13 December 2016
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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Human monoclonal antibody against activin A for the treatment of fibrodysplasia ossificans progressiva

On 18 November 2016, orphan designation (EU/3/16/1779) was granted by the European Commission to Regeneron Ireland, Ireland, for human monoclonal antibody against activin A (also known as REGN2477) for the treatment of fibrodysplasia ossificans progressiva.

What is fibrodysplasia ossificans progressiva?

Fibrodysplasia ossificans progressiva is a genetic condition which causes abnormal formation of bone in the muscles, tendons and ligaments. It is caused by a mutation (change) in the gene for 'ACVR1', a receptor involved in the formation of bone and cartilage. The mutation results in the receptor not working as it should, causing the formation of unwanted bone in muscles and joints throughout the body.

Patients have episodes of pain, inflammation and swelling ('flare-ups'), often triggered by minor injury to muscles or soft tissue. This is followed by abnormal bone formation with gradual restriction of movement and onset of deformity. Patients usually require a wheelchair by the time they reach their 20s.

Fibrodysplasia ossificans progressiva is a long-term debilitating and life-threatening disease because of loss of mobility and gradual impairment of breathing and heart function due to unwanted bone formation in the chest.

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

At the time of designation, fibrodysplasia ossificans progressiva affected less than 0.01 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 500 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).

[*]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 513,700,000 (Eurostat 2016).

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What treatments are available?

No satisfactory methods of treatment were authorised in the EU for fibrodysplasia ossificans progressiva at the time of designation. Patients were mainly managed by avoidance of injuries that could trigger a flare-up, and treatment of the symptoms including anti-inflammatory medicines for the pain and inflammation.

How is this medicine expected to work?

In patients with fibrodysplasia ossificans progressiva, the ACVR1 receptor does not work as it should and this allows a substance called activin A to interact with the receptor and trigger bone formation. This medicine is a monoclonal antibody (a type of protein) that has been designed to attach to activin A, which stops activin A from interacting with ACVR1. This is expected to stop or reduce unwanted bone formation and reduce symptoms of the condition.

What is the stage of development of this medicine?

The effects of the medicine have been evaluated in experimental models.

At the time of submission of the application for orphan designation, no clinical trials with the medicine in patients with fibrodysplasia ossificans progressiva had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for fibrodysplasia ossificans progressiva 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 6 October 2016 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

Sponsor's contact details:

Contact details of the current sponsor for this orphan designation can be found on EMA website, on the medicine's rare disease designations page.

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	Human monoclonal antibody against activin A	Treatment of fibrodysplasia ossificans progressiva
Bulgarian	Човешко моноклонално антитяло срещу активин А	Лечение на прогресивна осифицираща фибродисплазия
Croatian	Ljudsko monoklonsko protutijelo protiv aktivina A	Liječenje progresivne osificirajuće fibrodisplazije
Czech	Lidská monoklonální protilátka proti aktivinuA	Léčba progresivní osifikující fibrodysplazie
Danish	Humant monoklonalt antistof mod aktivin A	Behandling af fibrodysplasia ossificans progressiva
Dutch	Humane monoklonale antilichamen tegen activine A	Behandeling van fibrodysplasia ossificans progressiva
Estonian	Inimese monoklonaalne antikeha aktiviini A vastu	Progresseeruva ossifitseeriva fibrodüsplaasia ravi
Finnish	Ihmisperäinen monoklonaalinen vasta-aine aktiviini A:lle	Fibrodysplasia ossificans progressivan hoito
French	Anticorps monoclonal humain dirigé contre l'activine A	Traitement de la fibrodysplasie ossifiante progressive
German	Humaner monoklonaler Anti Activin A-Antikörper	Behandlung der Fibrodysplasia ossificans progressiva
Greek	Μονοκλωνικό αντίσωμα κατά του ακτιβίνης α	Θεραπεία της προοδευτικής οστεοποιού ινοδυσπλασίας
Hungarian	Aktivin A elleni humán monoklonális antitest	Fibrodysplasia ossificans progressiva kezelése
Italian	Anticorpo monoclonale umano anti-attivina A	Trattamento della fibrodisplasia ossificante progressiva
Latvian	Cilvēka monoklonālā antiviela pret aktivīnu A	Progresējošās osificējošās fibrodisplāzijas ārstēšana
Lithuanian	Žmogaus monokloninis antikūnas prieš aktiviną A	Progresuojančios kaulėjančios fibrodisplazijos gydymas
Maltese	Antikorp monoklonali uman kontra aktivin A	Kura tal-fibrodisplasija ossificans progressiva
Polish	Ludzkie przeciwciało monoklonalne przeciwko aktywinie A	Leczenie postępującego kostniejącego zapalenia mięśni
Portuguese	Anticorpo monoclonal humano anti-ativina A	Tratamento da fibrodisplasia ossificante progressiva
Romanian	Anticorp monoclonal uman anti-activina A	Tratamentul fibrodisplaziei osificante progresive
Slovak	Monoklonálne protilátky proti aktivínu A	Liečba progresívnej osifikujúcej fibrodysplázie

[1] At the time of designation

Language	Active ingredient	Indication
Slovenian	Humana monoklonska protitelesa proti aktivinu A	Zdravljenje osifikantne napredujoče fibrodisplazije
Spanish	Anticuerpo monoclonal humano anti-activina A	Tratamiento de la fibrodisplasia osificante progresiva
Swedish	Human monoklonal aktivin A–antikropp	Behandling av Fibrodysplasia Ossificans Progressiva
Norwegian	Humant monokclonalt antistoff mot aktivin A–antikropp	Behandling av fibrodysplasia ossificans progressiva
Icelandic	Manna einstofna aktivín A mótefni	Meðferð við ágengum rangvexti beingerðartrefja