



**Application number/Title: 41849** - GWAS studies for kidney-related traits using UKBB data

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**Keywords provided by the Applicant PI to describe the research project:** electronic health records (EHR), genome-wide association studies (GWAS), kidney disease, phenome-wide association study (PheWAS)

**Application Lay Summary:**

Chronic kidney disease affects a large number of individuals worldwide. Chronic kidney disease frequently progresses to end stage renal failure requiring lifetime dialysis or kidney transplantation. Despite significant public health impact and high costs of dialysis and transplantation, the progress in identifying molecular causes of CKD has been slow, and targeted therapies for specific types of CKD are largely missing. We propose to accelerate genetic discovery in the kidney disease field by combining GWAS datasets across multiple studies and cohorts, including UKBB. By including UKBB dataset in several ongoing gene mapping efforts for kidney-related traits, we hope to be able to quickly replicate new genetic findings, enhance discovery efforts for some phenotypes, examine associations of the new loci with other non-kidney traits, and examine global genetic correlations between kidney and non-kidney related diseases.