

# RESEARCHERS IN RACE TO RESTORE SIGHT

**Melbourne, Australia; 21/02/2010:**



Hundreds of thousands of people around the world stand to benefit from an ambitious project to develop a bionic eye within four years.

The Monash-based team, made up of engineering and computer scientists, together with a team of medical researchers from the [Department of Physiology](#) and Alfred Hospital in Melbourne, and Victorian

companies Grey Innovation and MiniFab have begun work on an \$8 million dollar project, to develop a human implant.

The team aims to develop a device that is implanted directly on the region of the brain that processes vision signals (the visual cortex). It is hoped this would provide treatment for the majority of forms of blindness, including partial blindness.

Head of Electrical and Computer Systems Engineering at Monash University [Professor Arthur Lowery](#) said the funding will allow the team to take their concept to the next level.

"We will develop a device that stimulates the brain using hundreds of electrodes. This electrode array can be placed conveniently on the surface of the brain so the implant is not overly intrusive -- a relatively simple and safe procedure," Professor Lowery said.

"The electrodes stimulate the vision areas of the brain mimicking the stimulation they would normally receive through the optic pathway. This approach bypasses damaged or dead parts of the visual pathway including the retina and optic nerve meaning that it can cure up to 90 per cent of cases of blindness.

---

**Grey Innovation Pty Ltd**

(ABN 14 083 304 214)

255 Mary Street (PO Box 4239) Richmond Melbourne Australia 3121

P +61 3 8459 6999 F +61 3 8459 6998 E [info@greyinnovation.com](mailto:info@greyinnovation.com) W

[www.greyinnovation.com](http://www.greyinnovation.com)



## TECHNOLOGY **COMMERCIALISATION**

"Also, because the brain has a larger surface area than the retina it is possible to get a much higher resolution image than with retinal implants, enhancing the patient's residual vision."

The team includes head of the Monash Department of Surgery and director of the Alfred Hospital Department of Neurosurgery Professor Jeffrey Rosenfeld, world-renowned visual pathways expert Professor Marcello Rosa, MiniFab's Dr Erol Harvey, former CEO Dynamic Hearing Elaine Saunders, Monash mechanical and aerospace engineer Professor James Friend, and head of Electrical and Computer Systems Engineering Professor Arthur Lowery.

---

**Grey Innovation Pty Ltd**

(ABN 14 083 304 214)

255 Mary Street (PO Box 4239) Richmond Melbourne Australia 3121

**P** +61 3 8459 6999 **F** +61 3 8459 6998 **E** [info@greyinnovation.com](mailto:info@greyinnovation.com) **W**

[www.greyinnovation.com](http://www.greyinnovation.com)