



DECADE OF VISION
2010-2020
an initiative of the
Alliance For Eye And Vision Research

THE ALLIANCE FOR EYE AND VISION RESEARCH

In conjunction with:
Congressional Vision Caucus
AMD Alliance International
Association for Research in Vision and Ophthalmology (ARVO)
Lighthouse International
Prevent Blindness America

*continues its series of educational briefings on exciting new
developments in eye and vision research*

Please join us for a Luncheon Briefing

*New Developments in Age-related Macular
Degeneration (AMD) Research:
Robo4 Protein Pathway*

In Recognition of International AMD Awareness Week 2009

Tuesday, September 22, 2009

12 Noon - 1:15 pm

House Rayburn B-339

**Please R.S.V.P. to
Dina Beaumont @ 202-530-4672 or Dinabeau@aol.com**

**Note: AEVR is a 501(c)3 Non-Profit Educational Foundation hosting this
widely attended event**

**AEVR's *Decade of Vision 2010-2020 Initiative* Presents a
Congressional Briefing Recognizing International AMD Awareness Week 2009
"New Developments in Age-related Macular Degeneration (AMD) Research:
Robo4 Protein Pathway"**

September 22, 2009

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What is the Robo4 Protein Pathway and why is it important to eye research?

Robo4 is a protein found only in cells in the interior surface of blood vessels. Once the protein is activated, it initiates a chain of biochemical events to stabilize blood vessels and prevent uncontrolled growth. In the "wet" form of age-related macular degeneration (AMD), new blood vessels grow into a part of the retina (the light sensitive back of the eye) called the macula, which is necessary for central vision. These new blood vessels are often unstable and leak, affecting vision. In a March 2008 study published in *Nature Medicine*, researchers reported that damage from AMD could be prevented or even reversed when the Robo4 protein was activated in mice models that simulated the disease, inhibiting abnormal blood vessel growth and stabilizing blood vessels to prevent leakage. Since this research used the same animal models required for drug development, it could potentially reduce the amount of time required to test the approach in people and develop treatments for AMD, as well as diabetic retinopathy. The National Eye Institute (NEI) and the National Heart, Lung, and Blood Institute (NHLBI) within the National Institutes of Health (NIH) funded the research, which NEI has described as "a prime example of basic science research yielding a discovery with direct clinical applications."

Why is research into AMD important?

NEI reports that AMD is the leading cause of vision loss in older Americans, with almost 10 million individuals age 40+ currently experiencing intermediate-to-advanced stages of the disease. Currently, 200,000 Americans each year develop advanced AMD, and this number is expected to double by year 2020. Since AMD affects central vision, it severely affects a person's ability to read and drive, which has an enormous impact on productivity, independence, and quality of life. With the aging of the population, AMD reflects a significant portion of the \$68 billion annual cost to the United States of vision impairment and eye disease.

Who will speak?

Kang Zhang, M.D., Ph.D., serves as professor of Ophthalmology and Human Genetics at the Shiley Eye Center/University of California at San Diego. An NIH-funded investigator, he focuses on novel disease gene targets and therapies in macular degeneration, diabetic retinopathy, and inherited retinal degenerations. He has collaborated closely with Dean Li, M.D., Ph.D., (University of Utah), whose laboratory initially cloned the protein in 2003. Drs. Zhang and Li together led the study published in *Nature Medicine*.

About the Alliance and its *Decade of Vision 2010-2020 Initiative*...

In H. Res 366 and S. Res. 209 passed earlier this year, Congress designated 2010-2020 as the decade of vision and acknowledged the Alliance for Eye and Vision Research's (AEVR) efforts to provide sustained education about the impact of eye disease and vision impairment through its *Decade of Vision 2010-2020 Initiative*. AEVR, a 501(c)3 non-profit foundation, is pleased to host this widely attended event in conjunction with:

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