

KPMP Structure

Recruitment Sites (RS)

1 RFA = ~\$3.7M TCs
U01 = 12 pages

- ~7 awards of ~350K DCs per year for 5 years.
- Enroll 30 or more diverse adult participants per year with either AKI, CKD, or both, for a longitudinal cohort study, including a research kidney biopsy.

Kidney Tissue Atlas Coordinating Center (KTACC)

1 RFA = ~\$2M TCs
U01 = 12 pages

- Ingest, clean, harmonize, store, and curate all de-identified data.
- Lead a comprehensive integrative analysis of all clinical, histopathologic, and molecular data to define disease subgroups and identify targets for therapy.
- Build an interactive Digital Pathology Bank and Kidney Tissue Atlas with FAIR principles to promote data retrieval, exploration, discovery, and analysis.

Tissue Interrogation Sites (TIS)

1 RFA = ~\$5M TCs
U01 = 12 pages

- ~8 awards of ~400K DCs per year for 5 years.
- Use and/or develop innovative technologies to analyze human kidney tissue and generate high-quality data.
- Analyze data to investigate cell, interstitial, and disease heterogeneity.

Central Hub (CH)

1 RFA = ~\$4M TCs (assuming an Opportunity Pool of ~\$1M)
U24 = 24 pages

Clinical Data and sample Coordinating Center (CDCC)

- Oversee renewal of the KPMP clinical protocol.
- Train personnel. Monitor and report study progress.
- Manage central laboratory and biorepository.
- Store protected health information (PHI) and minimize risk of re-identification.
- Lead KPMP-wide effort to ensure high-quality (QA/QC) of all data, workflows, and biosamples.
- Arrange for whole genome sequencing.

Administrative Core (AC)

- Provide KPMP-wide leadership and governance.
- Plan all KPMP meetings and workshops.
- Establish necessary working groups, including a Community Engagement Committee.
- Ensure participant satisfaction. Communicate goals and achievements to community.
- Administer an Opportunity Pool to address gaps or form new partnerships.
- Represent the KPMP to external partners.

KPMP Stages

The KPMP aims to ethically obtain and evaluate human kidney biopsies from participants with AKI or CKD, create a kidney tissue atlas, define disease subgroups, and identify critical cells, pathways and targets for novel therapies. It is anticipated that the KPMP will be conducted in stages:

Stage 1 (2017-2019)

- Optimize and validate tissue processing and interrogation methods
- Establish common clinical protocol
- Assess quality of phenotype data and biopsy protocols at each site
- Begin work on kidney tissue atlas

Stage 2 (2020-2021)

- Small scale proof of concept studies to determine if clinical and analytic pipelines are robust
- Expand longitudinal cohort study in initial AKI or CKD populations
- Implement next generation tissue interrogation assays
- Enrich the kidney tissue atlas

Stage 3 (2022-)

- Increase the number and diversity of individuals biopsied
- Enhance the throughput and depth of clinical and molecular phenotyping
- Increase data analysis and visualization
- Expand the capacity and reach of the kidney tissue atlas and bio-repository