11 November 2011
EMA/COMP/75/2002 Rev.3
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Colistimethate sodium for the treatment of *Pseudomonas aeruginosa* lung infection (including colonisation) in cystic fibrosis

Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in October 2011 on request of the sponsor.

On 19 February 2002, orphan designation (EU/3/02/088) was granted by the European Commission to Pharmax Limited, United Kingdom, for colistimethate sodium for the treatment of *Pseudomonas aeruginosa* lung infection (including colonisation) in cystic fibrosis.

Pharmax Limited changed its name to Forest Laboratories UK Ltd in July 2002.

What is *Pseudomonas aeruginosa* lung infection in cystic fibrosis patients?

Chronic infection of the lung with the bacterium *Pseudomonas aeruginosa* represents a hallmark of cystic fibrosis. It can induce damage to the lung tissue and respiratory insufficiency, which is life threatening.

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

At the time of designation, *Pseudomonas aeruginosa* lung infection in cystic fibrosis affected approximately 1.3 in 10,000 people in the European Union (EU)*. This is equivalent to a total of around 49,000 people, and is below the threshold for orphan designation, which is 5 people in 10,000. This is based on the information provided by the sponsor and knowledge of the Committee for Orphan Medicinal Products (COMP).

* The number of patients affected by the condition is estimated and assessed for the purpose of the designation, for a European Community population of 377,000,000 (Eurostat 2001) and may differ from the true number of patients affected by the condition. This estimate is based on available information and calculations presented by the sponsor at the time of the application.

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What treatments are available?

Pseudomonas aeruginosa lung infection in cystic fibrosis is treated predominantly with antibiotic therapy administered by a variety of routes, oral, intravenous and as an aerosol via nebulisation. Several antibiotics had been authorised for the condition in some countries in the Community, at the time of submission of the application for orphan designation. Satisfactory argumentation has been submitted by the sponsor to justify the assumption that colistimethate sodium might be of potential significant benefit for the treatment of *Pseudomonas aeruginosa* lung infection in cystic fibrosis, particularly in terms of its low potential for resistance and its ease of administration as a dry powder inhalation.

How is this medicine expected to work?

Colistimethate is an antibiotic produced by certain strains of bacteria. The sponsor has developed a formulation for dry powder inhalation to be administered with a commercial device. In contrast to many antibiotics, which target specific molecules in the bacteria, colistimethate is claimed to have a "physical" mechanism of action disrupting the bacterial membrane. This action cannot be countered by the resistance mechanisms employed by bacteria against other antibiotics with specific cellular enzyme targets, resulting in a very low degree of resistance to colistimethate.

What is the stage of development of this medicine?

At the time of the submission of the application for orphan designation clinical trials with colistimethate sodium dry powder inhaler in cystic fibrosis patients with *Pseudomonas aeruginosa* lung infection had not been initiated.

Colistimethate sodium dry powder inhaler had not been marketed anywhere worldwide for this condition or designated as an orphan medicinal product elsewhere, at the time of submission.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 18 December 2001 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:

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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	Colistimethate sodium	Treatment of *Pseudomonas aeruginosa* lung infection (including colonisation) in cystic fibrosis
Danish	Colistimethat natrium	Behandling af lungeinfektion med pseudomonas aeruginose (inklusive kolonidannelse)ved cystisk fibrose
Dutch	Natrium colistimetaat	Behandeling van *Pseudomonas aeruginosa* longinfectie (inclusief kolonisatie) bij cystische fibrosis
Finnish	Kolistimetaattinatrium	Pseudomonas aeruginosan aiheuttaman keuhkoinfektion (myös kolonisaation) hoito kystisessä fibroosissa
French	Colistiméthate sodique	Traitement des infections pulmonaires à Pseudomonas aeruginosa (incluant les colonisations) dans la mucoviscidose
German	Colistimethat-Natrium	Therapie der Lungeninfektion mit Pseudomonas aeruginosa (einschließlich Koloniebildung) bei zystischer Fibrose
Greek	Το μετά νατρίου άλας της κολιστίνης	θεραπεία λοιμώξεων των πνευμόνων με *Pseudomonas aeruginosa* (συμπεριλαμβανομένου του αποικισμού) κατά την κυστική ίνωση
Italian	Sodio colistimetato	Trattamento di infezione polmonare da *Pseudomonas aeruginosa* (inclusa la colonizzazione) nella fibrosi cistica
Portuguese	Colistimetato de sódio	Tratamento de infecção pulmonar por *Pseudomonas aeruginosa* (incluindo colonizaçãos) na fibrosa quística
Spanish	Colistimetato sódico	Tratamiento de infecciones pulmonares con *Pseudomonas aeruginosa* (incluyendo las colonizaciones) en la fibrosis quística
Swedish	Colistimetat natrium	Behandling av lunginflammation (inkluderande kolonibildning) orsakad av pseudomonas aeruginosa vid cystisk fibros

[1] At the time of designation