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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Recombinant human monoclonal antibody against hepatitis B virus for the prevention of hepatitis B re-infection following liver transplantation

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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 15 August 2013, orphan designation (EU/3/13/1156) was granted by the European Commission to CRO-PharmaNet Services GmbH, Germany, for recombinant human monoclonal antibody against hepatitis B virus for the prevention of hepatitis B re-infection following liver transplantation.

The sponsorship was transferred to inVentiv Health Germany GmbH, Germany, in July 2014.

What is hepatitis B re-infection following liver transplantation?

Hepatitis B is an infectious disease that affects the liver, caused by the hepatitis B virus. People who have been infected may not look or feel ill or may have mild flu-like symptoms, although some people can become very ill. Most people fully recover from the disease, but some remain infected ('carriers') and may go on to develop serious liver disease, such as cirrhosis (liver scarring) and liver cancer. If this happens, liver transplantation may be needed. However, since the virus is found in body fluids (such as blood) of hepatitis B virus carriers, the transplanted liver is likely to become infected in its turn.

Hepatitis B re-infection following liver transplantation is chronically debilitating and life-threatening because it may cause the transplanted liver to be damaged or rejected by the patient's body.

What is the estimated number of patients at risk of developing the condition?

At the time of designation, the number of patients at risk of hepatitis B re-infection following liver transplantation was estimated to be less than 0.1 people in 10,000 in the European Union (EU). This

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was equivalent to a total of fewer than 5,000 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 methods of prevention are available?

At the time of designation, several immunoglobulin preparations were authorised in the EU for the prevention of hepatitis B re-infection following liver transplantation. In addition, antiviral medicines were also sometimes given.

The sponsor has provided sufficient information to show that recombinant human monoclonal antibody against hepatitis B virus might be of significant benefit for patients at risk of hepatitis B re-infection following liver transplantation, because early experimental studies have shown it to be effective against different types of hepatitis B virus, including types that are difficult for the body's natural defences to control and which are resistant to currently authorised immunoglobulin treatments. 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?

This medicine is a monoclonal antibody (a type of protein) that has been designed to recognise and attach to a structure on the surface of hepatitis B virus called hepatitis surface antigen (HBsAg). By binding to the virus the medicine is expected to neutralise it and prevent it from re-infecting the cells of the transplanted liver.

The monoclonal antibody in this medicine is made by a method known as 'recombinant DNA technology': it is made by cells into which a gene (DNA) has been introduced that makes them able to produce the antibody.

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 trials with recombinant human monoclonal antibody against hepatitis B virus had been started in patients at risk of hepatitis B re-infection after liver transplantation.

At the time of submission, the medicine was not authorised anywhere in the EU for prevention of hepatitis B re-infection after liver transplantation. Orphan designation has been granted in the United States for prevention of hepatitis B recurrence following liver transplantation.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 13 June 2013 recommending the granting of this designation.

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*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.
At the time of designation, this represented a population of 512,200,000 (Eurostat 2013).

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	Recombinant human monoclonal antibody against hepatitis B virus	Prevention of hepatitis B re-infection following liver transplantation
Bulgarian	Рекомбинантно човешко моноклонално антитяло срещу вируса на Хепатит В	Превенция на реинфенкция с хепатит В след чернодробна трансплантация
Croatian	Rekombinantno ljudsko monoklonsko protutijelo protiv virusa hepatitisa B	Prevencija reinfekcije hepatitisom B nakon transplantacije jetre
Czech	Rekombinantní lidská monoklonální protilátka proti viru hepatitidy B	Prevence recidivy hepatitidy B po transplantaci jater
Danish	Rekombinant monoklonalt humant antistof mod hepatitis B virus	Forebyggelse af hepatitis B Gentagelse efter levertransplantation
Dutch	Recombinant humaan monoklonaal antilichaam tegen hepatitis B-virus	Preventie van hepatitis-B re-infectie na levertransplantatie
Estonian	Rekombinantne inimese monoklonaalne antikeha B-hepatiidi viiruse vastu.	Maksasiirdamise järgse B-hepatiidi kordusinfektsiooni ennetus
Finnish	Ihmisen monoklonaalinen rekombinanttivasta-aine hepatiitti-B –virusta vastaan	Hepatiitti-B:n uusiutumisen ehkäisyyn maksansiirron jälkeen
French	Anticorps monoclonal humain recombinant contre le virus de l'Hépatite B (VHB)	Prévention de la récurrence de l'infection par le virus de l'Hépatite B chez les patients transplantés hépatiques
German	Rekombinanter humaner monoklonaler Antikörper gegen Hepatitis B Virus	Vorbeugung einer erneuten Hepatitis B Infektion nach Lebertransplantation
Greek	Ανασυνδυασμένο ανθρώπινο μονοκλωνικό αντίσωμα ενάντια στον ιό της ηπατίτιδας Β	Πρόληψη της υποτροπής από ηπατίτιδα-Β μετά από μεταμόσχευση ήπατος
Hungarian	Hepatitis B vírus elleni rekombináns humán monoklonális antitest	Májtranszplantációra szoruló Hepatitis-B fertőzésben szenvedőkben a transzplantált máj fertőződésének megelőzése
Italian	Anticorpo monoclonale umano ricombinante contro il virus dell'epatite B	Prevenzione della recidiva da epatite B aseguito di trapianto epatico
Latvian	Rekombinanta cilvēka monoklonāla antiviela pret B-hepatīta vīrusu	B-hepatīta re-infekcijas profilakse pēc aknu transplantācijas
Lithuanian	Rekombinantinis žmogaus monokloninis antikūnas prieš hepatito B virusą	Hepatito B re-infekcijos prevencija po kepenų transplantacijos
Maltese	Anti-korp monoklonali uman rikombinanti kontra l-virus tal-epatite B	Prevenzjoni ta' infezzjoni mill-ġdid bl-epatite B wara trapjant tal-fwied
Polish	Rekombinowane ludzkie przeciwciało monoklonalne przeciw wirusom zapalenia wątroby typu B	Zapobieganie ponownemu wirusowemu zapaleniu wątroby typu B po przeszczepie wątroby
Portuguese	Anticorpo monoclonal humano recombinante contra o vírus da Hepatite B	Prevenção da Recorrência de hepatite B após transplante hepático

[1] At the time of designation

Language	Active ingredient	Indication
Romanian	Anticorp monoclonal uman recombinant impotriva virusului hepatitic B	Prevenirea reinfectarii cu virusul hepatitic B dupa transplant hepatic
Slovak	Rekombinantná ľudská monoklonálna protilátka proti vírusu hepatitídy B	Prevencia recidívy hepatitídy B po transplantácii pečene
Slovenian	Humanizirana rekombinantna monoklonska protitelesa proti virusu hepatitisa B	Preprečevanje ponovne okužbe s hepatitisom B po presaditvi jeter
Spanish	Anticuerpo monoclonal recombinante humano contra el virus de la hepatitis B	Prevención de la reinfección por hepatitis B post trasplante hepático
Swedish	Rekombinant human monoklonal antikropp mot hepatit B-virus	Förebyggande av reinfektion med hepatit B efter levertransplantation
Norwegian	Rekombinant humant monoklonalt antistoff mot hepatitt B-virus	Forebygging av hepatitt B re-infeksjon etter levertransplantasjon
Icelandic	Raðbrigða manna einstofna mótefni gegn lifrarbólgu B veiru	Til forvarna gegn endurtekinni lifrarbólgu B í kjölfar lifrarígræðslu