

Sight Loss Services, Inc.
Cape Cod and Islands
“The CandleLight” Newsletter March 2016

“Springtime is the land awakening. The March winds are the morning yawn.”

- Lewis Grizzard

Genetic Repair of Retinitis Pigmentosa in Patient-Derived Stem Cells

(The following is excerpted from an article published on nature.com; Scientific Reports)

Columbia University Medical Center (CUMC) and University of Iowa scientists have used a new gene-editing technology called CRISPR, to repair a genetic mutation responsible for retinitis pigmentosa (RP), an inherited condition that causes the retina to degrade and leads to blindness in at least 1.5 million cases worldwide.

In the study, the researchers created stem cells from a sample of skin that was taken from a patient with retinitis pigmentosa. As the patient-derived stem cells still harbored the disease-causing mutation, the teams used CRISPR to repair the defective gene. The stem cells can potentially be transformed into healthy retinal cells and

transplanted back into the same patient to treat vision loss

The current treatment for retinitis pigmentosa recommended by the National Institutes of Health--consuming high doses of vitamin A--slows down vision loss but does not cure the disease.

Bassuk, A. G. et al. Precision Medicine: Genetic Repair of Retinitis Pigmentosa in Patient-Derived Stem Cells. Sci. Rep. 6, 19969; doi: 10.1038/srep19969 (2016).

<http://www.nature.com/articles/srep19969>

Incidence of childhood myopia has more than doubled over last 50 years among American children

The largest study of childhood eye diseases ever undertaken in the U.S. confirms that the incidence of childhood myopia among American children has more than doubled over the last 50 years. The findings echo a troubling trend among adults and children in Asia, where 90 percent or more of the population have been diagnosed with myopia, up from 10 to 20 percent 60 years ago. The Multi-Ethnic Pediatric Eye Disease Study (MEPEDS), conducted by researchers and clinicians from the USC Eye Institute at Keck Medicine at USC in collaboration with the National Institutes of Health (NIH),

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adds to a growing body of research into the incidence and potential causes of myopia, or near-sightedness, in children and adults.

The possible culprit? Too much "screen time" and not enough sunlight, according to Rohit Varma, MD, MPH and director of the USC Eye Institute.

"While research shows there is a genetic component, the rapid proliferation of myopia in the matter of a few decades among Asians suggests that close-up work and use of mobile devices and screens on a daily basis, combined with a lack of proper lighting or sunlight, may be the real culprit behind these dramatic increases," said Varma. "More research is needed to uncover how these environmental or behavioral factors may affect the development or progression of eye disease."

<http://www.news-medical.net/news/20160121/Incidence-of-childhood-myopia-has-more-than-doubled-over-last-50-years-among-American-children.aspx>

Company has stopped making 20/20 Pens!

Popular as they are, production of 20/20 pens has been discontinued. We will no longer have them available at the office.



In Honor of St. Patrick's Day, Here is an Update from Our Friends at "Fighting Blindness"

Fighting Blindness is an Irish, patient led charity that funds research seeking cures for eye disease. One of their newer projects looks into the neuroprotective compound Norgestrel.

Lead researcher is Professor Tom Cotter, University College Cork. Professor Cotter is the head of a large research group in Cork and he is a world expert in the area of apoptosis. This is the mechanism by how cells die and for the past number of years Tom and his team have been investigating the mechanism of photoreceptor cell death in retinal degenerations. Tom has demonstrated that the compound Norgestrel (the active compound of an oral contraceptive) the "mini-pill" lends a protective effect to photoreceptor cells, preventing their death and therefore maintaining vision. This funding will allow the team to build on these encouraging results to develop this potential therapy towards a clinical trial.

<http://www.fightingblindness.ie/cure/research-projects-we-currently-fund/>

**Research Shows Statins May Be Of
Benefit In Treating Dry AMD**

Researchers from Harvard Medical School and the University of Crete in Greece have published findings from a small phase 1/2 clinical trial in which 10 out of 23 subjects with dry AMD who were given high doses of the cholesterol-lowering drug Lipitor showed regression of drusen deposits and demonstrated some improvements in visual acuity. In the study, 23 patients with dry-form AMD were given a high dose (80 milligrams) of atorvastatin (Lipitor). In 10 of the patients, the fat deposits under the retina disappeared and they had a slight improvement in vision clarity, according to the study. It typically took a year to 18 months of treatment for these positive results to arise, the researchers reported.

Although this research was conducted with a small number of subjects and is in its earliest stages, the results show promise as a potential treatment for dry AMD.

<http://www.visionaware.org/blog/visionaware-blog/new-research-statins-show-promise-as-a-treatment-for-dry-age-related-macular-degeneration/12>

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