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EMA/COMP/607076/2015
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Dronabinol and cannabidiol for the treatment of glioma

On 9 October 2015, orphan designation (EU/3/15/1564) was granted by the European Commission to GW Research Ltd, United Kingdom, for dronabinol and cannabidiol for the treatment of glioma.

Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in November 2015 on request of the Sponsor.

What is glioma?

Glioma is a type of brain tumour that affects the 'glial' cells (the cells that surround and support the nerve cells). Patients with glioma can have severe symptoms, but the types of symptoms experienced depend on where the tumour develops in the brain.

Symptoms can include headaches, nausea (feeling sick), loss of appetite, vomiting, and changes in personality, mood, mental capacity and concentration. About one fifth of patients with glioma have seizures (fits) for months or years before the disease is diagnosed.

Glioma is a long-term debilitating and life-threatening disease because of the severe damage to the brain, and is associated with poor long-term survival.

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

At the time of designation, glioma affected approximately 2.6 in 10,000 people in the European Union (EU). This was equivalent to a total of around 133,000 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, several medicines were authorised for the treatment of glioma in the EU. Treatments included surgery, radiotherapy (treatment with radiation), and chemotherapy (medicines

*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 512,900,000 (Eurostat 2015).

30 Churchill Place ● Canary Wharf ● London E14 5EU ● United Kingdom
Telephone +44 (0)20 3660 6000 **Facsimile** +44 (0)20 3660 5555
Send a question via our website www.ema.europa.eu/contact

to treat cancer) to improve survival. Patients also received treatments for the symptoms of glioma, including corticosteroids to reduce pressure in the skull and medicines to prevent seizures.

The sponsor has provided sufficient information to show that dronabinol and cannabidiol might be of significant benefit for patients with glioma because studies in experimental models showed that the medicine might reduce the size of the tumour and improve the survival of patients with glioma when given with existing treatments. This assumption 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?

Dronabinol and cannabidiol are substances found in the cannabis plant and are thought to act in different and complementary ways on glioma.

Dronabinol is expected to work by blocking the action of a protein complex called mTORC1. This prevents the production of proteins needed for the glioma cells to grow and causes substances called sphingolipids to accumulate in the cell, causing the cell to die.

Cannabidiol is thought to decrease the production of other sets of proteins needed by the cancer to grow and invade other cells (called MMP-2 and MMP-9) as well as to develop new blood vessels to supply it with nutrients (called VEF-F). It may also increase the effect of other medicines used for treating glioma.

What is the stage of development of this medicine?

The effects of dronabinol and cannabidiol have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with dronabinol and cannabidiol in patients with glioma were ongoing.

The combination of dronabinol and cannabidiol was authorised as Sativex in a number of EU Member States for the treatment of multiple sclerosis.

At the time of submission, dronabinol and cannabidiol was not authorised anywhere in the EU for glioma or designated as an orphan medicinal product elsewhere for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 3 September 2015 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

For details of the current sponsor of the orphan designation please refer to the information on the main web page of this Public Summary of Opinion.

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	Dronabinol and cannabidiol	Treatment of glioma
Bulgarian	Дронабинол и канабидиол	Лечение на глиома
Croatian	Dronabinol i kanabidiol	Liječenje glioma
Czech	Drobanidol a kanabidiol	Léčba gliomů
Danish	Dronabinol og cannabidiol	Behandling af gliom
Dutch	Dronabinol en cannabidiol	Behandeling van glioma
Estonian	Dronabinool ja kannabidiool	Glioomi ravi
Finnish	Dronabinoli ja kannabidioli	Gliooman hoito
French	Dronabinol et cannabidiol	Traitement des gliomes
German	Dronabinol und Cannabidiol	Behandlung von Gliomen
Greek	Δροναβινόλη και καννναβιδιόλη	Θεραπεία του γλοιώματος
Hungarian	Dronabinol és kannabidiol	Glioma kezelése
Italian	Dronabinolo e cannabidiolo	Trattamento del glioma
Latvian	Dronabinols un kanabidiols	Gliomas ārstēšana
Lithuanian	Dronabinolisir kanabidiolis	Gliomos gydymas
Maltese	Dronabinol u cannabidiol	Kura tal-glioma
Polish	Dronabinol i kannabidiol	Leczenie glejaka
Portuguese	Dronabinol e Canabidiol	Tratamento do glioma
Romanian	Dronabinol şi canabidiol	Tratamentul gliomului
Slovak	Dronabinol a kanabidiol	Liečba gliómu
Slovenian	Dronabinol in kanabidiol	Zdravljenje glioma
Spanish	Dronabinol y cannabidiol	Tratamiento del glioma
Swedish	Dronabinol och cannabidiol	Behandling av gliom
Norwegian	Dronabinol og cannabidiol	Behandling av gliom
Icelandic	Drónabídól og kannabidíól	Meðferð á glióma

[1] At the time of designation