Choroideremia Research Foundation Announces Six New Global Grants to Accelerate Vision Science

CRF awards six global grants to advance CHM research, spanning AI, gene editing, and more—driving progress toward treatments for this rare retinal disease.

A microscope sits on a laboratory bench, symbolizing the Choroideremia Research Foundation's commitment to advancing vision science through cutting-edge research.

SPRINGFIELD, MA, UNITED STATES, June 6, 2025 /EINPresswire.com/ -- The Choroideremia Research Foundation (CRF) is pleased to announce its latest round of scientific research funding, awarding six new grants to advance understanding and treatment options for choroideremia (CHM), a rare inherited retinal disease. These projects reflect the Foundation's commitment to investing in diverse, high-impact research around the world. Award recipients are as follows:

Sena Gocuk, OD, MPhil, PhD, FAAO
Department of Optometry and Vision Sciences, University of Melbourne, Australia

STUDY: Advanced Genomic Analysis of Female Carriers of X-linked Retinal Disease

AIM: To investigate the genetic and biological reasons behind the wide variability in retinal disease severity among female carriers of CHM. The study includes longitudinal tracking, analysis of X-inactivation and genomic imprinting, and comparisons with affected male relatives. Findings may help determine therapeutic eligibility and improve family planning support.

GRANT: $50,000

Abigail Fahim, MD, PhD

Clinical Assistant Professor, Ophthalmology and Visual Sciences, Kellogg Eye Center, University of Michigan

STUDY: Mechanisms of Defective RPE Cell Autophagy in Choroideremia

AIM: To determine how loss of the CHM gene affects cellular recycling mechanisms (autophagy) in retinal pigment epithelial (RPE) cells. The research focuses on mTORC1 signaling, Rab12 under-prenylation, and the roles of amino acids and iron in driving degeneration, with the goal of identifying new therapeutic targets.

GRANT: $50,000

Thomas Barker, PhD
Professor of Biomedical Engineering, Cell Biology, and Pulmonary and Critical Care Medicine, University of Virginia

STUDY: Deep Learning Discovery of Molecular Glues that Preserve Sight in Choroideremia

AIM: To harness artificial intelligence and deep learning to identify novel "molecular glues" that can stabilize or enhance malfunctioning proteins caused by CHM mutations. This approach seeks to reveal new small molecule drug candidates to prevent vision loss.

GRANT: $61,273

Miguel Seabra, MD, PhD and Pedro Antas, PhD
Global Eye Initiative, Champalimaud Foundation, Portugal

STUDY: CRISPR-Based Gene Editing for Choroideremia

AIM: To explore the use of CRISPR gene editing as a curative treatment for choroideremia by directly correcting CHM mutations in retinal cells. This preclinical study lays the groundwork for permanent, one-time interventions for CHM patients.

GRANT: $65,000
THREE-YEAR PROJECTED GRANT TOTAL: Up to $195,000, contingent upon satisfactory progress and the submission of required update reports.

Ajoy Vincent, MBBS, MS, FRCSC
Associate Professor, Department of Ophthalmology and Vision Sciences, Hospital for Sick Children, Toronto, Canada

STUDY: A Classification System for Choroideremia

AIM: To develop and validate a standardized classification system for stages of CHM using imaging and functional tests. This tool will aid clinicians in diagnosing and monitoring disease progression and in matching patients to future clinical trials.

GRANT: $38,524.53

Robert MacLaren, MB, ChB, DPhil, DSc, FRCOphth, FRCS, FACS, FMedSci
Professor of Ophthalmology, University of Oxford, United Kingdom

HOLZER FAMILY RESEARCH AWARD
STUDY: Long-Term Follow-Up of Choroideremia Patients Receiving Bilateral Retinal Gene Therapy

AIM: To assess the durability and safety of bilateral gene therapy in patients with choroideremia. This long-term follow-up builds on Dr. MacLaren's groundbreaking work in CHM gene therapy will inform future regulatory and clinical strategies.

GRANT: $32,264.20
THREE-YEAR PROJECTED GRANT TOTAL: Up to $99,630.45, contingent upon satisfactory progress and the submission of required update reports.

Choroideremia (CHM) is a rare inherited form of blindness affecting approximately 1 in 50,000 people. Due to its X-linked inheritance pattern, males are most severely affected, while females often experience milder vision loss. Symptoms begin in childhood, typically with night blindness and peripheral vision loss, and can progress to complete blindness. An estimated 6,000 people in the United States and 10,000 in the European Union are impacted. There are currently no approved treatments for CHM.

For more information about all research studies the CRF supports, please visit curechm.org/research.

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About Choroideremia

Choroideremia (CHM) is a rare inherited form of blindness affecting approximately 1 in 50,000 people. Due to its x-linked inheritance pattern males are most severely affected with females usually experiencing much milder visual impairment. Symptoms begin in early childhood with night blindness and restriction of visual field being the earliest noticeable effects, eventually progressing to complete blindness. An estimated 6,000 people in the United States and 10,000 in the European Union are impacted by Choroideremia. There are currently no approved treatments for Choroideremia. For more information, visit curechm.org/#choroideremia

About the Choroideremia Research Foundation Inc.

The Choroideremia Research Foundation was founded in 2000 as an international fundraising and patient advocacy organization to stimulate research on CHM. Since its inception, the CRF has provided approximately $5 million in research awards and is the largest financial supporter of CHM research worldwide. Research funded by the CRF has led to the development of a CHM animal model, the pre-clinical production of gene therapy vectors currently in clinical trials, and the CRF Biobank which stores tissue and stem cell samples donated by CHM patients. For more information, visit curechm.org

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