

**THE LIVER GROUP
CHAIRMAN'S REPORT**

FOR THE YEAR ENDED 31 DECEMBER 2015

The end of 2015 saw an important milestone in the development of our bio-artificial liver machine, with the completion, with our colleagues at Groote Schuur Hospital in Cape Town, of our second large-animal trial treating pigs with acute liver failure. Importantly, this time we were using a machine designed at a scale to treat people. The results were hugely encouraging, as the machine reversed those clinical and biochemical abnormalities that govern survival in patients; most importantly, the ability of the blood to clot, and the changes in brain function and in blood pressure that are vital indications of a poor outcome in patients with liver failure were all reversed.

So entering 2016 we have a machine we are convinced can make a critical difference in patients with acute liver disease, and will buy time for a patient's own liver to repair and regenerate. But in this long game, we now see clearly the next hurdles. One is scientific. If our machine is going to help, it has to be ready, 'on standby', to deliver to a patient's bedside, and with a machine based on living cells, being 'on standby' means being kept, frozen, until needed, when the cells can be thawed and the machine delivered ready to use. We have already begun to tackle this process of cryopreservation – freezing the cell-spheroids in alginate that are the key to our machines – but need to scale this up to freeze the literally billions of cells that are needed. This stage takes much more funding – as always a major hurdle. At the time of writing we are awaiting the outcome of grant applications – which we hope will take us all the way to a first-in-man trial - but also vitally we need to continue to raise money from our supporters and other charitable sources.

I should mention – to thank – Anna Lakey and Christopher Ellis, undergraduates from the University of Bath who have helped the Charity in updating our website and paperwork, and moving the Charity towards its more modern status as a Charitable Incorporated Organisation – but with the same name. I must also express my delight that Clare Selden, whose scientific work is the foundation of our machine and has worked tirelessly for The Liver Group Charity, was granted the title of Professor of Experimental Hepatology by our host organisation, University College London (UCL). And as always, the sincerest thanks from me and my fellow Trustees to our supporters.



**Humphrey Hodgson
Chairman**

Dated: 22/9/16