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EMA/COMP/360624/2014
Committee for Orphan Medicinal Products

# Public summary of opinion on orphan designation

## Carboxy pyrrolidine hexanoyl pyrrolidine carboxylate for the treatment of AL amyloidosis



On 29 July 2014, orphan designation (EU/3/14/1292) was granted by the European Commission to GlaxoSmithKline Trading Services Limited, Ireland, for carboxy pyrrolidine hexanoyl pyrrolidine carboxylate for the treatment of AL amyloidosis.

### What is AL amyloidosis?

AL amyloidosis belongs to a group of diseases called systemic amyloidosis in which deposits of proteins (called amyloids) accumulate and cause damage in tissues and organs such as the kidneys, liver, gut, heart and nerves.

In AL amyloidosis, the deposits come from proteins (called immunoglobulin light chains) produced in excess by malfunctioning white blood cells in the bone marrow. These deposits also contain serum amyloid P (SAP), a protein normally found in blood.

Symptoms of the condition vary widely depending on which organs are affected by the deposits and how much deposits have accumulated in them.

AL amyloidosis is a life-threatening and long-term debilitating condition because of damage to organs, particularly the heart and kidneys.

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

At the time of designation, AL amyloidosis affected approximately 1.1 in 10,000 people in the European Union (EU). This was equivalent to a total of around 56,000 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 511,100,000 (Eurostat 2014).

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## What treatments are available?

At the time of designation, no medicines were authorised in the EU for the treatment of AL amyloidosis. Patients often received treatment with medicines (chemotherapy) originally designed to treat cancers of white blood cells, in order to target the malfunctioning white blood cells. Stem-cell transplantation (a complex procedure where the patient receives stem cells from a matched donor to help restore the bone marrow) was used in a small group of newly diagnosed patients.

## How is this medicine expected to work?

Carboxy pyrrolidine hexanoyl pyrrolidine carboxylate (CPHPC) is expected to work by attaching to and removing the SAP protein that normally circulates in the blood.

CPHPC is to be given before treatment with another medicine, an antibody that attaches to the remaining SAP found in the amyloid deposits. Because CPHPC removes SAP from the blood, the antibody can only attach to SAP in the amyloid deposits. This is expected to stimulate the immune system to remove the unwanted material and help reduce the amyloid deposits that cause damage to the organs.

## 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, clinical trials with CPHPC in patients with AL amyloidosis were ongoing.

At the time of submission, CPHPC was not authorised anywhere in the EU for AL amyloidosis 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 12 June 2014 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:

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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 ingredient | Indication |
|---|---|---|
| English | Carboxy pyrrolidine hexanoyl pyrrolidine carboxylate | Treatment of AL amyloidosis |
| Bulgarian | Карбоксипиролидин-хексаноил-пиролидин карбоксилат | Лечение на лековерижна (AL) амилоидоза |
| Croatian | Karboksipirolidinheksanoilpirolidinkarboksilat | Liječenje AL amiloidoze |
| Czech | Karboxy-pyrrolidin-hexanoyl-pyrrolidin-karboxylát | Léčba AL amyloidózy |
| Danish | Carboxypyrrolidin-hexanoylpyrrolidin-carboxylat | Behandling af AL (amyloid let-kæde) amyloidose |
| Dutch | Carboxy pyrrolidine hexanoyl pyrrolidine carboxylaat | Behandeling van AL amyloïdose |
| Estonian | Karboksüpürrolidiinheksanoüülpürrolidiinkarboksülaat | AL-amüloidoosi ravi |
| Finnish | Karboksipyrrolidiiniheksanoyylipyrrolidiinikarboksylaatti | AL-amyloidoosin hoito |
| French | Carboxylate de carboxy pyrrolidine hexanoyl pyrrolidine | Traitement de l'amyloïdose de type AL |
| German | Carboxypyrrolidin-hexanoylpyrrolidincarboxylat | Behandlung der AL Amyloidose |
| Greek | Καρβοξυ πυρρολιδινη εξανοϋλ πυρρολιδίνη καρβοξυλική | Θεραπεία της AL-αμυλοειδωσης |
| Hungarian | Karboxi-pirrolidin hexanoil-pirrolidin-karboxilát | Amiotrófiás laterális amiloidózis kezelése |
| Italian | Carbossi-pirrolidin-esanoil-pirrolidina-carbossilato | Trattamento dell'amiloidosi di tipo AL |
| Latvian | Karboksipirolidīna heksanoilpirolidīna karboksilāts | Vieglo ķēžu (AL) amiloidozes ārstēšana |
| Lithuanian | Karboksipirolidino heksanoilpirolidino karboksilatas | AL amiloidozės gydymas |
| Maltese | Carboxy pyrrolidine hexanoyl pyrrolidine carboxylate | Kura tal-amilojdosi tat-tip AL |
| Polish | Karboksy-pirolidyno-heksanoilo-pirolidyno karboksylan | Leczenie układowej amyloidozy łańcuchów lekkich (AL) |
| Portuguese | Carboxilato de carboxipirrolidina hexanoilo pirrolidina | Tratamento da Amilóidose primária |
| Romanian | Carboxi pirolidin hexanoil pirolidin carboxilat | Tratamentul amiloidozei de tip AL |
| Slovak | Kyselina karboxypyrolidínhexanoylpyrolidín karboxylová | Liečba AL amyloidózy |
| Slovenian | Karboksipirolidin-heksanoilpirolidinkarboksilat | Zdravljenje AL amiloidoze |
| Spanish | Carboxilato de carboxi pirrolidina hexanoil pirrolidina | Tratamiento del AL amiloidosis |

[1] At the time of designation

| Language | Active ingredient | Indication |
|---|---|---|
| Swedish | Karboxypyrrolidin-hexanoylpyrrolidin-karboxylat | Behandling av AL amyloidos |
| Norwegian | Karboksypyrrolidin-heksanoylpyrrolidin karboksylat | Behandling av AL amyloidose |
| Icelandic | Karboxýpýrrólidín-hexanóýlpýrrólidín karboxýlat | Meðferð við AL mýlildi |