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Public summary of opinion on orphan designation

Bardoxolone methyl for the treatment of Alport syndrome

On 25 May 2018, orphan designation (EU/3/18/2019) was granted by the European Commission to Dr Stefan Blesse, Germany, for bardoxolone methyl for the treatment of Alport syndrome.

What is Alport syndrome?

Alport syndrome is an inherited condition caused by a mutation (change) in one of a group of genes responsible for producing type IV collagen, a fibrous protein needed to form the membranes that separate and support cells in organs such as the kidney, ear and eye. In patients with Alport syndrome, these membranes have an abnormal structure, so the organs cannot develop and function properly. Patients therefore experience internal scarring and inflammation of the kidney and gradually worsening kidney function that eventually results in kidney failure. Patients also suffer hearing loss and may develop cataracts and visual impairment.

Alport syndrome is a long-term debilitating disease due to the progressive kidney damage and impaired hearing and vision; it is potentially life threatening because it results in kidney failure that requires dialysis or transplantation.

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

At the time of designation, Alport syndrome affected approximately 2 in 10,000 people in the European Union (EU). This was equivalent to a total of around 103,000 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, no satisfactory methods of treatment were authorised in the EU for patients affected by the condition. Patients were given medicines that act on the renin-angiotensin system (RAS), which may if started early enough help slow the progression of kidney disease. As the disease worsens, kidney dialysis and kidney transplant may be needed.

*Disclaimer: 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 (EU 28), Norway, Iceland and Liechtenstein. This represents a population of 517,400,000 (Eurostat 2018).

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How is this medicine expected to work?

Bardoxolone methyl is expected to work by activating a protein called NrF2, which triggers the production of other proteins that reduce inflammation and help protect cells. It is also expected to block the production of a protein called NF-κB, which is involved in causing inflammation. These two actions are expected to help reduce the scarring and kidney damage in patients Alport syndrome.

What is the stage of development of this medicine?

The effects of bardoxolone methyl have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with bardoxolone methyl in patients with Alport syndrome were ongoing.

At the time of submission, bardoxolone methyl was not authorised anywhere in the EU for Alport syndrome. Orphan designation of bardoxolone methyl had been 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 19 April 2018 recommending the granting of this designation.

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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:

Contact details of the current sponsor for this orphan designation can be found on EMA website, on the medicine's rare disease designations page.

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[1], Norwegian and Icelandic

Language	Active ingredient	Indication
English	Bardoxolone methyl	Treatment of Alport syndrome
Bulgarian	Бардоксолон метил	лечение на синдрома на Алпорт
Croatian	Bardoksolon metil	Liječenje Alportovog sindroma
Czech	Bardoxolon metyl	Léčba Alportova syndromu
Danish	Bardoxolonmethyl	Behandling af Alports syndrom
Dutch	Bardoxolonmethyl	Behandeling van het syndroom van Alport
Estonian	Bardoksoloonmetüül	Alporti sündroomi ravi
Finnish	Bardoksolonimetyyli	Alportin oireyhtymän hoito
French	Méthyl-bardoxolone	Traitement du syndrome d'Alport
German	Bardoxolonmethyl	Behandlung des Alport-Syndroms
Greek	Μεθυλική βαρδοξολόνη	Θεραπεία του συνδρόμου Alport
Hungarian	Bardoxolon-metil	Alport-szindróma kezelésére
Italian	Bardoxolone metile	Trattamento della sindrome di Alport
Latvian	Bardoksolona metils	Olporta sindroma ārstēšanai
Lithuanian	Bardoksolono metilas	Alporto sindromo gydymui
Maltese	Metil bardossoloniku	Kura tas-sindrome ta' Alport
Polish	Metyl bardoksolonu	Leczenia zespołu Alporta
Portuguese	Bardoxolona metilo	Tratamento da síndroma de Alport
Romanian	Metil bardoxolonă	Tratamentul sindromului Alport
Slovak	Bardoxolónmetyl	Liečbu Alportovho syndrómu
Slovenian	Bardoksolon metil	Zadravljenje Alportovega sindroma
Spanish	Metil bardoxolona	Tratamiento del síndrome de Alport
Swedish	Bardoxolonmetyl	Behandlingen av Alports syndrom
Norwegian	Metylbardoksolonat	Behandling av Alports syndrom
Icelandic	Bardoxólónmetýl	Meðferð við Alport-heilkenni

[1] At the time of designation