

# A GABRIEL Consortium Large-Scale Genome-Wide Association Study of Asthma

 [consortiapedia.fastercures.org/consortia/gabriel/](http://consortiapedia.fastercures.org/consortia/gabriel/)

## Research Areas



### Biomarker Research

Diagnostic, Genomic Biomarker



### Basic Research

## At a Glance

- Status: **Completed Consortium**
- Year Launched: **2006**
- Initiating Organization: **Wellcome Trust**
- Initiator Type: **Third-party organization**
- Location: **Europe**

## Abstract

The European GABRIEL Consortium in conjunction with partners from many other countries undertook the largest study to date in the genetics of asthma. This was a genome-wide association study by genotyping 10,365 persons with physician-diagnosed asthma, as well as 16,110 unaffected persons obtained from 23 individual studies. Random-effects pooled analysis was applied to test for association in all subjects and in subgroups of childhood-onset (present below the age of 16 years), adult-onset, severe, and occupational asthma.

## Mission

European cases and population-matched controls were obtained from clinics and cohort and cross-sectional population surveys, including some family-based studies, cases, and controls from the first-generation, genome-wide association study, and cases and controls of European descent from Canadian, Australian, and U.S. surveys. Asthma was considered present if diagnosed by a physician. Childhood-onset asthma was defined as being present below the age of 16 years and adult-onset asthma to have started at 16 years or older. Some surveys contributed samples to both age-of-onset groups. Other subgroups consisted of cases of unknown age of onset, cases with occupational

asthma, or cases of severe asthma. All participants or their parents provided signed informed consent to participate in the study, according to the rules of local ethics committee. After quality control and filtering, genotype on 582,892 single nucleotide polymorphism (SNPs) on 10,365 cases and 16,110 controls from 23 different studies were retained.

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## Financing

This work was supported by the European Commission as part of GABRIEL (A multidisciplinary study to identify the genetic and environmental causes of asthma in the European Community) contract number 018996 under the Integrated Program LSH-2004-1.2.5-1. The study was also funded by the Wellcome Trust under WT084703MA: “A second-generation genome-wide association study for asthma,” Asthma UK (the Asthma UK genetics of severe asthma study (AUGOSA)) and the Ministère de l’Enseignement supérieur et de la Recherche (CEPH and CNG).

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## Data Sharing

The results file, available on the consortia website, contains the statistics divided by age-category and study in addition to pooled results for all the markers retained in the analysis after quality control.

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## Impact/Accomplishment

The consortium’s activities resulted in an article published in the New England Journal of Medicine on Sept. 23, 2010. “A Large-Scale, Consortium-Based Genomewide Association Study of Asthma” is linked on the consortium’s website.

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## Links/Social Media Feed

Homepage

<http://www.cng.fr/gabriel/index.html>

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## Sponsors & Partners

Aalborg Hospital

Abt. Fuer Kinderheilkunde Forschungsinstitut zur Praevention von Allergien und

Atemwegserkrankungen im Kindesalter

Academic Unit of Respiratory Medicine

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Canadian Childhood Cohorts: Canadian Asthma Primary Prevention Study (CAPPS) & Study of

Asthma Genes and Environment (SAGE) Investigator

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Karolinska Institutet  
KSMU Study Investigator  
Kursk State Medical University  
Max-Delbrück-Centrum (MDC) for Molecular Medicine  
Member of the GABRIEL Consortium  
Municipal Institute of Medical Research (IMIM-Hospital del Mar)  
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