



## CLSA Approved Project

**Applicant**

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**Project Title**

Improving understanding of the role of genetic variations in human disease and disease-related traits and integrating this knowledge into discovery of new drug targets and disease risk prediction

**Project Summary**

Our research aims to identify genomic factors affecting complex traits and diseases and use these discoveries to improve disease risk prediction and drug targets identification and validation. Using data from large population-based biobanks (e.g. CLSA, CARTaGENE, UK Biobank), we will assess patterns of rare and common genetic variations across different ancestries, evaluate their effects on disease risk, and elucidate mechanisms by which they act.

**Keywords**

Genetic and omics association study, Complex diseases, Monogenic diseases, Rare genetic variants, Polygenic risk scores