

AMD discovery: New hope for treatment of vision loss

20 February 2008

Scientists have won a major battle in the fight against age-related macular degeneration, or AMD, a blinding eye disease that affects millions of people. An international team, led by researchers at Sainte-Justine Hospital and the Université de Montréal, has identified the deficient receptor that causes the dry form of AMD.

In the February edition of the medical journal PLoS Medicine, the researchers explain how a deficiency of the CD36 receptor prevents the evacuation of oxidized lipids in the eye. Those oxidized lipids in turn accumulate and attack the layers beneath and over the retina – thereby causing vision loss.

“Our discovery has important implications for the development of new therapies,” explains lead researcher, Dr. Sylvain Chemtob, who co-authored the paper with Université de Montréal collaborator Dr. Huy Ong, a professor at the Faculty of Pharmacy, as well as Florian Sennlaub of the Institut national de la santé et de la recherche médicale (INSERM) in France.

Chemtob, a neonatal researcher at Sainte-Justine Hospital and a professor at the Université de Montréal’s Department of Pediatrics and School of Optometry, used mice and rat models to pinpoint the scavenger receptor responsible for retinal degeneration typical of dry AMD. “We found that a deficiency in CD36 receptors leads to significant and progressive age-related macular degeneration,” he says. “CD36 deficiency leads to central vision loss – a key feature of dry AMD.”

“This discovery brings us one step closer to treating dry AMD, which could significantly improve the quality of life of seniors who are most affected by this eye disease,” added co-author Dr. Huy Ong. “Now that we have also developed the molecules that activate CD 36 receptor, we are working on the validation of the efficacy of these molecules as potential therapeutic agents for dry AMD treatment with prospect at the horizon of

2015.”

Wet and dry AMD remain an alarming cause of vision loss in the western world, which according to the AMD Alliance International, affect 30 million people aged 50 and over. Dry AMD is the most pervasive of the disorders and affects 90 percent of AMD cases.

Source: University of Montreal

APA citation: AMD discovery: New hope for treatment of vision loss (2008, February 20) retrieved 11 October 2022 from <https://medicalxpress.com/news/2008-02-amd-discovery-treatment-vision-loss.html>

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