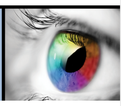
DISCOVERY
THE DISCOVERY EYE FOUNDATION

The Discovery Eye Foundation (DEF) supports research and is dedicated to finding treatments and cures for sight-threatening eye diseases.

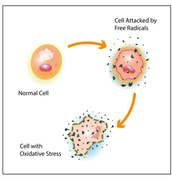


DEF E-Newsletter — Fall 2018

In this Issue:

AMD Research Can Lead to New Treatment for Keratoconus

The Discovery Eye Foundation has long researched both age-related macular degeneration (AMD) and keratoconus (KC). Recently, DEF-funded researchers have found commonalities between the two diseases that could lead to an important breakthrough in KC treatment.



Oxidative stress in cells can cause atoms to become what are known as "free radicals," where electrons are not paired properly. Free radicals, when activated by such triggers as UV light, damaged mitochondria or eye rubbing, can cause cell decline and death. This is what happens to retina cells in the macula of patients with AMD, and in the corneal cells of those with KC.

"Antioxidants," on the other hand, fight against free radicals, reducing oxidative stress and repairing damaged cells. "We have been studying oxidative stress for years in our research on AMD," DEF Medical Director, Anthony Nesburn, MD says.

AMD Research Can Lead to New Treatment for KC cont'd

Unusual Collaborations Draw on DEF's AMD Cybrid Model

A portion of the research funded by Discovery Eye Foundation focuses on mitochondria and their role in age-related macular degeneration (AMD). DEF researchers have shown that damaged mitochondria are a significant factor in accelerating cell death and developing AMD, and DEF Research Director Dr. Cristina Kenney has developed a cybrid mitochondria model to study the disease.

"Our goal is to use the AMD cybrid model to identify drugs and molecules that are protective and restore health to the cells," Kenney says. "To this end, we have entered into special collaborations with scientists in non-eye disciplines related to aging, in the hopes that we can leverage their progress toward sight-saving treatments for AMD."

Unusual Collaborations Draw on DEF's AMD Cybrid Model cont'd

Meet the Researcher: Thomas Vo

Thomas Vo

As a child in Orange County, Thomas Vo enjoyed going to the optometrist — so much so that he decided to become one himself. "There was no pain involved, and I always left seeing better than I had when I came in," he recalls. "I thought it would be a gratifying job."

As he completed his undergraduate degree in biology at UC Irvine, however, he had a change of heart and began to veer toward ophthalmology.

Meet the Researcher - Thomas Vo cont'd

Reaching Out to the Community: AMD Lecture

DEF Research Director Dr. Cristina Kenney gave five lectures in the past year called *Age-Related Macular Degeneration and Alzheimer's Disease: Similar Diseases, Different Locations, Possible Common Treatments.*

Held at retirement communities throughout Orange County, the lectures were well-attended, and Kenney plans to present more next year.

For more information on the topic, visit **www.discoveryeye.org/age-related-macular-degeneration-alzheimers**

DEF Names Ambassador of Vision: Tom Sullivan

DEF has named entertainer, singer, actor, author, motivational speaker Tom Sullivan as its first Ambassador of Vision. The role was created to expand DEF's donor base and create corporate partnerships. Meet him in our upcoming Thanksgiving issue.

To learn more about Sullivan, visit his website at **www.sullivanlive.com**

Discovery Eye Foundation's groundbreaking research needs your help to move forward!

Visit our website at www.discoveryeye.org/you-can-help/donate/ to find out how you can help, or click the donate now button below.

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