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## Public summary of opinion on orphan designation

Granulocyte-macrophage colony-stimulating factor for the treatment of pulmonary alveolar proteinosis

First publication	14 August 2013	
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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 17 July 2013, orphan designation (EU/3/13/1147) was granted by the European Commission to Serendex ApS, Denmark, for granulocyte-macrophage colony-stimulating factor for the treatment of pulmonary alveolar proteinosis.

In August 2014, Serendex ApS changed name to Serendex Pharmaceuticals A/S.

#### What is pulmonary alveolar proteinosis?

Pulmonary alveolar proteinosis is a disease of the lungs, where certain lipoproteins (molecules containing a fat and a protein) build up in the air sacs (or alveoli) of the lungs making it difficult to breathe. The exact cause of the condition is unknown, but it is believed to involve a malfunctioning of the immune system, leading to high levels of antibodies against granulocyte-macrophage colony-stimulating factor, a messenger molecule involved in keeping the alveoli clear of unwanted materials.

Pulmonary alveolar proteinosis is a long-term debilitating disease mainly because it causes progressive breathlessness and reduced lung function, which can lead to the need for supplementary oxygen through a breathing mask and to recurrent lung infections.



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

At the time of designation, pulmonary alveolar proteinosis affected less than 0.1 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 5,000 people<sup>\*</sup>, 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, treatment for pulmonary alveolar proteinosis involved washing out the lipoprotein substance from the lungs, in a procedure known as 'whole alveolar lavage'.

The sponsor has provided sufficient information to show that granulocyte-macrophage colonystimulating factor might be of significant benefit for patients with pulmonary alveolar proteinosis because studies show that it might reduce the need for whole alveolar lavage. 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?

In patients with pulmonary alveolar proteinosis the body's natural granulocyte-macrophage colonystimulating factor is prevented from working properly by high levels of antibodies against it. When inhaled by a patient (using a nebuliser), the medicine is expected to substitute for the natural factor, thereby helping to keep the alveoli clear of unwanted materials.

#### What is the stage of development of this medicine?

The sponsor has provided data in experimental models and patients from the published literature to support its application for orphan designation.

At the time of submission of the application for orphan designation, no clinical trials with granulocytemacrophage colony-stimulating factor in patients with pulmonary alveolar proteinosis had been started.

At the time of submission, granulocyte-macrophage colony-stimulating factor was not authorised anywhere in the EU for pulmonary alveolar proteinosis. Orphan designation of granulocyte-macrophage colony-stimulating factor had been granted in the United States for pulmonary alveolar proteinosis.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 13 June 2013 recommending the granting of this designation.

<sup>&</sup>lt;sup>\*</sup>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 512,200,000 (Eurostat 2013).

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:

Serendex Pharmaceuticals A/S Slotsmarken 17, 2.tv. 2970 Hørsholm Denmark Telephone: +45 7930 1417 http://www.serendex.com/contact/

For contact details of patients' organisations whose activities are targeted at rare diseases see:

- <u>Orphanet</u>, a database containing information on rare diseases which includes a directory of patients' organisations registered in Europe.
- <u>European Organisation for Rare Diseases (EURORDIS)</u>, 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<sup>1</sup>, Norwegian and Icelandic

Language	Active ingredient	Indication
English	Granulocyte macrophage colony stimulating factor	Treatment of pulmonary alveolar proteinosis
Bulgarian	Гранулоцитен макрофаг колония- стимулиращ фактор	Лечение на пулмонарна лажеоларна протеиноза.
Croatian	Faktor stimulacije granulocitno- monocitnih kolonija	Liječenje plućne alveolarne proteinoze
Czech	Granulocyty-makrofágy stimulujícíc faktor	Léčba plicní alveolární proteinosy
Danish	Granulocyt-makrofag-kolon stimulerande faktor	Behandling af pulmonal alveolær proteinose
Dutch	Granulocyt macrofaag colonie stimulerende factor	Behandeling van pulmonaire alveolaire proteïnosis
Estonian	Granulotsüütmakrofaag kolooniat stimuleeriv faktor	Kopsude alveolaarproteinoosi ravi
Finnish	Granulosyyttimakrofagien kolonisaatiota stimuloiva tekijä	Keuhkojen alveolaariproteinoosin hoito
French	Facteur stimulant la colonie de macrophages granulocytes	Traitement de la proteinose alvéolaire pulmonaire
German	Granulozyten-Makrophagen koloniestimulierender Faktor (GM- CSF)	Behandlung der Alveolarproteinose
Greek	Διεγερτικός παράγοντας αποικιών κοκκιοκυττάρων-μακροφάγων	Θεραπεία της πνευμονικής κυψελιδικής πρωτεϊνωσης
Hungarian	Granulocita makrofág kolónia stimuláló faktor	Pulmonalis alveolaris proteinosis kezelése
Italian	Fattore stimolante le colonie granulocitarie-macrofagiche	Trattamento della proteinosi polmonare alveolare
Latvian	Granulocītu makrofāgu koloniju stimulējošais faktors	Plaušu alveolu proteinozes ārstēsana
Lithuanian	Granulocitų makrofagų kolonijas stimuliuojantis faktorius	Plautinės alveolarinės proteinozės gydymas
Maltese	Fattur li jistimula kolonji makrofagu granuloćita	Kura tal-proteinosi fil-boroż tal-arja tal-pulmun
Polish	Czynnik stymulujący tworzenie kolonii granulocytów i makrofagów	Leczenie proteinozy pęcherzyków płucnych
Portuguese	Fator estimulador de colónias de granulócito	Tratamento da proteinose pulmunar alveolar
Romanian	Factor de stimulare a coloniilor de granulocite-macrofage	Tratamentul proteinozei pulmonare alveolare
Slovak	Granulocytový makrofágový faktor stimulujúci kolónie	Liečba pľúcnej alveolárnej proteinózy

<sup>1</sup> At the time of designation

Language	Active ingredient	Indication
Slovenian	Grenulocitne kolonije stimulirajoči faktor	Zdravljenje pljučne alveolarne proteinoze
Spanish	Factor estimulador de colonias de granulocitos-macrófagos	Tratamiento de la proteinosis alveolar pulmonar
Swedish	Granulocyt-makrofag- kolonistimulerande faktor	Behandling av pulmonell alveolär proteinos
Norwegian	Granulocytt- makrofagkolonistimulerende faktor	Behandling av pulmonal alveolær proteinose
Icelandic	Kirningafrumu makróphaga örvunarþáttur	Meðferð á lungna alveólar próteinósis