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Public summary of opinion on orphan designation

Leniolisib for the treatment of activated phosphoinositide 3-kinase delta syndrome (APDS)

On 19 October 2020, orphan designation EU/3/20/2339 was granted by the European Commission to Pharming Group N.V., the Netherlands, for leniolisib for the treatment of activated phosphoinositide 3-kinase delta syndrome (APDS).

What is activated phosphoinositide 3-kinase delta syndrome (APDS)?

Activated phosphoinositide 3-kinase delta syndrome (APDS) is an inherited disorder where the patient is unable to fight infections because the immune system (the body's natural defences) does not work properly.

It is caused by defects in the genes that control the production of a protein called phosphoinositide 3-kinase delta. This protein is essential for the development of B and T cells, white blood cells that play a key role in the immune system. The defects make phosphoinositide 3-kinase delta overactive, interfering with the normal development of B and T cells and their ability to fight infections. The main symptoms usually occur in the first two years of life and include repeated lung infections and a failure to grow and develop normally.

Activated phosphoinositide 3-kinase delta syndrome is a long-term debilitating and life-threatening condition due to repeated lung infections that can lead to bronchiectasis (enlargement and inflammation of part of the airways).

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

At the time of designation, activated phosphoinositide 3-kinase delta syndrome affected approximately 0.01 in 10,000 people in the European Union (EU). This was equivalent to a total of around 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).

*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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What treatments are available?

At the time of designation of the review of the orphan designation, no satisfactory treatments were authorised in the EU for patients affected by activated phosphoinositide 3-kinase delta syndrome. The main treatment included medicines to help control infection, such as immunoglobulin replacement therapy.

How is this medicine expected to work?

The medicine attaches to phosphoinositide 3-kinase delta and blocks its action. This is expected to reduce the excessive activity of the protein, helping to restore normal development of B and T cells and their ability to fight infections, thereby reducing symptoms of the disease.

What is the stage of development of this medicine?

The effects of leniolisib have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with leniolisib in patients with activated phosphoinositide 3-kinase delta syndrome were ongoing.

At the time of submission, leniolisib was not authorised anywhere in the EU for the treatment of activated phosphoinositide 3-kinase delta syndrome. Orphan designation of leniolisib had been granted in the US for this condition.

In accordance with Regulation (EC) No 141/2000, the COMP adopted a positive opinion on 10 September 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.