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Summary of research

Key words: Longevity, lifespan, genetic, environmental, risk, biomarkers.

We aim to identify the genetic factors that contribute to longevity, to construct prediction models of death risk that combine genetic and environmental risk factors, and to identify biomarkers or predictors of forthcoming death.

Understanding the causes of longevity will help to understand the ageing process and how it relates to disease onset. In turn, this will lead to better disease prevention policies and more effective intervention mechanisms that ultimately will delay death. Understanding the molecular mechanisms that lead to death could offer the opportunity to develop drugs that could reverse or slow down the processes that lead to death.

At recruitment, the UK Biobank participants were measured for a range of disease-related intermediate phenotypes and their blood and urine taken for measuring other biomarkers of disease. In addition, DNA was extracted and their genetic make-up is currently been measured. We will correlate the biomarkers measurements and the DNA variations with age at death. We will use information of dead and alive participants that have survived to their current age. Once the contributing factors have been identified we will combine all the risk factors to give the best predictor model of longevity and death.

Data only (no samples), including baseline physical measurements, questionnaire information, genetic and biochemistry data, are required for the full cohort. We request repeated measures from the repeated assessment when available.