10 March 2010
EMA/COMP/10959/2003 Rev.3
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Arsenic trioxide for the treatment of multiple myeloma

Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in March 2010 on request of the sponsor.

On 29 March 2001, orphan designation (EU/3/01/032) was granted by the European Commission to Cell Therapeutics (UK) Ltd., United Kingdom, for arsenic trioxide for the treatment of multiple myeloma.

The sponsorship was transferred to Cephalon UK Limited, United Kingdom, in April 2006 and subsequently to Cephalon Europe, France, in June 2007.

What is multiple myeloma?

Multiple myeloma is a cancer of a type of white blood cell called a plasma cell. Plasma cells are found in the bone marrow. The bone marrow is the spongy tissue inside the large bones in the body. Normally, the bone marrow makes cells called "blasts" that mature into several different types of blood cells that have specific functions in the body. These include red cells, white cells and platelets. Red blood cells carry oxygen and other materials to all tissues of the body. Platelets make the blood clot, and white blood cells fight infection. In multiple myeloma an excessive number of plasma cells are produced. Normally, the division of cells takes place in a controlled manner but with multiple myeloma, the process gets out of control and abnormal plasma cells multiply, producing many myeloma cells. These fill up the bone marrow and interfere with production of the normal white cells, red cells and platelets. This leads to a number of possible complications, which include anaemia, bone pain and fractures, raised levels of calcium in the blood and kidney disease. Multiple myeloma is life-threatening.

7 Westferry Circus ● Canary Wharf ● London E14 4HB ● United Kingdom
Telephone +44 (0)20 7418 8400 **Facsimile** +44 (0)20 7523 7040
E-mail info@ema.europa.eu **Website** www.ema.europa.eu

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

At the time of designation, multiple myeloma affected approximately 1.3 in 10,000 people in the European Union (EU)*. This is equivalent to a total of around 49,000 people, and is below the threshold 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?

The main treatment of multiple myeloma is chemotherapy (using drugs to kill cancer cells) usually combined with steroids (a group of chemical substances, belonging to a larger class of molecules, the so-called hormones, which have an effect on the activity of certain organs). Several products were authorised for the condition in the Community at the time of submission of the application for orphan drug designation. Radiotherapy (using high-dose x-rays or other high-energy rays to kill cancer cells) can be very useful to treat painful areas and weakened bones. Interferon alpha is a protein normally produced by the body during viral infections, such as flu. Sometimes a combination of interferon and chemotherapy may be used.

Arsenic trioxide could be of potential significant benefit for the treatment of multiple myeloma. This assumption will have to be confirmed at the time of marketing authorisation. This will be necessary to maintain the orphan status.

How is this medicine expected to work?

It is not completely understood how arsenic trioxide works in the human body. The sponsor claims that arsenic trioxide breaks down the fundamental genetic material (DNA) of the cancer cells and thereby induces their death.

What is the stage of development of this medicine?

The effects of arsenic trioxide were evaluated in experimental models.

At the time of submission of the application for orphan designation, a clinical trial in patients with multiple myeloma was completed and more were planned.

Arsenic trioxide was not marketed or designated as orphan medicinal product elsewhere, at the time of submission.

According to Regulation (EC) No 141/2000 of 16 December 1999, the Committee for Orphan Medicinal Products (COMP) adopted on 9 February 2001 a positive opinion recommending the grant of the above-mentioned designation.

*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.

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 European Union) 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:

Cephalon Europe
5 rue Charles Martigny
94700 Maisons-Alfort Cedex
France
Telephone: +33 1 49 81 82 78
Telefax: +33 1 49 98 13 72

Patient associations' contact points

International Myeloma Foundation (UK)
Lower Ground Floor
37 York Place
Edinburgh
Scotland
EH1 3HP
United Kingdom
Myeloma Infoline: 0800 980 3332 (UK freephone)
Telephone: +44 13 15 57 33 32 (Administration)
Telefax: +44 13 15 56 97 20
E-mail: TheIMF@myeloma.org.uk

Austrian Myeloma Association
Bürglsteinstr. 21-10
5020 Salzburg
Austria

Danish Myeloma Association
(Dansk Myelomatose Forening)
v/ Peter Randløv
Klosterbakken 40
DK-3500 Værløse
Denmark
Telephone: +45 44 48 41 27
E-mail: randlov@post9.tele.dk

Translations of the active ingredient and indication in all official EU languages[1]

Language	Active ingredient	Indication
English	Arsenic trioxide	Treatment of Multiple Myeloma
Bulgarian	Арсенов триоксид	Лечение на множествен миелом
Czech	Trioxid arsenitý	Léčba mnohočetného myelomu
Danish	Arsenik trioxid	Behandling af multipelt myelom
Dutch	Arseentrioxide	Behandeling van multipel myeloom
Estonian	Arseentrioksiid	Multiibelse imüeloomi ravi
Finnish	Arseenitrioksidi	Multippelin myelooman hoito
French	Trioxyde d'arsenic	Traitement du myélome multiple
German	Arsentrioxid	Behandlung des multiplen Myeloms
Greek	Τριοξείδιο αρσενικού	Θεραπεία του πολλαπλού μυελώματος
Hungarian	Arsenum trioxydatum	Myeloma multiplex kezelése
Italian	Triossido di arsenico	Trattamento del mieloma multiplo
Latvian	Arsēna trioksīds	Multiplās mielomas ārstēšana
Lithuanian	Arseno trioksidas	Dauginės mielomos gydymas
Maltese	Arsenic trioxide	Kura tal-mjeloma multipla
Polish	Arsenu tritlenek	Leczenie szpiczaka mnogiego
Portuguese	Trióxido de arsénico	Tratamento do mieloma múltiplo
Romanian	Trioxid de arsen	Tratamentul mielomului multiplu
Slovak	Oxid arzenitý	Liečba mnohopočetného myelómu
Slovenian	Arzenov trioksid	Zdravljenje multiplega mieloma
Spanish	Trióxido de arsénico	Tratamiento del mieloma múltiple
Swedish	Arseniktrioxid	Behandling av multipelt myelom

[1] At the time of transfer of sponsorship