



European Medicines Agency
Pre-authorisation Evaluation of Medicines for Human Use

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COMMITTEE FOR ORPHAN MEDICINAL PRODUCTS

PUBLIC SUMMARY OF POSITIVE OPINION FOR ORPHAN DESIGNATION OF hepatitis C immunoglobulin for the prevention of recurrent hepatitis C virus induced liver disease in liver transplant recipients

On 8 July 2005 orphan designation (EU/3/05/295) was granted by the European Commission to Nabi Biopharmaceuticals Europe Ltd, Ireland, for hepatitis C immunoglobulin for the prevention of recurrent hepatitis C virus induced liver disease in liver transplant recipients.

The sponsorship was transferred to Biotest Pharma GmbH, Germany, in February 2008.

What is recurrent hepatitis C virus induced liver disease in liver transplant recipients?

Hepatitis is a general term that means inflammation of the liver. Hepatitis C is an infectious disease that affects the liver, caused by the hepatitis C virus. This viral infection does not always manifest itself clinically, and thus some people infected with the virus will not look or feel ill, others might have mild flu-like symptoms, or can become very ill.

Most patients fully recover spontaneously while others remain infected, initially without any sign or symptom of the disease. They are called hepatitis C virus carriers. Hepatitis C carriers are at risk of serious liver disease, such as cirrhosis (liver scarring) and liver cancer. In these cases of advanced liver disease, liver transplantation (getting a liver from another person) could become a necessity. However, since the virus is found also in body fluids (such as blood) of hepatitis C virus carriers, the transplanted liver might become infected on its turn and the liver disease can start in the transplanted liver.

Recurrent hepatitis C virus induced liver disease in liver transplant recipients is chronically debilitating and life-threatening.

What are the methods of prevention available?

No satisfactory methods exist that were authorised at the time of application

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

Based on the information provided by the sponsor and previous knowledge of the Committee, the number of patients at risk of recurrent hepatitis C virus induced liver disease in liver transplant recipients was considered to be less than 1 in 10,000 persons in the European Union, which, at the time of designation, corresponded to about 46,000 persons.

* Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed based on data from the European Union (EU 25), Norway, Iceland and Lichtenstein. This represents a population of 459,700,000 (Eurostat 2004). This estimate is based on available information and calculations presented by the sponsor at the time of the application.

How is this medicinal product expected to act?

Antibodies are proteins, which specifically recognise and attach themselves to certain structures, such as proteins found on the surface of viruses or bacteria. Hepatitis C immunoglobulin is an antibody that recognises, attaches and neutralises the hepatitis C virus. In experimental models it has been shown that hepatitis C immunoglobulin would prevent recurrent hepatitis C virus induced liver disease. Therefore, if administered after liver transplantation, it would protect the new liver from the harmful activity of the hepatitis C virus.

What is the stage of development of this medicinal product?

The effects of hepatitis C immunoglobulin were evaluated in experimental models. At the time of submission of the application for orphan designation, clinical trials in patients who received liver transplantation due to chronic hepatitis C liver disease were initiated.

Hepatitis C immunoglobulin was not authorised anywhere worldwide for recurrent hepatitis C virus induced liver disease in liver transplant recipients, at the time of submission. Orphan designation of hepatitis C virus immune globulin (human) was granted in the United States for the condition of prophylaxis of hepatitis C infection in liver transplant recipients.

According to Regulation (EC) No 141/2000 of 16 December 1999, the Committee for Orphan Medicinal Products (COMP) adopted on 12 May 2005 a positive opinion recommending the grant of the above-mentioned designation.

Opinions on orphan medicinal products designations are based on the following cumulative criteria: (i) the seriousness of the condition, (ii) the existence or not of alternative methods of diagnosis, prevention or treatment and (iii) either the rarity of the condition (considered to affect not more than five in ten thousand persons in the Community) or the insufficient return of development investments.

Designated orphan medicinal products are still investigational products which were considered for designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of the quality, safety and efficacy will be necessary before this product can be granted a marketing authorisation.

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**Translations of the active ingredient and indication in all EU languages
and Norwegian and Icelandic**

Language	Active Ingredient	Indication
English	Hepatitis C Immunoglobulin	Prevention of recurrent hepatitis C virus induced liver disease in liver transplant recipients
Czech	Hepatitis C Immunoglobulin	Prevence recidivy jaterního onemocnění indukovaného virem hepatitidy C u nemocných po transplantaci jater
Danish	Hepatitis C Immunoglobulin	Forebyggelse mod tilbagevendende hepatitis C virus induceret leversygdom i levertransplantatmodtagere
Dutch	Hepatitis C immunoglobine	Preventie van wederkerende hepatitis C virus geïnduceerde leveraandoening in levertransplant recipiënten
Estonian	C-hepatiidi immuunoglobuliin	Retsidiivse C-hepatiidist tingitud maksahaiguste ärahoidmine maksatransplantaadi retsipientidel.
Finnish	Hepatiitti-C immunoglobuliini	Toistuvan hepitiitti C -viruksen aiheuttaman maksasairauden estäminen maksansiirtojen vastaanottajissa
French	Immunoglobuline anti-hépatite C	Prévention des manifestations hépatiques récurrentes causées par le virus de l'hépatite C chez les transplantés hépatiques
German	Hepatitis C Immunoglobulin	Schutz vor Wiederauftreten der Hepatitis C-Infektion bei Lebertransplantatempfängern
Greek	Ανοσοσφαιρίνη Ηπατίτιδας C	Πρόληψη από υποτροπιάζουσα ηπατική νόσο προερχόμενη από τον ιό της Ηπατίτιδας C σε λήπτες μοσχεύματος ήπατος
Hungarian	Hepatitis-C immunoglobulin	Májtranszplantációt követő visszatérő Hepatitis –C vírus fertőzés megelőzése
Italian	Immunoglobulina dell'Epatite C	Prevenzione delle malattie epatiche ricorrenti indotte dal virus dell'epatite C in pazienti sottoposti a trapianto di fegato
Latvian	Hepatīta C imūnglobulīns	Atkārtotas hepatīta C izraisītas aknu slimības profilaksei aknu transplantāta recipientiem
Lithuanian	Hepatito C imunoglobulinas	Kepenų ligos, nulemtos pakartotinio hepatito C viruso, prevencija kepenų transplantato recipientams
Polish	Immunoglobulina przeciw zapaleniu wątroby typu C	Zapobieganie nawracającemu zapaleniu wątroby wywołanemu przez wirus typu C u biorców przeszczepu wątroby
Portuguese	Imunoglobulina para a Hepatite C	Prevenção da doença hepática recorrente induzida pelo vírus da hepatite C em recipientes de transplante hepático
Slovak	Imunoglobulín hepatitídy typu C	Prevenia rekurentnej hepatitídy C u príjemcov transplantátov pečene s vírusmi indukovanými ochoreniami pečene
Slovenian	Hepatitis C Immunoglobulin	Preprečevanje ponovne jetrne okvare, povzročene s HCV, pri prejemniku jetrnega transpantata

Spanish	Inmunoglobulina de Hepatitis C	Prevención de la recurrencia de la enfermedad hepática inducida por el virus de la hepatitis C en receptores trasplante de hígado
Swedish	hepatit C immunglobulin	Profylax av återkommande hepatit C virusinducerad lever sjukdom hos levertransplanterade mottagare
Norwegian	Immunoglobulin mot hepatitt C	Forebygging av tilbakevendende hepatitt C virus-indusert leversykdom hos levertransplanterte pasienter
Icelandic	Lifrabólgu C ónæmisglóbúlín	Fyrirbyggjandi gegn endurteknum lifrabólgu C tengdum lifrarsjúkdómi hjá lifrarígræðsluþegum