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EMA/COMP/140/2002 Rev.2  
Committee for Orphan Medicinal Products

## Public summary of opinion on orphan designation

### Nitisinone for the treatment of alkaptonuria

First publication	6 January 2003
Rev.1: administrative update	7 January 2003
Rev.2: sponsor's name change	27 June 2014
<b>Disclaimer</b> Please note that revisions to the Public Summary of Opinion are purely administrative updates. Therefore, the scientific content of the document reflects the outcome of the Committee for Orphan Medicinal Products (COMP) at the time of designation and is not updated after first publication.	

On 13 March 2002, orphan designation (EU/3/02/096) was granted by the European Commission to Swedish Orphan AB, Sweden, for nitisinone for the treatment of alkaptonuria.

In May 2014, the sponsor changed name to Swedish Orphan Biovitrum AB (publ).

#### What is alkaptonuria?

Alkaptonuria is a genetic disease, where a deficiency in an enzyme, the homogentisic acid oxidase, leads to the accumulation of homogentisic acid (HGA) and its metabolites, which have deleterious effects on cartilage. The condition is sometimes revealed in infants by a bluish colour of eye conjunctiva, or dark colouring of urine in diapers. The most common symptoms occur during childhood or early adulthood. They include joint pain such as spinal pain, limited joint mobility, and joint deterioration of mainly the hips, knees and shoulders in the third or fourth decade of life. The condition may be seriously disabling and lead to the need for early surgical joint replacement.

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

At the time of designation, alkaptonuria affected approximately 0.02 - 0.05 in 10,000 people in the European Union (EU). This was equivalent to a total of around 760 – 1,900 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).

\*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. At the time of designation, this represented a population of 380,600,000 (Eurostat 2002).



## **What treatments are available?**

At the time of submission of the application for orphan designation, no satisfactory method had been authorised in the European Union for treatment of the condition. Joint damage has led to the need for surgical replacement such as hip replacement at an early age.

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

Nitisinone interrupts the formation of HGA, by inhibiting the enzyme that produces HGA.

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

A limited pharmacokinetic study has been performed.

At the time of submission of the application for orphan designation, further clinical trials in patients with alkaptonuria had not been initiated.

Nitisinone had not been marketed anywhere worldwide for alkaptonuria or designated as an orphan medicinal product elsewhere for this condition, at the time of submission.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 23 January 2002 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:

Swedish Orphan Biovitrum AB (publ)  
SE 112 76 Stockholm  
Sweden  
Tel. +46(0)8 697 20 00  
E-mail: [mail.se@sobi.com](mailto:mail.se@sobi.com)

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	Nitisinone	Treatment of alkaptonuria
Danish	Nitisinon	Behandling af alkaptonuri
Dutch	Nitisinone	Behandeling van alkaptonurie
Finnish	Nitisinoni	Alkaptonurian hoito
French	Nitisinone	Traitement de l'alcaptonurie
German	Nitisinon	Behandlung von Alkaptonurie
Greek	Nitisinone	Θεραπεία της αλκαπτονουρίας
Italian	Nitisinone	Tattamento dell'alcaptonuria
Portuguese	Nitisinona	Tratamento de Alcaptonúria
Spanish	Nitisinone	Tratamiento de la alcaptonuria
Swedish	Nitisinon	Behandling av alkaptonuri

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