derivate da tessuto adiposo autologo- frazione	Trattamento della sclerosi sistemica
Latvian	Autologas no taukaudiem atvasinātas stromas vaskulārās frakcijas šūnas	Sistēmiskas sklerozes ārstēšana
Lithuanian	Autologinis riebalinis audinys, išskirtas iš kraujagyslių stromos frakcijos ląstelių	Sisteminės sklerozės gydymas
Maltese	Ċelluli minn frazzjoni vaskulari stromali imnissla minn tessut xaħmi awtologu	Kura tas-sklerosi sistemika
Polish	Autologiczne komórki uzyskane z frakcji podporowo-naczyniowej tkanki tłuszczowej	Leczenie twardziny narządowej
Portuguese	Fração celular do estroma vascular derivada de tecido adiposo autólogo	Tratamento da esclerose sistémica
Romanian	Celule stromale vasculare fractionate, derivate din țesut adipos autolog	Tratamentul sclerozei sistemice
Slovak	Autológne tukové tkanivo-odvodený stromálny vaskulárny frakcie bunky	Liečba systémovej sklerózy

¹ At the time of designation

Language	Active ingredient	Indication
Slovenian	Avtologne celice maščobnega tkiva, ki izvirajo iz žilne stromalne frakcija	Zdravljenje sistemske skleroze
Spanish	Tejido adiposo autólogo-estroma células derivadas de la fracción vascular	Tratamiento de la esclerosis sistémica
Swedish	Vaskulära stromalceller från autolog fettvävnad	Behandling av systemisk skleros
Norwegian	Autologe fettvevsavledede stromal vaskulær fraksjon celler	Behandling av systemisk sklerose
Icelandic	Samgena fituvefs-afleiddar uppistöðuvefs æða brot frumur	Meðferð við dreifðum herslismeinum