

Electronic light-sensitive chip may restore vision in some blind patients

German researchers have found that an electronically boosted light-sensitive chip has the potential to restore sight to some blind patients. Eberhart Zrenner, executive director of the Eye Hospital at the University of Tübingen, announced at a recent press conference the findings of the test, the first of its kind. The researchers conducted surgery on seven blind patients between 26 to 58 years of age, and implanted a three-millimetre-square chip behind the retina of one eye in each of them. They found that the chip had restored limited vision to three of the patients. The research team will present its results at the Association for Research in Vision and Ophthalmology annual meeting

in Fort Lauderdale, Florida, in May. Retina Implant of Reutlingen, a start-up company co-founded by Zrenner, has developed these chips, and the company is now working on fine tuning them. Walter Wrobel, the Chief Executive Officer of the company, says that the chips may be ready to market by 2009. „We now know what improvements need to be made and we need more tests,” the Nature quoted the CEO as saying. The chip contains 1,500 light-sensitive microelectrodes, each generating a picture element (pixel), and each with an amplifier that boosts the signal delivered to stimulate the retina. It takes around five hours to implant it. According to the researchers, two of the

patients did not show any improvement in the trial because they had been blind for more than 10 years, and so seemed to have lost the ability to interpret the light signals. The three patients in whom the chip worked reported seeing „sort of an illuminated window frame”, in which they had limited vision. „The patients were absolutely enthusiastic about it, to see light or find a plate on the table in front of them. For them, it was tremendous progress,” says Wrobel. He says that a key to future success will be teaching patients to interpret the images better. The researcher, however, did not have to offer any surety for the long-term effects of the implants. (ANI) ■