14 November 2012
EMA/COMP/613087/2012
Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant human lecithin cholesterol acyltransferase for the treatment of lecithin cholesterol acyltransferase deficiency

On 10 October 2012, orphan designation (EU/3/12/1051) was granted by the European Commission to Alphacore Pharma Limited, United Kingdom, for recombinant human lecithin cholesterol acyltransferase for the treatment of lecithin cholesterol acyltransferase deficiency.

What is lecithin cholesterol acyltransferase deficiency?

Lecithin cholesterol acyltransferase deficiency is an inherited disease caused by abnormalities in the gene responsible for the production of the lecithin cholesterol acyltransferase (LCAT) enzyme. LCAT is key to transporting cholesterol from tissues into the liver for excretion into the bile. A deficiency of LCAT results in cholesterol and other types of fats building up in tissues, mostly in the cornea (the transparent layer in front of the eye), red blood cells and kidneys. Symptoms of the disease include corneal opacity (clouding of the cornea), haemolytic anaemia (low red blood cell counts caused by the cells being destroyed too soon) and kidney disease which can lead to kidney failure.

Lecithin cholesterol acyltransferase deficiency is chronically debilitating due to corneal opacity that affects vision and the development of anaemia. It is also life-threatening due to severe kidney damage which may lead to kidney failure.

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

At the time of designation, lecithin cholesterol acyltransferase deficiency affected approximately 0.001 in 10,000 people in the European Union (EU)*. This is 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).

*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).

7 Westferry Circus ● Canary Wharf ● London E14 4HB ● United Kingdom
Telephone +44 (0)20 7418 8400 **Facsimile** +44 (0)20 7523 7040
E-mail info@ema.europa.eu **Website** www.ema.europa.eu
An agency of the European Union

What treatments are available?

At the time of orphan designation, no satisfactory treatments were authorised in the EU for this condition and only limited symptomatic treatment was available.

How is this medicine expected to work?

This medicine is made of the LCAT enzyme produced by a method known as 'recombinant DNA technology': it is made by cells that have received a gene (DNA) which makes them able to produce LCAT. This medicine is expected to work by replacing the missing enzyme, which can then modify cholesterol from tissues so that it can be transported to the liver and excreted into the bile. This is expected to reduce the deposit of cholesterol in tissues, thus improving the symptoms of the disease.

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 the medicine in experimental models was ongoing.

At the time of submission of the application for orphan designation, no clinical trials with the medicine in patients with lecithin cholesterol acyltransferase deficiency had been started.

At the time of submission, the medicine was not authorised anywhere in the EU for lecithin cholesterol acyltransferase deficiency. Orphan designation of the medicine had been granted in the United States of America for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 12 September 2012 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:

Alphacore Pharma Limited
c/o Arnold & Porter (UK) LLP Tower 42
25 Old Broad Street
London
EC2N 1HQ
United Kingdom
Telephone: +1 734 619 8801 or +44 207 786 6100
Telefax: +1 734 418-2531 or +44 207 786 6299
E-mail: william.brinkerhoff@alphacorepharma.com

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	Recombinant human lecithin cholesterol acyltransferase	Treatment of lecithin cholesterol acyltransferase deficiency
Bulgarian	рекомбинантна човешка лецитин-холестерол ацилтрансфераза	Лечение на лецитин-холестерол ацилтрансферазна недостатъчност
Czech	Rekombinantní lidská lecitin-cholesterol-acyltransferáza	Léčba deficitu lecithin cholesterové acyltransferázy.
Danish	Rekombinant human lecithin-cholesterol-acyltransferase	Behandling af lecithin cholesterol-acyltransferase mangel
Dutch	Recombinant-humaan-lecithine-cholesterolacyltransferase	Behandeling van lecithine-cholesterolacyltransferase deficiëntie
Estonian	Rekombinantne inimese letsitiin-kolesterool-atsüültransferaas	Letsitiin-kolesterool-atsüültransferaasi puudulikkuse ravi
Finnish	Rekombinantti ihmisen lesitiinikolesteroliasyylitransferaasi	Lesitiinikolesteroliasyylitransferaasin puutoksen hoito
French	Lécithine-cholestérol acyltransférase humaine recombinante	Traitement du déficit en lécithine cholesterol acyltransférase
German	Rekombinante humane Lecithin-Cholesterin-Acyltransferase	Behandlung eines Lecithin-Cholesterin-Acyltransferase Mangels
Greek	ανασυνδυασμένη ανθρώπινη ακυλοτρανσφεράση λεκιθίνης - χοληστερόλης.	Θεραπεία της ανεπάρκειας της ακυλοτρανσφεράσης λεκιθίνης -χοληστερόλης
Hungarian	Rekombináns humán lecitin-koleszterin aciltranszferáz	Lecitin-koleszterin aciltranszferáz-elégtelenség kezelése
Italian	Lecitina-colesterolo aciltransferasi ricombinante umana	Trattamento del déficit di lecitina-colesterolo aciltransferasi
Latvian	Rekombinanta cilvēka lecitīna holesterīna aciltransferāze	Lecitīna holesterīna aciltransferāzes deficīta ārstēšana
Lithuanian	Rekombinantinė žmogaus lecitino-cholesterolio aciltransferazė	Lecitino-cholesterolio aciltransferazės stokos gydymas
Maltese	Lecithin cholesterol acyltransferase rikombinanti uman	Kura ta' nuqqas ta' *lecithin cholesterol acyltransferase*
Polish	Rekombinowana ludzka acylotransferaza lecytynowo-cholesterolowa	Leczenie niedoboru acylotransferazy lecytynowo-cholesterolowej
Portuguese	Lecitina-colesterol aciltransferase humana recombinante	Tratamento da deficiência de lecitina colesterol acetiltransferase
Romanian	Lecitin-colesterol aciltransferază umană recombinantă	Tratamentul deficitului de lecitin-colesterol aciltransferază
Slovak	Rekombinantná ľudská lecitín cholesterol acyltransferáza	Liečba deficitu lecitín cholesterol acyltransferázy
Slovenian	Rekombinantna humana lecitin holesterolna aciltransferaza	Zdravljenje pomanjkanja lecitin holesterolne aciltransferaze
Spanish	Acil tranferasa de la lecitina colesterol	Tratamiento de la deficiencia de la lecitina

[1] At the time of designation

Language	Active ingredient	Indication
	recombinante	colesterol Aciltransferasa
Swedish	Rekombinant humant lecitin-kolesterol acyltransferas	Behandling av lecitin-kolesterol-acyltransferasbrist
Norwegian	Rekombinant humantlecitin kolesterol acyltransferase	Behandling av lecitin-kolesterol-acyltransferase mangel
Icelandic	Raðbrigða manna lecithin kólesteról acýltransferasi	Meðferð við lecithín kólesteról acýltransferasa skorti