10 February 2021
EMADOC-628903358-3456

Public summary of opinion on orphan designation

Alisitol, retinol palmitate, zinc gluconate for the treatment of microvillus inclusion disease

On 13 November 2020, orphan designation EU/3/20/2354 was granted by the European Commission to Vanessa Research Magyarorszag Kft., Hungary, for alisitol, retinol palmitate, zinc gluconate (also known as Shylicine) for the treatment of microvillus inclusion disease.

What is microvillus inclusion disease?

Microvillus inclusion disease is an inherited disease in which the gut does not absorb nutrients from food, causing malnutrition, dehydration and affecting the normal balance of fluids and salts. This leads to severe, watery diarrhoea, weight loss and eventually problems with the liver and normal growth and development.

Microvillus inclusion disease is a long-term debilitating disease that may be life-threatening due to persistent and treatment-resistant diarrhoea requiring feeding by a drip into a vein (parenteral nutrition).

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

At the time of designation, microvillus inclusion disease affected less than 0.01 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 500 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, no satisfactory methods were authorised in the EU for the treatment of microvillus inclusion disease. Patients were normally treated with parenteral nutrition. In severe cases intestinal transplantation might be used.

*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
Send us a question via www.ema.europa.eu/contacts **Telephone** +31(0)88 781 6000 An agency of the European Union

How is this medicine expected to work?

Large volumes of water are normally secreted into the intestine, but most of this water is then absorbed before reaching the large intestine. Diarrhea occurs when secretion of water into the intestine exceeds absorption. Patients with microvillus inclusion disease lack special proteins called 'channels' to absorb salt particles from the intestine to the cells into the intestine.

Alisitol blocks the ability of special proteins called 'chloride channels' to carry chloride ions out of cells into the intestine and blocks secretion into the intestine. This will reduce the amount of fluid secreted into the intestine.

Retinol palmitate promotes absorption of nutrients and fluids in the gut by restoring normal structure and function of intestinal cells.

Zinc gluconate is expected to work by increasing the effects of retinol palmitate and alisitol.

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 microvillus inclusion disease were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for the treatment of microvillus inclusion 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 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.