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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant human beta-glucuronidase for the treatment of mucopolysaccharidosis type VII (Sly syndrome)

First publication	4 April 2012
Rev.1: transfer of sponsorship	13 January 2014
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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.

On 21 March 2012, orphan designation (EU/3/12/973) was granted by the European Commission to NDA Regulatory Science Ltd, United Kingdom, for recombinant human beta-glucuronidase for the treatment of mucopolysaccharidosis type VII (Sly syndrome).

The sponsorship was transferred to NDA Group AB, Sweden, in December 2013 and subsequently to Ultragenyx UK Limited, United Kingdom, in May 2015.

What is mucopolysaccharidosis type VII?

Mucopolysaccharidosis type VII (also known as Sly syndrome) is an inherited disease caused by a lack of the enzyme beta-glucuronidase. This enzyme is needed to break down substances in the body called glycosaminoglycans (GAGs). If the enzyme is not present, GAGs cannot be broken down and they build up in the cells and damage them. This causes a wide range of problems such as short stature, skeletal abnormalities, joint stiffness, enlarged spleen and liver, lung infections, heart problems and hernias. Patients usually die within the first year of life, although some survive into their teenage years.

Mucopolysaccharidosis type VII is a life-threatening disease with many patients dying in early childhood. It also debilitating due to the physical and skeletal abnormalities that occur.

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

At the time of designation, mucopolysaccharidosis type VII affected approximately 0.001 in 10,000 people in the European Union (EU). This was equivalent to a total of around 50 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).

What treatments are available?

At the time of designation, no satisfactory methods were authorised in the EU for the treatment of mucopolysaccharidosis type VII. Bone marrow transplantation was sometimes used to treat the condition.

How is this medicine expected to work?

Recombinant human beta-glucuronidase is an enzyme replacement therapy that is expected to work by replacing the missing beta-glucuronidase enzyme in patients with mucopolysaccharidosis type VII. The medicine is produced by a method known as 'recombinant DNA technology', which involves inserting a gene into a cell, enabling the cell to make the enzyme.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, the evaluation of the effects of recombinant human beta-glucuronidase in experimental models was ongoing.

At the time of submission, no clinical trials with recombinant human beta-glucuronidase in patients with mucopolysaccharidosis type VII had been started.

At the time of submission, recombinant human beta-glucuronidase was not authorised anywhere in the EU for mucopolysaccharidosis type VII 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 11 January 2012 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.

[*]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 512,200,000 (Eurostat 2013).

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 substance	Indication
English	Recombinant human beta-glucuronidase	Treatment of mucopolysaccharidosis type VII (Sly syndrome)
Bulgarian	Рекомбинантна човешка бета-глюкуронидаза	Лечение на мукополизахаридоза тип VII (синдром на Слай)
Croatian	Rekombinantna ljudska beta-glukoronidaza	Liječenje mukopolisharidoze tipa VII (Sly sindrom)
Czech	Rekombinantní lidská beta-glukuronidáza	Léčba mukopolysacharidózy VII (Slyův syndrom)
Danish	Rekombinant human beta-glukuronidase	Behandling af mukopolysakkaridose VII (Slys syndrom)
Dutch	Recombinant humaan bètaglucuronidase	Behandeling van mucopolysaccharidosis type VII (Sly syndroom)
Estonian	Rekombinantne inimese beeta-glükuronidaas	VII tüüpi mukopolüsahharidoosi (Sly sündroomi) ravi
Finnish	Rekombinantti ihmisen beeta-glukuronidaasi	Tyypin VII mukopolysakkaridoosin (Slyn oireyhtymän) hoito
French	Bêta-glucuronidase humaine recombinante	Traitement de la mucopolysaccharidose de type VII (maladie de Sly)
German	Rekombinant hergestellte, humane beta-Glucuronidase	Behandlung von Mukopolysaccharidose Typ VII (Sly-Syndrom)
Greek	Ανασυνδυασμένη ανθρώπινη β-γλυκουρονιδάση	Θεραπεία βλεννοπολυσακχαρίδωσης τύπου VII (σύνδρομο Sly)
Hungarian	Rekombináns humán béta-glukuronidáz	Mucopolisacharidosis VII (Sly-szindróma) kezelése
Italian	Beta-glucuronidasi umana ricombinante	Trattamento della mucopolisaccaridosi VII (sindrome di Sly)
Latvian	Rekombinantā cilvēka beta-glukuronidāze	Mukopolisaharidozes VII tipa (Sly sindroma) ārstēšana
Lithuanian	Rekombinantinė žmogaus beta gliukuronidazė	Mukopolisacharidozės VII tipo (*Sly* sindromo) gydymas
Maltese	Beta-glucuronidase rikombinanti tal-bnedmin	Kura ta' mukopolisakkaridoži VII (Sindromu ta' Sly)
Polish	Ludzka rekombinowana beta-glukuronidaza	Leczenie mukopolisacharydozy typu VII (choroba Sly)
Portuguese	Beta-glucuronidase humana recombinante	Tratamento da mucopolisacaridose VII (síndrome de Sly)
Romanian	Beta-glucuronidază umană recombinantă	Tratamentul mucopolizaharidozei de tip VII (sindromul Sly)
Slovak	Rekombinantná ľudská beta-glukuronidáza	Liečba mukopolysacharidózy VII. typu (Slyov syndróm)

[1] At the time of transfer of sponorship

Language	Active substance	Indication
Slovenian	Rekombinantna humana beta-glukuronidaza	Zdravljenje mukopolisaharidoze tipa VII (Slyjev sindrom)
Spanish	Beta-glucuronidasa humana recombinante	Tratamiento de la mucopolisacaridosis tipo VII (Síndrome de Sly)
Swedish	Rekombinant humant beta-glukuronidas	Behandling av mukopolysackaridos VII (Slys syndrom)
Norwegian	Rekombinant human beta-glukuronidase	Behandling av mukopolysakkaridose type VII (Sly syndrom)
Icelandic	Raðbrigða manna beta-glúkúronídasi	Meðferð við slímfjölsykrukvilla VII (Sly-heilkenni)