



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH₂ for the treatment of acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma)

On 16 June 2005, orphan designation (EU/3/05/292) was granted by the European Commission to Laboratoires Auris SAS, France, for H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH₂ (AM-111) for the treatment of acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma).

The sponsorship was transferred to Auris Medical Limited, Ireland, in January 2009.

What is acute sensorineural hearing loss?

Hearing loss can begin suddenly (acutely) or slowly and persisting over a long period of time (chronic). Acute sensorineural hearing loss is a sudden hearing loss resulting from damage to cells in the cochlea, the organ of hearing, which is located behind the eardrum. Although it is not always possible to identify the cause of this type of hearing loss, known causes of injury are exposure to noise (acoustic trauma) or a direct damage to the hearing system (for instance secondary to surgery). Some patients recover fully while others will remain with a hearing loss that can vary in intensity. This may result in impaired interpersonal communication, learning difficulties, impaired ability to work, irritability, etc. and is therefore considered as seriously debilitating.

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

At the time of designation, acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma) affected approximately 3.7 in 10,000 people in the European Union (EU)*. This is equivalent to a total of around 187,331 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 27), Norway, Iceland and Liechtenstein. This represents a population of 506,300,000 (Eurostat 2011).



What treatments are available?

Several products mostly aimed to improve the blood circulation and oxygenation of the inner ear were authorised for the condition in some countries in the Community at the time of submission of the application for orphan drug designation.

The sponsor has provided sufficient information to show that AM-111 might be of significant benefit for patients with acute sensorineural hearing loss because it might improve the long-term outcome of the patients. 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?

The damage caused to the inner ear results in the death of those cells responsible for the transmission of sounds. Different biochemical mechanisms lead to the death of those cells. Blocking (inhibiting) these mechanisms would prevent further cell death and thus the size of the damage could be limited. AM-111 is a peptide that inhibits (blocks) one of these biochemical mechanisms. It is therefore expected to interrupt the destruction of the cells and thus might limit the intensity of the hearing loss.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, no clinical trials in patients with acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma) had been started.

At the time of submission, AM-111 was not authorised anywhere worldwide for acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma) 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 12 May 2005 recommending the granting of this 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 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 languages¹, Norwegian and Icelandic

Language	Active ingredient	Indication
English	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Treatment of acute sensorineural hearing loss (acute acoustic trauma, sudden deafness and surgery induced acoustic trauma)
Czech	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Léčba akutní sensorineurální ztráty sluchu (akutní akustické trauma, náhlá hluchota a chirurgicky vyvolané akustické trauma)
Danish	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Behandling af akut sensorineurale høretab (akut akustisk traume, pludselig døvhed og akustisk traume induceret af kirurgi)
Dutch	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Behandeling van acuut perceptief gehoorverlies (acuut acoustisch trauma, plotse doofheid en chirurgisch geïnduceerd acoustisch trauma)
Estonian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Akuutse sensorineuraalse kuulmiskaotuse ravi (äge akustiline trauma, äkki tekkiv kurtumus ja kirurgias tingitud akustiline trauma)
Finnish	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Akuutin sensorineuraalisen kuulonaleneman hoito (akuutti akustinen trauma, äkillinen kuurous ja kirurgisen toimenpiteen aiheuttama akustinen trauma)
French	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Traitement de la perte auditive neurosensorielle aiguë (trauma sonore aigu, surdités d'apparition brutale et trauma sonore provoqué par la chirurgie)

¹ At the time of designation

Language	Active ingredient	Indication
German	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Behandlung des akuten sensorineuralen Hörverlustes (akutes akustisches Trauma, Hörsturz, operationsbedingter Hörverlust)
Greek	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Θεραπευτική αγωγή οξείας νευροαισθητήριας απώλειας ακοής (οξύ ακουστικό τραύμα , ξαφνική κώφωση και ακουστικό τραύμα προερχόμενο από εγχείριση)
Hungarian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Akut idegi eredetű hallásvesztés kezelése (akut acusticus trauma, hirtelen megsüketülés, műtét által kiváltott acusticus trauma)
Italian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Trattamento della perdita uditiva neurosensoriale acuta (trauma acustico acuto, sordita' improvvisa, trauma acustico derivante da intervento chirurgico)
Latvian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Akūta sensorineirāla dzirdes zuduma (akūta akustiska trauma, pēkšņs kurlums, ķirurģiski izraisīta akustiska trauma) ārstēšana
Lithuanian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Ūmaus neurosensorinio prikurtimo gydymas (ūmi akustinė trauma, staigi klausos netektis ir chirurginio gydymo indukuota akustinė trauma)
Polish	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Leczenie ostrej czuciowo-nerwowej utraty słuchu (ostry uraz akustyczny, nagła głuchota, uraz akustyczny spowodowany zabiegiem operacyjnym)
Portuguese	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH ₂	Tratamento da perda auditiva neurosensorial aguda (trauma acústico agudo, surdez súbita e trauma acústico induzido por cirurgia)

Language	Active ingredient	Indication
Slovak	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Liečba akútnej senzorieurálnej straty sluchu (akútna akustická trauma, náhla hluchota a chirurgicky vyvolaná akustická trauma)
Slovenian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Zdravljenje akutne senzorične okvare sluha (akutna akustična travma, nenedana gluhost, perioperativna okvara sluha)
Spanish	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Tratamiento de la pérdida auditiva aguda neurosensorial (trauma acústico agudo, sordera súbita, trauma acústico inducido por cirugía)
Swedish	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Behandling av akut sensorineural hörselnedsättning (akut akustisk trauma, plötslig dövhet och kirurgi inducerad akustisk trauma)
Norwegian	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Behandling av akutt sensorinevralt hørselstap (akutt akustisk traume, plutselig hørselstap, kirurgi-indusert akustisk traume)
Icelandic	H-D-Asp-D-Gln-D-Ser-D-Arg-D-Pro-D-Val-D-Gln-D-Pro-D-Phe-D-Leu-D-Asn-D-Leu-D-Thr-D-Thr-D-Pro-D-Arg-D-Lys-D-Pro-D-Arg-D-Pro-D-Pro-D-Arg-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Lys-D-Lys-D-Arg-D-Gly-NH2	Meðferð við bráðum sensorineural heyrnarskaða (bráður heyrnaráverki, brátt heyrnarleysi og áverki á innra eyra við skurðaðgerð)