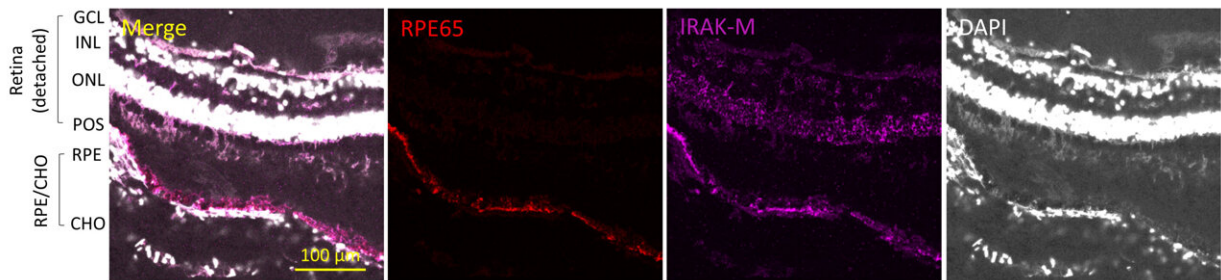


Researchers unveil pioneering approach to combat age-related vision loss

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IRAK-M expression in human RPE and retina. Credit: Liu et al. / *Science Translational Medicine*

Cirrus Therapeutics, the University of Bristol, and London's Global University Institute of Ophthalmology have discovered a new treatment for age-related macular degeneration (AMD), the leading cause of vision loss among older adults.

Featured on the cover of the journal *Science Translational Medicine*, this [research reveals](#) that boosting a specific protein, IRAK-M, in retinal cells could offer a new and highly effective therapy for AMD.

AMD can severely impact a person's vision. Patients suffering from AMD often start with [blurred vision](#) or seeing a black dot in their central vision, which can ultimately expand to the point where there is no useful

central vision. Currently, AMD affects approximately 200 million people worldwide, a number projected to rise to 288 million by 2040 with graying populations. The exact cause of AMD is complex and thought to involve a combination of aging, environmental, and lifestyle factors.

The team found that augmenting IRAK-M levels in retinal cells can significantly protect against [retinal degeneration](#).

"This discovery represents the first pathway-agnostic approach toward AMD, offering a comprehensive treatment option for the millions of people who suffer from this debilitating condition," said Dr. Andrew Dick, Head of the Academic Unit of Ophthalmology at the University of Bristol, Director of the UCL Institute of Ophthalmology, and co-founder and Chief Scientific Advisor of Cirrus Therapeutics.

Dr. Jian Liu, the first author and senior research scientist at the Academic Unit of Ophthalmology of the University of Bristol, added, "Since age stands as a primary risk factor for AMD, the gradual decrease of IRAK-M levels with age, which further declines in AMD, is a key way to identify the potential markers of early AMD progression and ultimately a new way of treatment."

This discovery will build and improve upon current treatments for AMD, which are targeting single pathophysiology pathways.

"Our novel approach not only addresses the multiple pathways involved in treating AMD but also offers the most compelling and evidence-based strategy available today," said Cirrus Therapeutics co-founder and Chief Executive Officer Dr. Ying Kai Chan.

Cirrus Therapeutics recently spun out of the University of Bristol to develop therapies related to this discovery.

More information: Jian Liu et al, Replenishing IRAK-M expression in retinal pigment epithelium attenuates outer retinal degeneration, *Science Translational Medicine* (2024). [DOI: 10.1126/scitranslmed.adi4125](https://doi.org/10.1126/scitranslmed.adi4125).
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Provided by Cirrus Therapeutics

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