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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione for the treatment of progressive supranuclear palsy

First publication	16 November 2009
Rev.1: withdrawal from the Community Register	26 November 2012
Rev.2: administrative update	8 October 2013

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Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in November 2012 on request of the sponsor

On 28 October 2009, orphan designation (EU/3/09/679) was granted by the European Commission to Noscira, S.A., Spain, for 4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione for the treatment of progressive supranuclear palsy.

What is progressive supranuclear palsy?

Progressive supranuclear palsy (PSP), which is also known as Steele-Richardson-Olszewski syndrome, is a rare disease that involves the gradual deterioration of parts of the brain. Symptoms include loss of balance with unexplained falls, stiffness, difficulty moving the eyes, particularly up and down, personality changes and dementia (loss of intellectual function). The disease usually starts in people aged over 40 years and gradually gets worse over a number of years.

PSP is a debilitating and life-threatening disease that leads to a progressive inability to move and poor long-term survival.

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

At the time of designation, PSP affected less than 0.7 in 10,000 people in the European Union (EU). This was equivalent to a total of around 35,000 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 knowledge of the Committee for Orphan Medicinal Products (COMP).

What treatments are available?

At the time of designation, no satisfactory methods were authorised in the EU for the treatment of PSP. Because of their tendency to fall, patients were often offered walking aids, as well as special glasses to help them to look down. Physiotherapy was used to keep the joints flexible. Medicines developed to treat Parkinson's disease were used in some PSP patients, but their effect was usually temporary and low.

How is this medicine expected to work?

PSP is thought to be caused by proteins called tau sticking together and forming filaments. These filaments build up in brain cells, damaging different areas of the brain. 4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione is expected to work in PSP by blocking an enzyme called glycogen synthase kinase-3β (GSK-3). This enzyme is one of the main factors that make the tau protein become 'sticky'. By blocking GSK-3, this medicine is expected to reduce the amount of tau protein sticking together, reducing the damage to brain cells.

What is the stage of development of this medicine?

The effects of 4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials in healthy volunteers had finished and trials in patients with PSP were planned.

At the time of submission, 4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione was not authorised anywhere in the EU for PSP or designated as 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 2 September 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).

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	4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione	Treatment of progressive supranuclear palsy
Bulgarian	4-бензил-2-нафтален-1-ил-1,2,4-тиадиазолидин-3,5-дион	Лечение на прогресивна супрануклеарна парализа
Czech	4-benzyl-2-naftalen-1-yl-1,2,4-thiadiazolidin-3,5-dion	Léčba progresivní supranukleární paralýzy
Danish	4-benzyn-2-naftalen-1-yl-1,2,4-thiazolidion-3,5	Behandling af progressiv, supranuklear lammelse
Dutch	4-benzyl-2-naftaleen-1-yl-1,2,4-thiadiazolidine-3,5-dione	Behandeling van progressieve supranucleaire paralyse
Estonian	4-bensüül-2-naftaleen-1-üül-1,2,4-tiadiasolidiin-3,5-dioon	Progressiivse supranukleaarse halvatuse ravi
Finnish	4-bentsyyli-2-naftaleeni-1-yyli-1,2,4-tiadiatsolidiini-3,5-dioni	Progressiivisen supranukleaarisen halvauksen hoito
French	4-benzyl-2-naphtalène-1-yl-1,2,4-thiadiazolidine-3,5-dione	Traitement de la paralysie supranucléaire progressive
German	4-Benzyl-2-naphtalin-1-yl-1,2,4-thiadiazolidine-3,5-dion	Behandlung der progressiven supranukleären Lähmung
Greek	4-βενζυλο, 2-ναφθαλενο-1-υλο-1, 2, 4 θειαδιαζολιδινο-3,5-διόνη	Θεραπεία προϊούσας υπερπυρηνικής παράλυσης
Hungarian	4-benzil-2-naftalen-1-il-1,2,4-tiadiazolidin-3,5-dion	Progresszív supranuclearis bénulás kezelése
Italian	4-benzil-2-naftalen-1-il-1,2,4-tiadiazolidin-3,5-dione	Trattamento della paralisi sopranucleare progressiva
Latvian	4-benzil-2-naftalīn-1-il-1,2,4-tiadiazolidīn-3,5-dions	Progresējošās supranukleārās triekas ārstēšana
Lithuanian	4-benzil-2-naftalin-1-il-1,2,4-tiadiazolidin-3,5-dionas	Progresuojančio supranuklearinio paralyžiaus gydymas
Maltese	4-benzyl-2-naphtalen-1-yl-1,2,4-thiadiazolidine-3,5-dione	Kura ta' paraliżi supranukleari progressiva
Polish	4-benzylo-2-naftaleno-1-yl-1,2,4-tiadiazolidyno-3,5-dion	Leczenie postępującego porażenia nadjądrowego
Portuguese	4-benzilo-2-naftaleno-1-il-1,2,4-tiadiazolidina-3,5-diona	Tratamento da paralisia supranuclear progressiva
Romanian	4-benzil-2-naftalen-1-il-1,2,4-tiadiazolidină-3,5-dionă	Tratamentul paraliziei supra-nucleare progresive
Slovak	4-benzyl-2-naftalén-1-yl-1,2,4-tiadiazolidín-3,5-dión	Liečba progresívnej supranukleárnej paralýzy
Slovenian	4-benzil-2-naftalen-1-il-1,2,4-tiadiazolidin-3,5-dion	Zdravljenje progresivne supranuklearne paralize

[1] At the time of designation

Language	Active ingredient	Indication
Spanish	4-bencil-2-naftalen-1-il-1,2,4-tiadiazolidin-3,5-diona	Tratamiento de parálisis supranuclear progresiva
Swedish	4-bensyl-2-naftalin-1-yl-1,2,4-tiazolidin-3,5-dion	Behandling av progressiv supranukleär pares
Norwegian	4-benzyl-2-naftalen-1-yl-1,2,4-tiadiazolidin-3,5-dion	Behandling av progressiv supranukleær parese
Icelandic	4-benzýl-2-naftalen-1-ýl-1,2,4-tíadíasólídín-3,5-díón	Meðferð við ágengri ofankjarnalömun