European Medicines Agency
Pre-authorisation Evaluation of Medicines for Human Use

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Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in May 2007 on request of the sponsor.

COMMITTEE FOR ORPHAN MEDICINAL PRODUCTS

PUBLIC SUMMARY OF POSITIVE OPINION FOR ORPHAN DESIGNATION OF human transferrin conjugated to mutant diphtheria toxin for the treatment of glioma

On 19 March 2002, orphan designation (EU/3/02/090) was granted by the European Commission to KS Biomedix Holdings plc, United Kingdom, for human transferrin conjugated to mutant diphtheria toxin for the treatment of gliomas.
The name of the sponsor changed to Xenova Biomedix Limited in August 2004.

What are gliomas?

Tumours that begin in brain tissue are known as primary brain tumours. Primary brain tumours are classified by the type of tissue from which they originate. The most common brain tumours are gliomas, which begin in the glial (supportive) tissue.
Due to their localisation, gliomas represent a potentially debilitating and life-threatening condition. Patients affected by gliomas can suffer from neurological complications, depending on the site of intra-cerebral development of the tumour.

What are the methods of treatment available?

Treatment for gliomas depends on a number of factors and may include surgery, radiotherapy or chemotherapy as well as symptomatic treatments, such as corticosteroids to control the effects of raised intracranial pressure, and anticonvulsants to help control seizures, as required. Methods of treatment for the condition had been authorised in the Community at the time of submission of the application for orphan designation. Satisfactory argumentation has been submitted by the sponsor to justify the assumption that human transferrin conjugated to mutant diphtheria toxin might be of potential significant benefit for the treatment of gliomas, particularly in terms of its novel mechanism of action.

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

According to the information provided by the sponsor, gliomas were considered to affect about 35,000 persons in the European Union.

How is this medicinal product expected to act?

The active substance in this medicinal product is formed by bonding a protein, human transferrin, with a substance derived from the diphtheria toxin. As tumour cells over-express transferrin receptors compared to normal cells, it is expected that the product will mainly target cancer cells. The toxic effect is supported by the modified diphtheria toxin, through inhibition of cell protein synthesis.

* Disclaimer: The number of patients affected by the condition is estimated and assessed for the purpose of the designation, for a European Community population of 377,000,000 (Eurostat 2001) and may differ from the true number of patients affected by the condition. This estimate is based on available information and calculations presented by the sponsor at the time of the application.

7 Westferry Circus, Canary Wharf, London, E14 4HB, UK
Tel. (44-20) 74 18 84 00 Fax (44-20) 75 23 70 40
E-mail: orphandrugs@emea.europa.eu http://www.emea.europa.eu

What is the stage of development of this medicinal product?
The effects of human transferrin conjugated to mutant diphtheria toxin have been evaluated in experimental models. At the time of submission of the application for orphan designation, clinical trials in patients with gliomas were ongoing.

Human transferrin conjugated to mutant diphtheria toxin had not been marketed anywhere worldwide, at the time of submission. Orphan drug status was granted by the United States Food and Drug Administration (FDA) on 3 December 2001 for human transferrin conjugated to mutant diphtheria toxin in the treatment of malignant tumours of the central nervous system.

According to Regulation (EC) No 141/2000 of 16 December 1999, the Committee for Orphan Medicinal Products (COMP) adopted on 23 January 2002 a positive opinion recommending the grant of the above mentioned designation.

Opinions on orphan medicinal products designations are based on the following cumulative criteria: (i) the seriousness of the condition, (ii) the existence or not of alternative methods of diagnosis, prevention or treatment and (iii) either the rarity of the condition (considered to affect not more than five in ten thousand persons in the Community), or the insufficient return of development investments.

Designated orphan medicinal products are still investigational products which have been considered for designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of its quality, safety and efficacy will be necessary before this product can be granted a marketing authorisation.

For more information:
Sponsor's contact details:
Xenova Biomedix Limited
957 Buckingham Avenue
Slough
Berkshire SL1 4NL
United Kingdom
Telephone: +44 17 53 70 66 00
Telefax: +44 17 53 70 66 07