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Public summary of opinion on orphan designation

Alpha galactosidase A for the treatment of Fabry disease

On 6 January 2021, orphan designation EU/3/20/2396 was granted by the European Commission to Consejo Superior de Investigaciones Científicas, Spain, for alpha galactosidase A (also known as rh GLA) for the treatment of Fabry disease.

What is Fabry disease?

Fabry disease is an inherited disease that is caused by the lack of an enzyme called alpha galactosidase A, which breaks down and removes Gb3, a complex molecule containing sugars and fats.

In patients with this condition, large amounts of Gb3 build up in vital organs, such as the kidneys and heart, leading to kidney failure and heart problems. Gb3 also builds up in the tissues of the skin, eye and nervous system leading to skin damage, clouding of the front part of the eye, pain in the hands and feet and complications affecting the brain.

Fabry disease is a long-term debilitating disease due to recurrent episodes of severe pain that cannot be relieved with painkillers. It is also life-threatening due to kidney problems, heart attack and stroke.

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

At the time of designation, Fabry disease affected approximately 2.6 in 10,000 people in the European Union (EU). This was equivalent to a total of around 135,000 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, Fabrazyme (agalsidase beta) and Replagal (agalsidase alpha, another form of alpha galactosidase A), which are enzyme replacement therapies, and Galafold (migalastat), which allows any existing enzyme to work better, were authorised in the EU to treat Fabry disease.

*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).

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The sponsor has provided sufficient information to show that the medicine might be of significant benefit for patients with Fabry disease. Results from early laboratory studies indicate that this medicine improved Gb3 levels in several tissues compared to the effects of agalsidase alpha.

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 contains a version of human alpha galactosidase A packaged into nanoliposomes (tiny particles with an outer layer of fats). When given by injection, these particles are expected to target affected organs in Fabry Disease, especially the liver and heart, delivering the missing enzyme and helping to control symptoms of the disease.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, the evaluation of the effects of alpha galactosidase A in experimental models was ongoing.

At the time of submission of the application for orphan designation, no clinical trials with alpha galactosidase A in patients with Fabry disease had been started.

At the time of submission, alpha galactosidase A was not authorised anywhere in the EU for the treatment of Fabry disease or designated as an orphan medicinal product elsewhere for this condition.

In accordance with Regulation (EC) No 141/2000, the COMP adopted a positive opinion on 3 December 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.