



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

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Committee for Orphan Medicinal Products

## Public summary of opinion on orphan designation alpha-galactosidase A for the treatment of Fabry disease

***Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in August 2011 at the end of the period of market exclusivity.***

On 8 August 2000, orphan designation (EU/3/00/002) was granted by the European Commission to TKT Europe-5S AB, Sweden, for alpha-galactosidase A for the treatment of Fabry disease.

The sponsor applied for a change of name to Shire Human Genetic Therapies AB in September 2010.

### What is Fabry disease?

Fabry disease comprises a group of inherited lysosomal storage disorders. Lysosomes are small vesicles within cells containing enzymes that are able to destroy or transform different substances of the cell, such as proteins, fat, nucleic acids (components of the genetic material) and sugars. Any change of the lysosomal enzymes causes abnormal accumulation of the substance (also known as substrate) normally transformed by it. Cells are unable to destroy or eliminate accumulated substrates, and high levels of them can be toxic leading to damage and malfunction of the organ where accumulation occurs. In Fabry disease, the activity of the lysosomal enzyme alpha-galactosidase A is impaired or absent. Fabry disease is a heterogenous disorder with variable onset of symptoms that affect several organs. Glycosphingolipids (biological molecules composed of a type of sugar and lipid) is the substrate that accumulates in Fabry disease, and severity of the disease depends on the level of accumulation. Fabry disease affects the nervous system, kidneys, heart, skin and gastrointestinal system. Some of the most common pathological symptoms are skin lesions and burning pain of the extremities. Fabry disease is chronically debilitating and life threatening.

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

At the time of designation, Fabry disease affected approximately 0.013-0.027 in 10,000 people in the European Union (EU)\*. This is equivalent to a total of 500-1,000 people, and is below the threshold for

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\* Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed based on data from the European Union. This represents a population of 377,000,000 (Eurostat 2001).



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 submission of application for orphan drug designation, there were no satisfactory methods authorised for the treatment of Fabry disease. Some patients with advanced renal failure due to the disease could be treated with dialysis and/or renal transplantation and treatments for specific symptoms, such as convulsions, were used.

### **How is this medicine expected to work?**

The product works as an enzyme replacement therapy. It is expected to replace the missing or defective alpha-galactosidase in patients with Fabry disease, reducing the accumulation of glycosphingolipids. This is expected to relieve the symptoms.

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

The effects of alpha-galactosidase A were evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials in patients with Fabry disease were ongoing.

Alpha-galactosidase A was not authorised anywhere worldwide for the treatment of Fabry disease, at the time of submission. Orphan designation of alpha-galactosidase A was granted in the United States for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 11 July 2000 recommending the granting of this designation.

Update: Alpha-galactosidase A (Replagal) was authorised in the EU on 4 May 2001 for long-term enzyme replacement therapy in patients with a confirmed diagnosis of Fabry Disease ( $\alpha$ -galactosidase A deficiency).

More information on Replagal can be found in the European public assessment report (EPAR) on the Agency's website: [ema.europa.eu/Find\\_medicine/Human\\_medicines/European\\_Public\\_Assessment\\_Reports](http://ema.europa.eu/Find_medicine/Human_medicines/European_Public_Assessment_Reports)

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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<sup>1</sup>, Norwegian and Icelandic**

Language	Active Ingredient	Indication
English	$\alpha$ -Galactosidase A	Treatment of Fabry Disease
Danish	$\alpha$ -galactosidase A	Behandling af Fabrys sygdom
Dutch	$\alpha$ -Galactosidase A	Behandeling van de ziekte van Fabry
Finnish	$\alpha$ -Galaktosidaasi A	Fabryn taudin hoito
French	$\alpha$ -Galactosidase A	Traitement de la maladie de Fabry
German	$\alpha$ -Galactosidase A	Behandlung des Fabry-Syndroms
Greek	A-γαλακτοζιδάση	Αγωγή κατά της νόσου του Fabry
Italian	$\alpha$ -Galattosidasi A	Tattamento della malattia di Fabry
Potuguese	$\alpha$ -Galactosidase A	Tratamento da doença de Fabry
Spanish	$\alpha$ -Galactosidasa A	Tratamiento de la enfermedad de Fabry
Swedish	$\alpha$ -Galaktosidas A	Behandling av Fabrys sjukdom

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