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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Chenodeoxycholic acid for the treatment of inborn errors in primary bile acid synthesis

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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 16 December 2014, orphan designation (EU/3/14/1406) was granted by the European Commission to Sigma-Tau Pharma Ltd, United Kingdom, for chenodeoxycholic acid for the treatment of inborn errors in primary bile acid synthesis.

The sponsorship was transferred to sigma-tau Arzneimittel GmbH, Germany, in May 2015.

What are inborn errors in primary bile acid synthesis?

Inborn errors in primary bile acid synthesis are a group of diseases in which the liver does not produce ('synthesise') enough 'primary bile acids'. These acids are the main components of the bile, a fluid that helps break down fats in the digestive tract, and include cholic acid and chenodeoxycholic acid. The lack of bile acids is caused by inborn genetic abnormalities.

Patients lacking primary bile acids produce abnormal bile acids instead, which can damage the liver and in some cases, lead to liver failure. Patients may also have neurological problems and problems with absorbing fats and fat-soluble vitamins.

Inborn errors in primary bile acid synthesis are a group of long-term debilitating and life-threatening diseases because they can severely damage the liver and they can cause neurological problems and problems with food absorption.

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

At the time of designation, inborn errors in primary bile acid synthesis affected not more than 0.2 in 10,000 people in the European Union (EU). This was equivalent to a total of not more than 10,000 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).

What treatments are available?

At the time of designation, two cholic acid products, Orphacol and Kolbam (previously Cholic Acid FGK), were authorised in the EU for treating inborn errors in primary bile acid synthesis.

The sponsor has provided sufficient information to show that chenodeoxycholic acid might be of significant benefit for patients with inborn errors in primary bile acid synthesis. This is based on results of studies in the published literature indicating that chenodeoxycholic acid could potentially be more beneficial than currently authorised treatments and that it could prevent worsening of the disease. 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?

Chenodeoxycholic acid is one of the main primary bile acids produced by the liver. The chenodeoxycholic acid contained in this medicine is expected to replace the patient's missing bile acids and thereby reduce the production of abnormal bile acids and contribute to the normal activity of bile in the digestive system.

Chenodeoxycholic acid is already authorised in the EU for the treatment of gallstones.

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, no clinical studies in patients with inborn errors in primary bile acid synthesis were planned.

At the time of submission, the medicine was not authorised anywhere in the EU for inborn errors in primary bile acid synthesis 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 13 November 2014 recommending the granting of this designation.

*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).

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	Chenodeoxycholic acid	Treatment of inborn errors of primary bile acid synthesis
Bulgarian	Хенодеоксихолиева киселина	Лечение на вродени дефекти в първичната синтеза на жлъчни киселини
Croatian	Kenodeoksikolatna kiselina	Liječenje urođenih pogrešaka u sintezi primarnih žučnih kiselina
Czech	Kyselina chenodeoxycholová	Léčba vrozené primární poruchy syntézy žlučových kyselin
Danish	Chenodeoxycholsyre	Terapi af medfødt mangel på syntese af primærgaldesyrerne
Dutch	Chenodeoxycholiczuur	Behandeling van congenitale deficiëntie in de synthese van primair galzuur
Estonian	Kenodeoksükoolhape	Sünnipärase primaarse sapphappe sünteesi häire ravi
Finnish	Kenodeoksikoolihappo	Primaarisen sappihapposynteesin synnynnäisen vajauksen hoito
French	Acide chénodéoxycholique	Traitement des déficits congénitaux de synthèse des acides biliaires primaires
German	Chenodeoxycholsäure	Therapie von angeborenen Synthesedefizit primärer Gallensäuren
Greek	Χηνοδεοξυχολικό *οξύ*	Θεραπεία της ελαττωματικής σύνθεσης πρωτογενών χολικών οξέων
Hungarian	Kenodeoxikólsav	Veleszületett primér epesav szintézis rendellenesség kezelése
Italian	Acido chenodesossicolico	Trattamento di errori congeniti nella sintesi degli acidi biliari primari
Latvian	Henodeoksiholskābe	Iedzimtu primāru žultsskābes sintēzes traucējumu ārstēšana
Lithuanian	Chenodeoksicholio rūgštis	Įgimtų pirminių tulžies rūgščių sintezės sutrikimų gydymas
Maltese	Chenodeoxycholic acid	Kura ta' żbalji mit-twelid fis-sintesi ta' l-aċidu biljari primarju
Polish	Kwas chenodeoksycholowy	Leczenie wrodzonych zaburzeń pierwotnej syntezy kwasów żółciowych
Portuguese	Ácido cenodeoxicólico	Tratamento da deficiência congénita da síntese de ácidos biliares primários
Romanian	Acid chenodeoxicolic	Tratamentul anomaliilor congenitale ale sintezei primare de acizi biliari
Slovak	Kyselina chenodeoxycholová	Liečba vrodených porúch primárnej syntézy žlčovej kyseliny
Slovenian	Henodeoksiholna kislina	Zdravljenje vrojenih motenj sinteze primarnih žolčnih kislin
Spanish	Ácido quenodesoxicólico	Tratamiento de la deficiencia congénita de síntesis de los ácidos biliares primarios

[1] At the time of designation

Language	Active ingredient	Indication
Swedish	Kenodeoxicholsyra	Behandling av medfödd oförmåga att syntetisera primära gallsyror
Norwegian	Kenodeoksykolsyre	Behandling av medfødt defekt i syntese av primære gallesyrer
Icelandic	Sénódeoxýkólsýra	Meðferð við meðfæddum galla í gallsýrumyndun