

New materials to be developed to repair eyes

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For an individual the loss of sight is estimated by the RNIB to have a financial impact of £20k per year and the annual cost to the UK economy is around £6.5 billion in terms of direct healthcare costs and other costs such as unpaid carers and loss of employment.

The five-year Engineering Fellowship for Growth has been awarded to Professor Rachel Williams to bring together expertise from across departments such as [eye](#) and vision science, engineering, chemistry and physics to address these issues.

The researchers will work on new materials which could be used as artificial corneas – removing the need for patients to wait for a transplant. They will also develop contact lenses which are manufactured in a more environmentally friendly way and that can be adapted to carry drugs to help people recover from wounds to the eye or to fight infections.

Professor Williams said: "The eye is a complex structure and the design and production of advanced materials are required to overcome the destructive nature of ocular diseases. Bringing together engineers, scientists and clinicians to combine their knowledge and expertise and apply them to address the eye healthcare problems of the 21st Century has enormous potential."

Other strands of the research will develop surfaces which promote the growth of cells ready to be implanted in the eye to repair damage caused by conditions such as [age-related macular degeneration](#).

The funding was announced by Universities and Science Minister, David Willetts and has been provided by the Engineering and Physical Sciences Research Council (EPSRC) to support the Government's Eight Great Technologies policy.

Professor Williams is based in the University's Institute of Ageing and Chronic Disease and was recently named by the EPSRC as one of the UK's top ten most inspirational scientists. She added: "This funding will allow the University to bring together a diverse group of researchers with different specialisms.

"By combining this expertise in one place, we hope to be able to make a major impact on restoring people's sight and protecting their vision."

Provided by University of Liverpool

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