

**Applicant**

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**Project Title**

Adverse childhood experiences, genomic influences, and acceleration of biological aging in middle-aged and older adults in the CLSA

**Project Summary**

Adverse childhood experiences (ACEs), including childhood exposure to abuse, neglect, and intimate partner violence can have significant and lasting effects on health outcomes in later life. There is research evidence that childhood maltreatment may be heritable, but the genetic influence on ACEs and the causal association of ACEs with health outcomes is not well understood. Further, it is proposed that exposure to ACEs may accelerate biological aging, which in turn may be associated with poor mental and physical health outcomes, however, this is yet to be examined in older adults. Therefore, the purpose of this study is to examine the influence of genetic heritability on ACEs and its association with health outcomes, assess the impact of ACEs on epigenetic and metabolomic aging, and identify pathways by which ACEs may become biologically embedded and confer risk for a range of health problems later in life.

**Keywords**

Adverse childhood experiences, Biological aging, Epigenetic age, Metabolomic age, Genetics