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Public summary of opinion on orphan designation

3,5-diamino-6-chloro-N-(N-(4-(4-(2-(hexyl((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)amino)ethoxy)phenyl)butyl)-carbamimidoyl)pyrazine-2-carboxamide, sodium chloride solution 4.2% (w/v) for the treatment of primary ciliary dyskinesia

On 16 November 2020, orphan designation EU/3/20/2363 was granted by the European Commission to EUDRAC GmbH, Germany, for 3,5-diamino-6-chloro-N-(N-(4-(4-(2-(hexyl((2S,3R,4R,5R)-2,3,4,5,6-pentahydroxyhexyl)amino)ethoxy)phenyl)butyl)-carbamimidoyl)pyrazine-2-carboxamide, sodium chloride solution 4.2% (w/v) (also known as P-1037 Inhalation Solution) for the treatment of primary ciliary dyskinesia.

What is primary ciliary dyskinesia?

Primary ciliary dyskinesia is an inherited disease in which the cilia, hair-like structures which can be found in the lining of the airways, are defective. In the airways, cilia are important for sweeping out mucus and microorganisms that can cause infections and disease. Patients with primary ciliary dyskinesia are prone to recurring lung infections.

Although the main symptoms affect the lung and respiratory tract, patients can have problems with other organs including the ear and may also suffer from infertility. In some patients with primary ciliary dyskinesia, organs in the chest and abdomen, such as the heart, are structurally abnormal or in the wrong position.

Primary ciliary dyskinesia is debilitating in the long-term because of the recurring respiratory infections which can damage the lungs, and problems with heart and hearing and with infertility.

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

At the time of designation, primary ciliary dyskinesia affected approximately 1.1 in 10,000 people in the European Union (EU). This was equivalent to a total of around 57,000 people*, and is below the

*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, Iceland, Liechtenstein, Norway and the United Kingdom. This represents a population of 519,200,000 (Eurostat 2020).

Official address Domenico Scarlattilaan 6 ● 1083 HS Amsterdam ● The Netherlands
Address for visits and deliveries Refer to www.ema.europa.eu/how-to-find-us
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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 primary ciliary dyskinesia. Antibiotic treatments were widely used to treat recurring infections.

How is this medicine expected to work?

When given by inhalation, this medicine is expected to block the action of a protein called 'epithelial sodium channel' and prevent it carrying sodium ions and water away from the airways. As a result, the mucus becomes more liquid and can be cleared more easily from the airways by the cilia, thereby improving the symptoms of the disease.

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 primary ciliary dyskinesia were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for the treatment of primary ciliary dyskinesia. Orphan designation of the medicine had been granted in the United States for this condition.

In accordance with Regulation (EC) No 141/2000, the COMP adopted a positive opinion on 8 October 2020, 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

Contact details of the current sponsor for this orphan designation can be found on EMA website.

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.