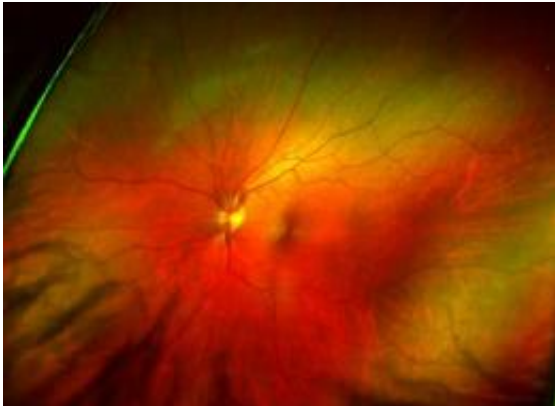


Retina implants: location is key

March 24 2010, by Pete Wilton



Healthy human retina by Michael Judge Brislin via Wikimedia Commons.

(PhysOrg.com) -- The first UK trial of a promising new retinal implant technique is to be led by Oxford University researchers.

The technology, developed by the firm [Retinal Implant](#), AG, involves implanting a device underneath a patient's retina.

The device itself is light sensitive, with a 1,500 pixel array, and is stimulated by the natural image focused by the eye - eliminating the need for an external camera (typically mounted on spectacles).

Retinal implants hold particular promise for the treatment of retinitis pigmentosa (RP) a form of inherited [retinal degeneration](#) affecting approximately 200,000 people worldwide that typically causes severe [vision problems](#) in adulthood.

The trial will be led by Professor Robert MacLaren of Oxford University's Nuffield Laboratory of Ophthalmology. 'I have been working in developing new treatments for patients with retinal diseases for many years and I was initially sceptical about the role of electronic devices,' he said.

'However, this recent work by the Retina Implant team is very impressive indeed and I would now certainly consider this technology as a viable treatment option for patients blind from RP.'

He described it as 'much more logical' to implant a device underneath the retina, as this is 'where the residual neurons are orientated towards the implant electrodes, because this should equate to a much higher pixel resolution.'

Making the implant itself light sensitive is, he believes, a major advance 'because the whole device can be contained within the eye. A power supply is fed through a battery behind the ear similar to a hearing aid.'

'This represents a true fusion of an electronic interface with the human [central nervous system](#) and we are likely now to learn a lot more about this technology as the trial progresses.'

The Oxford-led clinical trial using the technology, which will take place at the John Radcliffe Hospital, is due to start later this year.

Provided by Oxford University

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