



# Accelerating Preclinical Research in Kidney Diseases

## Integrated Services & Biospecimens for Translational Nephrology

At **Protheragen**, we help researchers and developers overcome the complexity of kidney diseases by providing tailored preclinical services and high-quality biospecimens. Whether you're working on congenital anomalies of the kidney and urinary tract (CAKUT), glomerular disorders, or renal ciliopathies, our platform supports your journey from target discovery to IND-enabling studies.

### What We Offer

- ▶ Custom disease models for hereditary and immune-related renal conditions
- ▶ Mechanism-of-action and biomarker validation studies
- ▶ Translational PK, nephrotoxicity, and drug safety services
- ▶ Human biospecimens: urine, kidney tissue, primary renal cells

### Diseases We Focus On

- ✓ CAKUT (Congenital Anomalies of the Kidney and Urinary Tract)
- ✓ Glomerulopathies (e.g., FSGS, Alport syndrome)
- ✓ Renal ciliopathies (e.g., NPHP, PKD)
- ✓ Rare tubulopathies
- ✓ Nephrolithiasis (genetic stone disease)
- ✓ Immune-mediated nephritis (e.g., SLE, IgA nephropathy)



## Preclinical R&D Services

Category	Capabilities
Target & Biomarker Discovery	Transcriptomics, proteomics, pathway profiling
<i>In Vitro</i> Models	Kidney organoids, 2D/3D renal tubule models, chip-based flow systems
<i>In Vivo</i> Models	Genetically modified rodents, toxin-induced models for fibrosis or proteinuria
PK/PD & Safety	Nephrotoxicity, renal clearance, plasma/urine exposure dynamics
Diagnostic R&D	Urinary biomarker screening, ELISA/LFA kit development

## Human Kidney Biospecimens Available

All samples are collected under IRB-approved protocols and can be tailored to your inclusion/exclusion criteria.

- ✓ **Biofluids** – Urine, serum, plasma from both healthy donors and rare renal disease patients
- ✓ **Tissue** – FFPE and fresh-frozen kidney biopsies with matched clinical data
- ✓ **Primary Renal Cells** – Podocytes, proximal tubular epithelial cells, fibroblasts
- ✓ **Molecular Materials** – DNA, RNA, protein from renal tissue and cell lines

Our services cover a broad spectrum of drug development needs, including model creation, therapeutic development, analytical testing, and biospecimen provision. Contact us to learn more or request a quote—we're happy to provide customized support based on your project stage and research goals.

Please note that we are a research service provider and do not provide diagnostic or treatment services to individuals.