



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Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in November 2006 on request of the sponsor.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 primary insulin-like growth factor-1 deficiency due to molecular or genetic defects

On 20 June 2006, orphan designation (EU/3/06/378) was granted by the European Commission to Insmed Europe Ltd., United Kingdom, for mecasermin rinfabate for the treatment of primary insulin-like growth factor-1 deficiency due to molecular or genetic defects.

What is primary insulin-like growth factor-1 deficiency due to molecular or genetic defects?

Insulin-like growth factor-1 (IGF-1) is a naturally occurring hormone secreted (produced) in the body which, together with growth hormone (GH), plays a central role in stimulating growth of the human body. Deficiency of IGF-1 results in short stature (height) and can be caused by an underlying molecular or genetic defect. There may be molecular defects in the specific structures on the surface of cells (receptors) that GH binds to, resulting in resistance to GH, or signalling defects in the cascade of molecular reactions which induce (stimulate) the biological activity of growth, or defects in expression of the gene that codes for production of IGF-1. In these cases the primary deficiency is circulating IGF-1, with GH levels being normal or elevated. The reason why these molecular or genetic defects occur is unknown.

Primary insulin-like growth factor-1 deficiency due to molecular or genetic defects is a serious and chronically debilitating condition.

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

At the time of designation primary insulin-like growth factor-1 deficiency due to molecular or genetic defects affected less than 2 in 10,000 people in the European Union (EU)*. This is based on the information provided by the sponsor and knowledge of the Committee for Orphan Medicinal Products (COMP). This is below the threshold for orphan designation which is 5 in 10,000. This is equivalent to a total of around 92,000 people.

What treatments are available?

There were no approved treatments for primary insulin-like growth factor-1 deficiency at the time of designation.

* Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed based on data from the European Union (EU 25), Norway, Iceland and Liechtenstein. This represents a population of 459,700,000 (Eurostat 2004).

How is this medicine expected to work?

Mecasermin is a recombinant (artificially synthesised) human insulin-like growth factor-1. Once administered in patients with primary IGF-1 deficiency, mecasermin is expected to replace the natural IGF-1 in the body, thus compensating for its loss. Thus, mecasermin is expected to stimulate the growth of the body in the same way as IGF-1.

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 in patients with primary insulin-like growth factor-1 deficiency 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;
- and either the rarity of the condition (affecting not more than five in 10,000 people in the Community) or the 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 the quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

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

Language	Active Ingredient	Indication
English	Mecasermin rinfabate	Treatment of primary insulin-like growth factor-1 deficiency due to molecular or genetic defects
Czech	Mecasermin rinfabát	Léčba primárního deficitu inzulinu podobného růstového faktoru 1 (primární IGFD) v způsobeného molekulárním nebo genetickým defektem
Danish	Mecasermin rinfabat	Behandling af primær insulinlignende vækstfaktor 1-mangel på grund af molekylære eller genetiske defekter
Dutch	Mecasermin-rinfabaat	Behandeling van primaire insuline-achtige groeifactor-1 deficiëntie te wijten aan moleculaire of genetische defecten
Estonian	Mekaserminrinfabaat	Molekulaarse test või geneetilisest defektidest tingitud primaarse insuliinisarnase kasvufaktori 1 puudulikkuse ravi
Finnish	Mekaserminirinfabaatti	Molekyyli- tai geenivirheestä johtuvan primaarin insuliininkaltaisen kasvutekijä 1:n puutoksen hoito
French	Mécasermine rinfabate	Traitement de la carence primaire en facteur de croissance 1 analogue de l'insuline d'origine moléculaire ou génétique
German	Mecasermin-Rinfabat	Behandlung von primärem Mangel an insulin-ähnlichem Wachstumsfaktor 1 (primärer IGF-Mangel) verursacht durch molekulare oder genetische Defekte
Greek	Μηκασερμίνη rinfabate	Θεραπευτική αγωγή της καθυστέρησης ανάπτυξης σε παιδιά με πρωτογενή ανεπάρκεια ινσουλινομόρφου αυξητικού παράγοντα-1 οφειλόμενη σε μοριακά ή γενετικά ελαττώματα
Hungarian	Mecasermin rinfabát	Molekuláris vagy genetikai elváltozás okozta primer inzulin-szerű növekedési faktor-1 hiány kezelése
Italian	Mecasermina rinfabato	Trattamento dell' insufficienza primaria del fattore di crescita 1 tipo insulina d'origine molecolare o genetica
Latvian	Mekaserminrinfabāts	Molekulāru vai ģenētisku defektu izraisītas primāras insulīnam līdzīgā augšanas faktora-1 nepietiekamības ārstēšana
Lithuanian	Mekasermino rinfabatas	Pirminio į insuliną panašaus augimo faktoriaus 1 stokos gydymas dėl molekulinio ar genetinio defekto
Polish	Rinfabat mekaserminy	Leczenie pierwotnego niedoboru insulinopodobnego czynnika-1 wzrostu, spowodowanego uszkodzeniem genetycznym lub częściowym
Portuguese	Mecasermina rinfabato	Tratamento da deficiência primária em factor de crescimento de tipo insulínico 1 causada por factores genéticos ou moleculares
Slovak	Mekaserminiumrinfabát	Liečba primárneho nedostatku inzulinu podobného rastového faktora 1 spôsobeného molekulárnou alebo genetickou poruchou
Slovenian	Mekaserminrinfabat	Zdravljenje pomanjkanja insulina podobnega rastnega faktorja-1 zaradi molekularnega ali genetskega defekta
Spanish	Mecasermina rinfabato	Tratamiento de la deficiencia primaria de factor de

		crecimiento insulínico de tipo 1 debido a defectos moleculares o genéticos
Swedish	Mekasermin rinfabate	Behandling av primär insulinliknande tillväxtfaktor-1 brist beroende på molekyllära eller genetiska defekt
Norwegian	Mekaserminrinfabate	Behandling av primær insulinlignende vekstfaktor-1 mangel pga molekyllær eller genetisk defekt
Icelandic	Mecasermín rínfabat	Meðferð við frumkomnum skorti á insúlín-líkum vaxtarþætti-1 sem stafar af mólekúlar- eða erfðagalla