European Medicines Agency
Pre-authorisation Evaluation of Medicines for Human Use

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Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in November 2006 on request of the sponsor.

Committee for Orphan Medicinal Products

Public summary of positive opinion for orphan designation of mecasermin rinfabate for the treatment of patients with growth hormone (GH) gene deletion who have developed neutralizing antibodies to GH

On 20 June 2006, orphan designation (EU/3/06/377) was granted by the European Commission to Insmed Europe Ltd., United Kingdom, for mecasermin rinfabate for the treatment of patients with growth hormone (GH) gene deletion who have developed neutralizing antibodies to GH.

What is the condition?
Growth hormone (GH) is a natural hormone secreted (produced) in the body which, together with insulin-like growth factor-1 (IGF-1), plays a central role in stimulating growth of the human body. Deficiency in GH results in short stature (height) and can be caused by a deletion in the GH gene. These patients are usually treated with recombinant (artificially synthesised) human GH, however, some patients develop antibodies to GH during treatment, resulting in loss of growth response. This is a serious chronically debilitating condition.

What is the estimated number of patients affected by the condition?
At the time of designation the number of patients with growth hormone (GH) gene deletion who have developed neutralizing antibodies to GH was considered to be less than 0.01 in 10,000 people in the European Union (EU)[*]. This is equivalent to a total of less than 460 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?
There were no approved treatments available for patients with GH gene deletion who have developed neutralizing antibodies to GH at the time the application was made.

How is this medicine expected to work?
Mecasermin rinfabate is recombinant (artificially synthesised) human insulin-like growth factor-1 together with a recombinant form of its main transport protein, human insulin-like growth factor-binding protein-3. When a patient with GH deficiency develops neutralising antibodies, treatment with growth hormone is no longer possible and the patients are in need of an alternative treatment intervention. Mecasermin rinfabate could produce similar effects to GH on body growth.

[*]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. This represents a population of 459,700,000 (Eurostat 2004).

7 Westferry Circus, Canary Wharf, London, E14 4HB, UK
Tel. (44-20) 74 18 84 00 Fax (44-20) 75 23 70 40
E-mail: orphandrugs@emea.europa.eu http://www.emea.europa.eu

What is the stage of development of this medicine?
The effects of mecasermin rinfabate were evaluated in experimental models. At the time of submission of the application for orphan designation, clinical trials including some patients with GH gene deletion who have developed neutralizing antibodies to GH were ongoing.

Mecasermin rinfabate was authorised as an orphan medicinal product in the United States for 'the long-term treatment of growth failure in children with severe primary IGF-1 deficiency (Primary IGFD) or with growth hormone (GH) gene deletion who have developed neutralizing antibodies to growth hormone', 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 16 May 2006 a positive opinion recommending the grant of the above-mentioned designation.

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 Community) 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:
Insmed Europe Ltd.
Compass House
Vision Park
Chivers Way
Histon
Cambridge CB4 9AD,
United Kingdom
Telephone: +44 01 223 257 743
Telefax: +44 01 223 257 800
E-mail: information@insmed.com

Patients' associations contact points:

Child Growth Foundation
2 Mayfield Avenue
Chiswick
London W4 1PW
United Kingdom
Telephone: +44 20 89 95 02 57 / +44 20 89 94 76 25
Telefax : +44 20 89 95 90 75
E-mail: cgflondon@aol.com

APPT : Association des Personnes de Petite Taille
35 Avenue d'Alfortville
94600 Choisy-le-Roi
France
Telephone: +33 1 48 52 33 94
Telefax: +33 1 40 57 83 43
E-mail: contact@appt.asso.fr

BKMF : Bundesverband Kleinwüchsige Menschen und ihre Familien e.V.
Hillmannplatz 6
28195 Bremen
Germany
Telephone: + 49 421 50 21 22
Telefax: +49 421 50 57 52
E-mail: info@bkmf.de

Translations of the active ingredient and indication in all official EU languages, Norwegian and Icelandic

Language	Active Ingredient	Indication
English	Mecasermin rinfabate	Treatment of patients with growth hormone (GH) gene deletion who have developed neutralizing antibodies to GH
Czech	Mecasermin rinfabát	Léčba pacientů s delecí genu růstového hormonu (GH, *growth hormone*), kteří vyvinuly neutralizační protilátky proti GH
Danish	Mecasermin rinfabat	Behandling af patienter med gendeletion af væksthormon (GH, *growth hormone*), som har udviklet neutraliserende antistoffer mod GH
Dutch	Mecasermin-rinfabaat	Behandeling van patiënten met gedeleteerd gen voor groeihormoon (GH) die neutraliserende antilichamen tegen GH hebben ontwikkeld
Estonian	Mekasermiinrinfabaat	Kasvuhormooni geeni deletsiooniga patsientide, kellel on tekkinud kasvuhormooni-vastased neutraliseerivad antikehad, ravimine
Finnish	Mekasermiinirinfabaatti	Sellaisten potilaiden hoitoon, joilla on kasvuhormonin geenideleetio ja joille on kehittynyt kasvuhormonin neutralointivasta-aineita
French	Mécasermine rinfabate	Traitement des patients présentant une délétion au niveau du gène de l'hormone de croissance (GH) qui ont développé des anticorps neutralisants dirigés contre la GH
German	Mecasermin-Rinfabat	Behandlung von Patienten mit Deletion im Wachstumshormongen, die neutralisierende Antikörper gegen Wachstumshormone gebildet haben
Greek	Μηκασερμίνη rinfabate	Θεραπεία ασθενών με γονιδιακή απώλεια της αυξητικής ορμόνης (GH, *growth hormone*) οι οποίοι έχουν αναπτύξει εξουδετεροποιητικά αντισώματα στην GH
Hungarian	Mecasermin rinfabát	Növekedési hormon (GH) gén deletio következtében kialakult neutralizáló antitesttel rendelkező betegek kezelése
Italian	Mecasermina rinfabato	Trattamento di pazienti con delezione del gene che codifica per l'ormone della crescita (GH, *growth hormone*) che abbiano sviluppato anticorpi neutralizzanti contro il GH
Latvian	Mekaserminrinfabāts	Tādu slimnieku ārstēšana, kam ir augšanas hormona (AH) gēna delēcija un kuriem ir izveidojušās neitralizējošas antivielas pret AH
Lithuanian	Mekasermino rinfabatas	Pacientų su augimo hormono (AH) geno delecija, lemiančia neutralizuojančių antikūnų prieš augimo hormoną (AG) gamybą, gydymas
Polish	Rinfabat mekaserminy	Leczenie pacjentów z delecją genu hormonu wzrostu (GH, *growth hormone*), u których pojawiły się przeciwciała przeciw GH
Portuguese	Mecasermina rinfabato	Tratamento de doentes com ausência do gene da hormona do crescimento (GH, *growth hormone*) que tenham desenvolvido anticorpos neutralizantes contra a GH
Slovak	Mekasermíniumrinfabát	Liečba pacientov s deléciou génu rastového hormónu (*growth hormone*, GH), u ktorých sa vyvinuli

		neutralizačné protilátky proti GH
Slovenian	Mekaserminrinfabat	Zdravljenje bolnikov z delecijo gena rastnega hormona (RH), pri katerih so se razvila nevtralizirajoča protitelesa proti RH
Spanish	Mecasermina rinfabato	Tratamiento de pacientes con deleción del gen de la hormona de crecimiento (GH) que hayan desarrollado anticuerpos neutralizantes frente a la GH
Swedish	Mekasermin rinfabate	Behandling av patienter med deleterad tillväxthormongen som har utvecklat neutraliserande antikroppar mot tillväxthormon
Norwegian	Mekaserminrinfabate	Behandling av pasienter med delesjon av veksthormongen som har utviklet nøytraliserende antistoffer mot veksthormon
Icelandic	Mecasermín rínfabat	Til meðferðar á sjúklingum með vaxtarhormón genabrottfall sem hafa þróað með sér hlutleysandi mótefni gegn vaxtarhormóni