

Cell therapy trial offers new hope to liver disease patients

24 November 2014

Liver disease patients could be helped by a new cell therapy to treat the condition.

Researchers from the University of Edinburgh have received funding to start testing the therapy in patients within the next year.

It will be the world's first clinical trial of a new type of cell therapy to treat [liver cirrhosis](#), a common disease where scar tissue forms in the organ as a result of long-term damage.

The Edinburgh team has received funding from the Medical Research Council and Innovate UK to investigate the disease, which claims 4000 lives in the UK each year.

The only successful treatment for end-stage liver cirrhosis at present is an organ transplant. The new therapy is based on a type of white blood cell called a macrophage, which is key to normal repair processes in the liver.

Macrophages reduce [scar tissue](#) and stimulate the liver's own stem cells to expand and form into healthy new liver cells.

Scientists will take cells from the blood of patients with liver cirrhosis and turn them into macrophages in the lab using chemical signals.

These new cells will then be re-injected into the patient in the hope they will reduce scarring and help to rebuild the damaged organ from within.

The Scottish National Blood Transfusion Service and the Cell Therapy Catapult are collaborating on the project.

Causes of liver cirrhosis include infections such as hepatitis C, obesity, alcohol abuse and some genetic and immune conditions.

Liver transplants are limited by a lack of available

donors and the risk that a recipient's immune system will reject the transplanted organ. Many people die each year just waiting for an organ to become available.

Professor Stuart Forbes, of the MRC Centre for Regenerative Medicine at the University of Edinburgh, said: "Liver cirrhosis is on the increase in the UK and is one of the top five killers. If successful, we hope that this approach could offer a new way to tackle the condition."

Provided by University of Edinburgh

APA citation: Cell therapy trial offers new hope to liver disease patients (2014, November 24) retrieved 11 November 2019 from <https://medicalxpress.com/news/2014-11-cell-therapy-trial-liver-disease.html>

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