

## GENOMEUTWIN: an integrated project of eight twin cohorts for studies on complex traits

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**Background:** Studies on large population-based cohorts are of significance in the current era of genomic research aiming to characterize the background of common human traits and diseases. Twin cohorts provide a unique advantage for investigations of the role of genetics and environment in the aetiology of common diseases. The EU-funded (Fifth Framework program, FP5; nr QLG2/CT/2002/01254) GenomeUtwinn consortium ([www.genomeutwin.org](http://www.genomeutwin.org)) consists of eight twin cohorts and a large pan-European prospective epidemiological study MORGAM ([www.ktl.fi/morgam](http://www.ktl.fi/morgam)). The total study population includes over 600.000 twin pairs and over 130.000 participants in MORGAM cohorts.

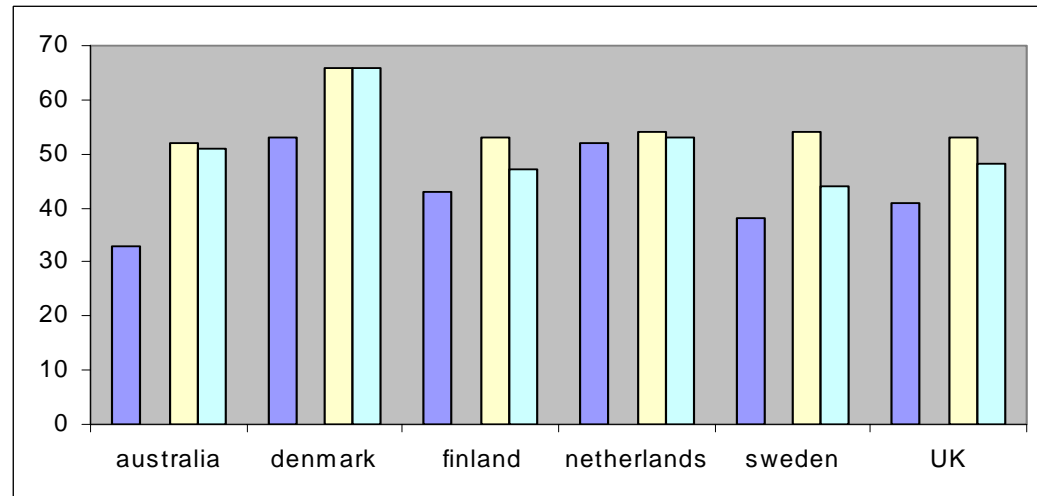
### Participating twin cohorts:

Australia, Denmark, Finland, Italy, Netherlands, Norway, UK and Sweden.

- Twin cohorts represent the whole population
- Contain longitudinal information on phenotypes
- Contain longitudinal information on lifestyle
- Provide a unique opportunity to understand the genetic architecture of common diseases

### Genes for complex traits: e.g. migraine, BMI, height, cardiovascular risk, longevity

- heritability
- linkage
- association studies



Heritability for migraine, systolic and diastolic blood pressure in 6 countries. (*Twin Research*, October, 2003) Papers at: [www.ists.qimr.edu.au/journal.html](http://www.ists.qimr.edu.au/journal.html)