

9th May 2018

£4m bid to find therapies that prompt damaged tissues to repair

Stem cell scientists are to join forces with doctors to investigate methods of promoting tissue repair in the liver, lungs and joints.

The £4 million project seeks to better understand the environment in which stem cells grow in the body, known as the niche.

Experts will use their findings to design new therapies that mimic this environment, in order to stimulate repair mechanisms in tissues damaged by disease or injury.

Researchers at the University of Edinburgh are leading the collaboration, called the UK Regenerative Medicine Platform (UKRMP)-Engineered Cell Environment Hub.

Teams hope to work with industry partners to test potential therapies in clinical trials.

The project – led by the University’s Medical Research Council Centre for Regenerative Medicine – includes experts at the Universities of Cambridge and Birmingham, King’s College London and UCL (University College London).

The work is supported under Phase 2 of the UKRMP, funded by the Medical Research Council, the Biotechnology and Biological Sciences Research Council and Engineering and Physical Sciences Research Council.

Professor Stuart Forbes, Director of the University of Edinburgh’s MRC Centre for Regenerative Medicine and Project Lead, said: “We’re bringing together a research network of regenerative biologists, tissue engineers and clinician scientists in order to understand why the niche environment does not always allow cells to grow and repair damaged tissues. We hope to develop novel treatments to promote the regeneration of tissues and organs.”

Dr Rob Buckle, Chief Science Officer at the MRC, said: “Regenerative medicine holds enormous potential for delivering the treatments and cures of tomorrow. The UKRMP has been pivotal in bringing together and supporting the interdisciplinary science required to tackle the key bottlenecks in the field. Great strides have been made so far and this second tranche of UKRMP funding will enable the UK to continue to lead the way to new understanding, treatments and therapies.”

The MRC Centre for Regenerative Medicine is part of the University of Edinburgh’s new Institute for Regeneration and Repair. It is located at Edinburgh BioQuarter, a leading location for life sciences and healthcare innovations bringing together scientists from industry and academia with NHS experts.

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