



Application number/Title: 27960 - Population structure in the UK Biobank samples

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Keywords provided by the Applicant PI to describe the research project:

Population structure, GWAS

Application Lay Summary:

1a: We will investigate population structure in the UK Biobank genetic dataset. When searching for genes that influence a particular disease knowledge of the genetic ancestry of the study samples is important. So uncovering the population structure at a fine-scale will be useful for these studies.

1b: The research will provide a characterisation of the fine scale population structure in the UK Biobank samples. This will be useful to all those researchers carrying out genome-wide association studies and enhance the discovery of novel disease associations.

1c: We will use the genome wide genotype, haplotype and imputed data to investigate the fine scale population structure in the UK Biobank samples . We will use the data together with existing genetic variation resources, and statistical methodology to look for similarities and differences between individuals with and without known ethnicities. This will allow us to assess the extent that individuals can be categorized as having mixed ancestry from known source populations. We will test the use of this mixture information in GWAS studies to protect against confounding.

1d: This research will be performed on the full set of UK Biobank samples.