International AMD Gene Consortium

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Research Areas

Biomarker Research

At a Glance

- Status: **Active Consortium**
- Year Launched: **2010**
- Initiating Organization: **National Eye Institute**
- Initiator Type: **Government**
- Location: **North America**

Abstract

The National Eye Institute (NEI) created the International AMD Genetics Consortium in 2010 to increase the statistical power needed to identify genes that have small, yet significant contributions to age-related macular degeneration (AMD).

Mission

The goal of the consortium is to identify the remaining genetic risk variants for AMD. The study began with consortium members contributing their existing data from previous genome-wide association studies to a single genetic database on more than 7,600 people with advanced AMD (dry type, neovascular, or both) and more than 50,000 controls. Genome-wide association studies (GWAS) look for differences in the frequency of single nucleotide polymorphisms (SNPs) in a disease-affected cohort compared with controls.

Consortium History

The consortium was created by the National Eye Institute. Scientists from 18 research groups in 14 countries formed the consortium in the spring of 2010 with the goal of speeding up the search for AMD susceptibility genes.

Structure & Governance

The National Eye Institute, part of the National Institutes of Health, leads the federal government's research on the visual system and eye diseases. NEI supports basic and clinical science programs that result in the development of sight-saving treatments.

The consortium has oversight from several committees, including a Gene Analysis, Gene Phenotype, and Gene Steering Committee.

Financing

The National Institutes of Health/National Eye Institute provided initial funding for the consortium in 2010.

Data Sharing

NEI’s effort to unite the international research community to share GWAS data sets made it possible to solve a common goal in understanding this blinding disease.

The consortium conducted a meta-analysis on 15 GWAS representing over 8,000 patients with AMD and 50,000 controls. In addition to verifying known genes, the consortium identified 19 new gene variants. The genes identified in these studies function in the immune system, cholesterol transport and metabolism, and formation and maintenance of connective tissue. This study provides a nearly complete picture of genetic heritability for AMD. The AMD Gene Consortium confirmed 12 loci identified in previous studies that are associated with increased risk of macular degeneration. The findings are reported online in the journal Nature Genetics. The consortium identified 19 new gene variants.

Homepage	http://eaglep.case.edu/iamdgc_web/

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