

# Recompensation of exacerbated liver insufficiency with hyperbilirubinaemia and/or encephalopathy and/or renal failure

<b>Submission date</b> 17/01/2006	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 23/02/2006	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 07/02/2019	<b>Condition category</b> Digestive System	<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Prof Rafael Bañares

**Contact details**  
Hospital General Universitario  
Servicio de Gastroenterología (Sección de Hepatología)  
C/ Dr Esquerdo, 46  
Madrid  
Spain  
28007

## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**  
NCT00614146

**Secondary identifying numbers**  
1438

# Study information

## Scientific Title

Recompensation of Exacerbated Liver Insufficiency with hyperbilirubinaemia and/or Encephalopathy and/or renal Failure

## Acronym

RELIEF

## Study objectives

Patients with Molecular Adsorbents Recirculation System (MARS®) treatments in addition to standard medical treatment show a significant improvement in 28-day transplant-free survival.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Ethics approval received from the Freiburg Ethics Commission International (first review) on the 02/04/2003. Local Ethics Committee approval sought for every study site.

## Study design

Randomised prospective open controlled non-blinded two-armed study

## Primary study design

Interventional

## Secondary study design

Randomised controlled trial

## Study setting(s)

Hospital

## Study type(s)

Treatment

## Participant information sheet

Not available in web format, please use the contact details to request a patient information sheet

## Health condition(s) or problem(s) studied

Recent clinical severe decompensation of a presumed cirrhosis related to a precipitating event

## Interventions

Comparison of standard medical treatment (SMT) for acute-on-chronic liver failure versus MARS® liver support therapy in addition to SMT.

## Intervention Type

Other

**Phase**

Not Specified

**Primary outcome measure**

28-day transplant-free survival

**Secondary outcome measures**

1. 28-day survival regardless of transplantation
2. 84-day survival
3. In-hospital mortality
4. Time course of clinical state (number and severity of complications, vital signs, scoring systems, laboratory tests)
5. Economic analysis

**Overall study start date**

16/04/2003

**Completion date**

01/09/2008

**Eligibility****Key inclusion criteria**

1. Signed written informed consent by patient or next of kin
2. Age greater than 18 years
3. Patients with a recent clinical severe decompensation of a presumed cirrhosis (based on clinical evaluation or radiological imaging) related to a precipitating (trigger) event (e.g. infection, bleeding, alcohol abuse)
4. Intrahepatic cholestasis (bilirubin greater than 5 mg/dl or greater than 85  $\mu$ mol/l, respectively) without evidence of extrahepatic origin and at least one of the following three:
  - 4.1. Hepatorenal syndrome (impaired renal function with creatinine greater than 1.5 mg/dl or greater than 133  $\mu$ mol/l without evidence of reduced vascular volume [e.g. central venous pressure {CVP} greater than 8 cm H<sub>2</sub>O] and no evidence of pre-existing renal failure)
  - 4.2. Hepatic Encephalopathy greater than or equal to II°
  - 4.3. Progressive Hyperbilirubinaemia: defined as a more than 50% increase of bilirubin before enrolment, whether in referral or currently in hospital up to a level of greater than 20 mg/dl (or greater than 340  $\mu$ mol/l)

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

## **Target number of participants**

172

## **Key exclusion criteria**

1. Progressive jaundice and deterioration as a natural course of a chronic liver disease without precipitating (trigger) event
2. Severe thrombocytopenia (platelet count less than or equal to 50 glutamic pyruvic transaminase [GPT]/l)
3. Severe coagulopathy (international normalised ratio [INR] greater than 2.3)
4. Need for renal replacement therapy within three days prior to enrolment
5. Severe infection without antibiotic treatment for at least 24 hours. Uncontrolled bacterial infection.
6. Active bleeding within 48 hours prior to enrolment
7. Proven hepatocellular carcinoma (HCC) greater than 4 cm or infiltration of portal vein or acute portal vein thrombosis
8. Severe cardiopulmonary disease (New York Heart Association [NYHA] greater than or equal to 2)
9. Pregnancy/lactation
10. Mean arterial pressure (MAP) less than 60 mmHg despite vasopressor agents (norepinephrine greater than 1 µg/kg/min) for blood pressure support
11. Overt clinical evidence for disseminated intravascular coagulation (DIC)
12. Clinical evidence for coma of non-hepatic origin
13. Extra-hepatic cholestasis
14. Severe intrinsic renal disease
15. Extended surgical procedure within the last four weeks or unsolved surgical problems
16. Known human immunodeficiency virus (HIV) infection

## **Date of first enrolment**

16/04/2003

## **Date of final enrolment**

01/09/2008

## **Locations**

### **Countries of recruitment**

Austria

Belgium

Denmark

France

Germany

Italy

Spain

Switzerland

United Kingdom

**Study participating centre**  
**Hospital General Universitario**  
Madrid  
Spain  
28007

## **Sponsor information**

### **Organisation**

Gambro Lundia AB (Sweden)

### **Sponsor details**

Study Director Ludger Thiele  
PO Box 1010  
Magistratsvägen 16  
Lund  
Sweden  
22010  
+33 (0)437 281 135  
ludger.thiele@gambro.com

### **Sponsor type**

Industry

### **Website**

<http://www.gambro.com>

### **ROR**

<https://ror.org/05mw5ed57>

## **Funder(s)**

### **Funder type**

Industry

### **Funder Name**

Gambro Lundia AB (Sweden)

# Results and Publications

## Publication and dissemination plan

Not provided at time of registration

## Intention to publish date

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/03/2013	07/02/2019	Yes	No