

European Network for Genetic and Genomic Epidemiology (ENGAGE)

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Research Areas



Biomarker Research

Diagnostic



Basic Research



Data-Sharing Enabler

At a Glance

- Status: **Completed Consortium**
- Year Launched: **2008**
- Initiating Organization: **European Commission Seventh Framework Programme (FP7)**
- Initiator Type: **Government**

Abstract

The European Network for Genetic and Genomic Epidemiology (ENGAGE) consortium aims to translate data emerging from large-scale research efforts in molecular epidemiology into information of direct relevance to future advances in clinical medicine. The ENGAGE consortium will integrate and analyze one of the largest ever human genetics dataset (more than 80,000 genome-wide association scans and DNAs and serum/plasma samples from over 600,000 individuals). One goal is to demonstrate that the findings from ENGAGE can be used as diagnostic indicators for common diseases that will help us to understand better risk factors, disease progression and why people differ in responses to treatment.

Mission

The European Network for Genetic and Genomic Epidemiology (ENGAGE) consortium aims to translate data emerging from large-scale research efforts in molecular epidemiology into information of direct relevance to future advances in clinical medicine. The overall objectives of ENGAGE are to:

Establish an international framework for research into genetic and genomic epidemiology by assembling the best researchers, the best sample and data sets in areas of primary focus (cardiovascular, metabolic and behavioral diseases), the best ethical guidance and the best analytical and translational platforms.

Investigate the origins and causes of metabolic and cardiovascular disease phenotypes. This initial focus is due to their priority for European and global health, with hopes that the methods developed and lessons learned will also be applied to a wider range of disease areas including behavioral and psychiatric phenotypes during the course of the project. ENGAGE aims to evaluate the clinical and public health relevance of the novel disease and trait-susceptibility genes that are identified, demonstrating that these findings can be used as diagnostic indicators for common diseases. This will help to better understand risk factors, disease progression and why people differ in responses to treatment.

Improve the sharing and integration of large data sets with the consortium's combined access to an extensive range of well phenotyped and catalogued population cohorts representing >600,000 subjects and including a number of ethnically homogeneous population sets. Furthermore, Genome wide association data (GWA) are available for >100,000 of these subjects. The ENGAGE project aims to bring together these datasets efficiently to perform large scale integrated genetic association analyses in order to accelerate discovery of novel disease-susceptibility variants undetectable in individual studies.

Explore key methodological questions to European research such as the consequences of ethnic and environmental heterogeneity for gene discovery efforts and the allelic architecture of common disease, and the development of novel technological and statistical approaches for the study of human disease. ENGAGE aims to find new ways of providing recommendations for methodological issues within European research in genetic and genomic epidemiology.

Facilitate translation of findings to the clinical area by disseminating research outputs to both the scientific and non-specialist audience and at contributing to international efforts in large population cohorts by maintaining very close contacts with the P3G effort (Public Population Projects in Genomics).

Consortium History

2008 – Program launched

Financing

Funded with 12 M euros by the European Commission under the 7th Framework Programme-Health Theme.

Data Sharing

Key ethical issues in ENGAGE and in all biobanks-related international consortia studies that share data involve confidentiality, data security, consent and feedback to the participants regarding study results.

A key consideration in structuring the ENGAGE project was to include a research component on societal aspects that utilizes the ENGAGE project as an ‘in vivo’ design whereby relevant ethical and societal issues are analyzed within the framework of the project itself. For the purposes of the ENGAGE study, all samples will be coded, and no personal identifiers are used and all is made to protect the privacy of study participants. Only study samples that were consented and approved by the local ethical committee will be used for genetic and genomic epidemiological studies within ENGAGE.

The results of the first round of ENGAGE led meta-analyses have already been published in high profile journals and have raised interest in the mainstream press, resulting in a dissemination of key messages to the general public.

Homepage <http://www.euengage.org/>

Sponsors & Partners

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Updated: **04/15/2016**