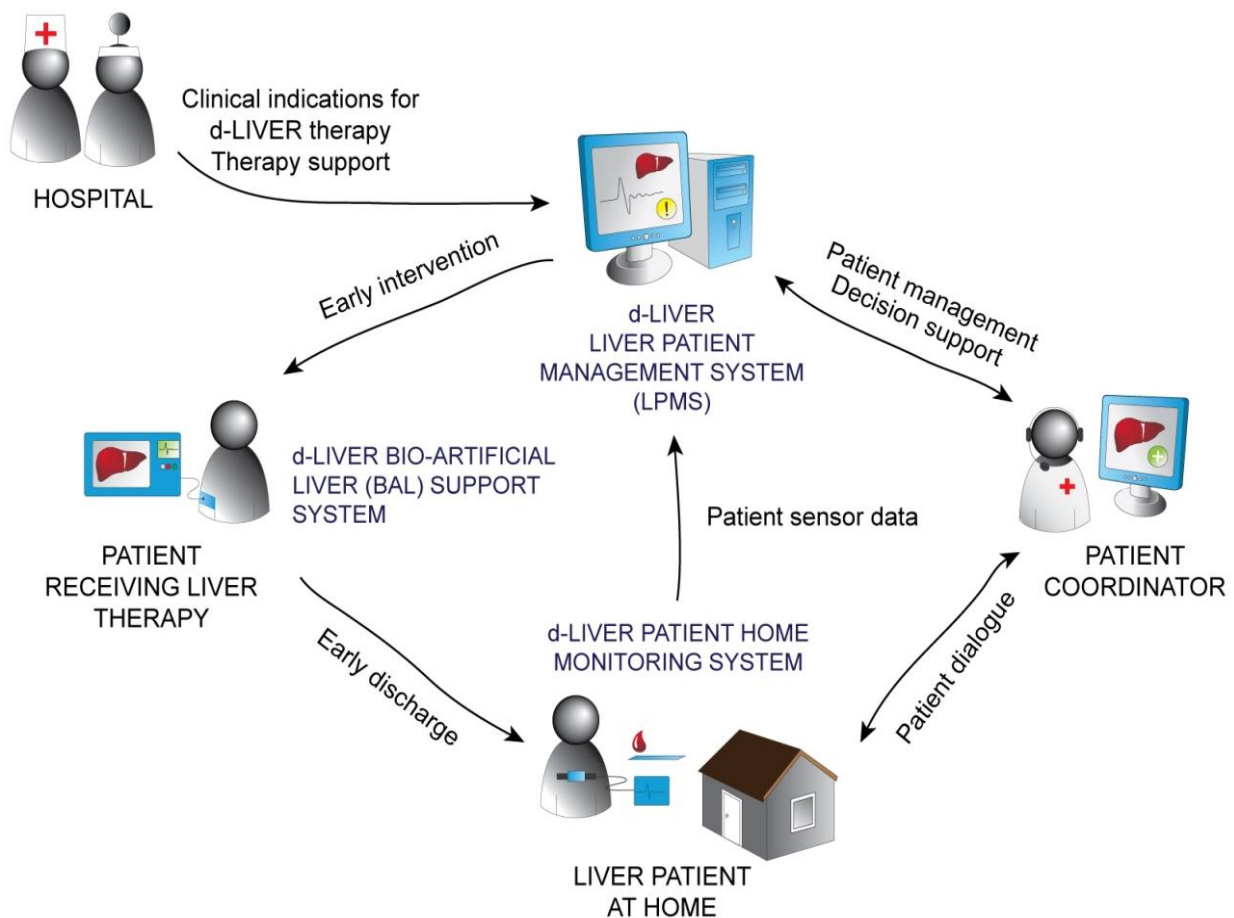


# ICT-enabled, cellular artificial liver system incorporating personalized patient management and support

d-LIVER is an Integrating Project funded by the European Commission

- developing a bio-artificial liver support system
- addressing sensor-based monitoring of patient health status at home
- remote monitoring and communication with hospital information systems



## Background / Motivation

The liver is a complex organ with various vital functions in synthesis, detoxification and regulation; its failure is life-threatening and the only curative treatment is transplantation. Whilst awaiting transplantation, or after liver resection, patients need to be supported with detoxification systems which, currently mainly based on filtration, do not support metabolic liver function. This can only be provided by living cells.

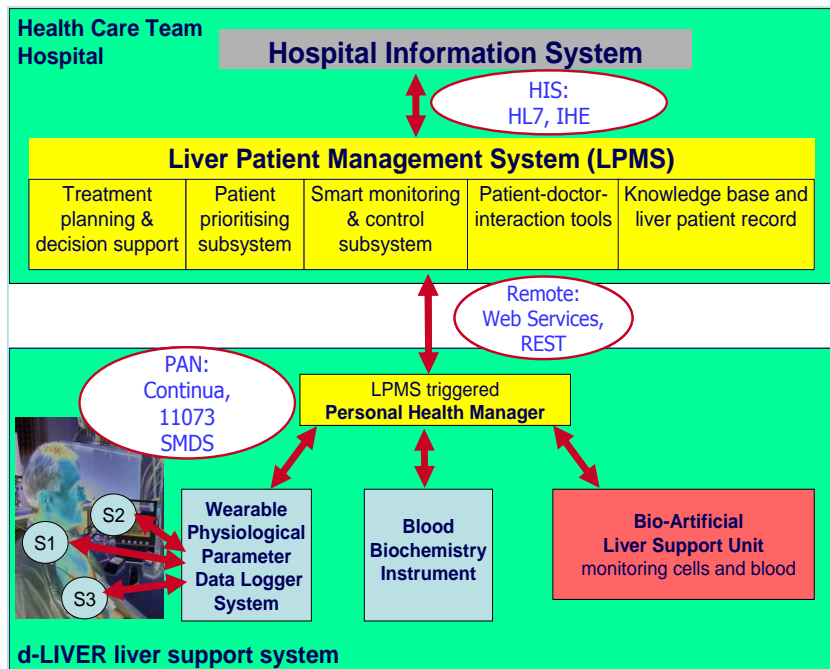
## Objectives of the Project

The d-LIVER project will develop an ICT-enabled bio-artificial liver support system with associated remote monitoring to assist in the treatment and management of liver patients in care settings extending from the hospital to the home.

# ICT-enabled, cellular artificial liver system incorporating personalized patient management and support

The d-LIVER project applies a scenario-driven development methodology to address the unmet clinical need for an ICT-enabled bio-artificial liver support system (BAL) for remote management of patients with chronic liver disease outside the hospital. The aim is to provide safe, cost-effective systems for continuous, context-aware, multi-parametric monitoring of both patient and BAL parameters in order to: enhance the quality of medical treatment and management; improve the quality of life for patients; reduce the incidence and duration of hospitalization and consequently reduce the economic burden of chronic liver disease.

In a parallel, high-risk, high reward activity, d-LIVER will identify human pancreatic progenitor cells which can differentiate into human hepatocytes and be cultured into the large numbers of functional cells which can supplement vital liver functions.



## Consortium:



StemCellSystems



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The d-LIVER project is partly funded by the European Commission (Contract No. 287596)