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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Tamibarotene for the treatment of acute promyelocytic leukaemia

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Rev.1: sponsor's change of address	13 March 2013
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Disclaimer 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.	

Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in July 2013 on request of the Sponsor.

On 24 July 2009, orphan designation (EU/3/09/658) was granted by the European Commission to Eudax S.R.L., Italy, for tamibarotene for the treatment of acute promyelocytic leukaemia.

What is acute promyelocytic leukaemia?

Acute promyelocytic leukaemia (APL) is a rare form of leukaemia, a cancer of the white blood cells (cells that fight against infections). APL is caused by a 'chromosomal translocation' (when there is a rearrangement of parts of genes between two chromosomes). The translocation affects the way the white blood cells grow. The cells also lack the ability to use retinoic acid (vitamin A).

In patients with APL, large numbers of abnormal, immature white blood cells called 'blasts' quickly build up in the bone marrow (the spongy tissue inside the large bones) and are found in the blood. APL is a life-threatening disease because these immature cells take the place of the normal white blood cells, reducing the patient's ability to fight infections.

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

At the time of designation, APL affected approximately 0.3 in 10,000 people in the European Union (EU). This was equivalent to a total of around 15,000 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?

Treatment for APL is complex and depends on a number of factors including the extent of the disease, whether it has been treated before, and the patient's age, symptoms and general state of health. At the time of designation, the main treatment for APL was all-trans retinoic acid (ATRA) a medicine derived from vitamin A that helps the blasts to mature into normal white blood cells. This was used in combination with chemotherapy (medicines to kill cancer cells) in particular anthracyclines.

In some cases, bone marrow transplantation was used. This is a complex procedure where the bone marrow of the patient is destroyed and replaced with healthy bone marrow from a matched donor. In addition, arsenic trioxide (a medicine that causes death in APL cells) was used when patients had not responded to ATRA and chemotherapy, or when their disease had come back after these treatments.

The sponsor has provided sufficient information to show that tamibarotene might be of significant benefit for patients with APL because it might be more efficacious and cause fewer side effects than existing treatments. In addition, the medicine might be effective in patients who do not respond to ATRA. These assumptions will need to be confirmed at the time of marketing authorisation, in order to maintain the orphan status.

How is this medicine expected to work?

Tamibarotene is a 'synthetic retinoid' (a substance that is related to vitamin A). Tamibarotene is expected to work by stimulating the blasts to mature into normal white blood cells by attaching to a protein on the cells called the retinoic acid receptor. Although this mechanism of action is similar to that of ATRA, tamibarotene could also work in patients who do not respond to ATRA because it may be less likely to activate another protein called 'cellular retinoic acid binding protein'. This protein breaks vitamin A-derived substances down and stops them working.

What is the stage of development of this medicine?

The effects of tamibarotene have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials in patients with APL were ongoing.

At the time of submission, tamibarotene was authorised in Japan for the treatment of APL. Orphan designation of tamibarotene had been granted in the United States of America and Japan for APL.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 4 June 2009 recommending the granting of this designation.

*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 27), Norway, Iceland and Liechtenstein.
At the time of designation, this represented a population of 504,800,000 (Eurostat 2009).

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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:

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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	Tamibarotene	Treatment of acute promyelocytic leukaemia
Bulgarian	тамибаротен	Лечение на остра промиелоцитна левкемия
Czech	Tamibarotén	Léčba akutní promyelocytární leukemie
Danish	Tamibarotene	Behandling af akut promyelocytleukæmi
Dutch	Tamibaroteen	Behandeling van acute promyelocytaire leukemie
Estonian	Tamibaroteen	Ägeda promüelotsütaarse leukeemia ravi
Finnish	Tamibaroteeni	Akuutin promyelosyyttisen leukemian hoito
French	Tamibarotène	Traitement de la leucémie aiguë promyélocytaire
German	Tamibaroten	Behandlung der akuten Promyelozytenleukämie
Greek	Ταμιμπαροτένη	Θεραπεία της οξείας προμυελοκυτταρικής λευχαιμίας
Hungarian	Tamibarotene	Akut promyelocitás leukémia kezelése
Italian	Tamibarotene	Trattamento della leucemia promielocitica acuta
Latvian	Tamibarotēns	Akūta promielocitāra leikoze
Lithuanian	Tamibarotenas	Ūmios promielocitinės leukemijos gydymas
Maltese	Tamibarotene	Kura tal-lewkimja promjelocitika akuta
Polish	Tamibaroten	Leczenie ostrej białaczki promielocytowej
Portuguese	Tamibaroteno	Tratamento da Leucémia Promielocítica Aguda
Romanian	Tamibaroten	Tratamentul leucemiei promielocitare acute
Slovak	Tamibarotén	Liečba akútnej promyelocytárnej leukémie
Slovenian	Tamibaroten	Zdravljenje akutne promielocitne levkemije
Spanish	Tamibaroteno	Tratamiento de la leucemia promielocítica aguda
Swedish	Tamibaroten	Behandling av akut promyeloisk leukemi
Norwegian	Tamibaroten	Behandling av akutt akutt promyelocyttleukemi
Icelandic	Tamibaróten	Meðferð við bráðu formerglingahvítblæði

[1] At the time of designation