Artificial Retina Project

Restoring Sight Through Science

U.S. Department of Energy Office of Science

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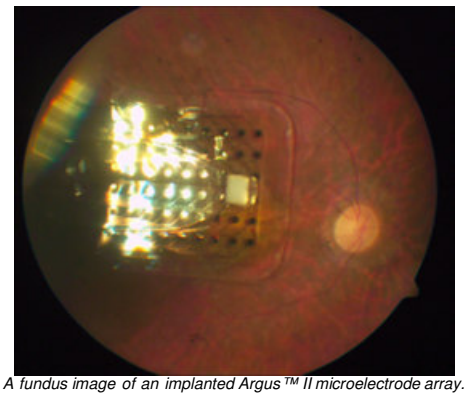


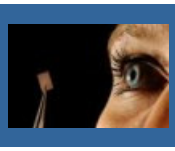
A fundus image of an implanted Argus™ II microelectrode array.

The U.S. Department of Energy's (DOE's) Artificial Retina Project is a collaborative, multi-institutional effort to develop an implantable microelectronic retinal prosthesis that restores useful vision to people blinded by retinal diseases. The ultimate goal of the project is to restore reading ability, facial recognition, and unaided mobility in people with retinitis pigmentosa and age-related macular degeneration.

The project taps into the **unique research technologies** and resources developed at DOE national laboratories to surmount the many technical challenges involved with developing a safe, effective, and durable product. The research team includes six DOE national laboratories, four universities, and private industry.

Three models are now in development or testing. Model 1, with 16 electrodes, has been implanted in six patients. As of mid-July 2009, a second model integrating a 60-electrode array has been implanted in 30 human subjects domestically and internationally. A third model, an array with a higher electrode count, is under development.

Clinical testing of the devices is supported by the National Eye Institute of the National Institutes of Health and others. For information on eligibility for participation in these studies, see *How to Participate*.



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Leveraging DOE research: AR Project spurs spinoff technologies

Clinical trials update

BBC features patient [Video]

The Artificial Retina Project is part of the
Biological and Environmental Research Program
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Contact Webmaster
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