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Newsletter from the Macular Degeneration Foundation, Inc.
P.O. Box 531313 Henderson, NV 89053
http://www.eyesight.org

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TRANSPLANTED RETINAL CELLS RESTORE VISION IN MICE

Breakthrough is Major Step in Retinal repair for Humans

By Ben A Shaberman: Foundation Fighting Blindness

An international retinal research team funded by the Foundation Fighting Blindness has restored vision in mice with retinitis pigmentosa through the transplantation of developing photoreceptor cells.

The breakthrough is one more step in the development of a treatment for restoring vision in people with a variety of retinal diseases including retinitis pigmentosa and macular degeneration – conditions that affect more than nine million Americans. While more work needs to be done before this transplantation approach can be studied in humans, the Foundation Fighting Blindness is strongly committed to moving this type of promising therapy into the clinic.

What's most noteworthy about the study is that the transplanted cells became full-fledged retinal cells and integrated into the host retina. Though scientists have previously performed retinal cell transplantation studies with varying success, never before have they achieved functional integration of photoreceptors – the cells that provide vision.

"Over the past couple of years, various research teams have transplanted retinal cells and tissue into the eye and they survived. While these promising studies have advanced the field, photoreceptor development and functional integration have been elusive," says Stephen Rose, Ph.D., Chief Research Officer, Foundation Fighting Blindness. "You need integration if you are going to fully repair damage and restore vision. This group of researchers has done just that. It's an important advancement."

The investigative team, which included Anand Swaroop, Ph.D., from the University of Michigan Kellogg Eye Center, used immature mouse retinal cells for transplantation.

A key to their success was choosing cells that were at just the right developmental stage – they are committed to becoming sight-giving photoreceptors and are also capable of integration. The researchers used two different techniques to verify that the mice had restored vision.

“We’ve made significant progress toward bringing cellular therapy to the clinic,” says Rose. “This new knowledge tells us that retinal cell transplantation is a viable strategy for restoring vision. We’re excited to move this promising technique to the next level.”

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FOVEA OBTAINS WORLDWIDE RIGHTS TO RETINAL DEGENERATION THERAPY

Fovea Pharmaceuticals SA signed an exclusive development and commercialization agreement with Novartis Pharma AG covering RdCVF (Rod-derived cone viability factor) for use in the treatment of retinal degeneration disorders.

Paris-based Fovea Pharmaceuticals, which is developing new drugs for treating back-of-the-eye (BOE) diseases such as retinitis pigmentosa, macular degeneration, glaucoma, macular edema in venous occlusion and diabetic retinopathy, points out that RdCVF is a new protein factor that has shown promise for treating retinal degeneration.

Fovea plans to develop RdCVF first in retinitis pigmentosa, which is recognized as one of the most common inherited causes of blindness in people younger than 50. The company points out that since there is no known cure for RP, it qualifies as an orphan disease. The development of RdCVF subsequently could be extended to other patholoigies, including the highly prevalent atrophic form of macular degeneration.

RdCVF acts by preventing cone cell death and by protecting remaining cones in patients suffering rod damage. Loss of cones causes disabling visual loss, as cone photoreceptor cells are responsible for central vision and central acuity, as well as color vision. In RP, as in other retinal degeneration disorders, treatment with RdCVF not only prevents cone cell death, but also helps preserve useful vision, even in patients with 95 percent cone photoreceptor loss.

Source Therapeutics Daily
Posted by Stefanie Baeker on January 17, 2007

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QUESTIONS FROM SUBSCRIBERS:
Do You have a list of drugs that could cause a risk factor with my eye condition?

The National Registry of Drug-Induced Ocular Side Effects lists the following drugs:

Aredia Topamax Neo-Synephrine
Accutane Cordarone Plaquenil
Diamox Darnanide Gauctabs and Neptazane
Trusopt Travatan Xalatan
Lumigan Rescula

Questions regarding prescriptions you are taking now should be discussed with your eye care professional or your pharmacist.

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CONTACTING MDF
To speak to a support representative directly, you may call 1-888-633-3937. If you reach our voice mail, please speak slowly and distinctly.

ORDERING BOOKS & TAPES

When purchasing items from Amazon.com, please remember to use the MDF search box located at http://www.eyesight.org/Books/books.html . By simply originating your search from our website, Amazon rewards the Foundation with a small commission from each product you order. Thank you.

MAKING CONTRIBUTIONS:
Please make checks payable to Macular Degeneration Foundation, Inc., P.O. Box 531313, Henderson, Nevada 89053, or you may use your credit card on our web site http://www.eyesight.org/Donations/donations.html . Your contributions make our services available as a support system for macular degeneration patients in the following ways:

1. We provide toll-free lines for personal contact assistance.
2. We mail brochures and other printed materials upon request.
3. We support an award-winning web site that provides the latest up-to-date information.
4. We fund research proposal grants to provide therapies for both the wet and dry form of AMD. Contributions marked "research" are used 100% for research.

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MDF was founded in 1992 by Edmund J. Aleksandrovich Ph.D (a victim of macular degeneration). It provides MD patients and their families with the information necessary to understand the disease, the latest news concerning ways to cope with the disease, and supports the efforts of researchers to find a cure.

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