

Polycystic Kidney Disease Research Resource Consortium (PKD RRC)

Sprint Challenge Grant

The Polycystic Kidney Disease Research Resource Consortium (PKD RRC)

The PKD RRC is a national consortium funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) with the goal of accelerating discovery in the field of polycystic kidney disease (PKD) by promoting innovation and resource sharing.

The PKD RRC Pilot Funding Opportunity

The PKD RRC seeks to fund “sprint challenge” grants to catalyze the development of innovative resources that will advance the study of PKD. Specifically, this grant will provide \$63,500 total costs for one year to support the generation of a new reagent or tool that will benefit the PKD research community. Both Early-Stage Investigators and Established Investigators who are new to PKD are eligible to apply (See Eligibility Requirements below). Applicants should describe why the resource is critical for advancing our understanding of PKD and should present a clearly defined strategy for resource development over the course of 12 months. All resources will be validated in collaboration with the PKD RRC. Successful applicants will be expected to participate in the appropriate PKD RRC sub-committee meetings (see list below) where progress will be discussed. Upon validation the resource will be made available to the research community via the PKD RRC web site. We anticipate that successful projects will expedite discovery and bolster research in PKD.

“Sprint Challenge” areas of focus:

- Implementation of innovative informatics approaches for aggregating PKD “omics” data.
- The use of artificial intelligence (AI) tools applied to PKD.
- Novel approaches to generate immortalized human kidney cell lines that maintain epithelial characteristics.
- Generation of a democratizable organoid model that can be used by any researcher.
- Generation of novel in vitro PKD models for high throughput drug testing PKD.
- Generation of reporter mice to investigate relevant PKD signaling pathways.
- Generation of novel PKD mouse models to investigate renal cyst initiation.

Proposals outside of these areas of emphasis will also be considered. Research involving human subjects is limited to observational studies with non-invasive or minimally invasive testing. Clinical trials, as defined by the NIH (<https://grants.nih.gov/policy/clinical-trials/definition.htm>), are beyond the scope of this program. Applicants are encouraged to review the PKD RRC web site before writing a proposal expertise (www.pkd-rrc.org). There will be no opportunity for a no cost extension and funds must be used by June 30, 2025.

Eligibility both Early-Stage Investigators and Established Investigators new to PKD

- Established investigators, who bring new and unique expertise to advance innovative research in polycystic kidney and liver disease, are encouraged to apply.
- Established investigators are not eligible if they had prior funding for PKD research, including grants from NIH (any mechanism), Department of Defense, Veteran’s Administration, PKD Foundation or American Heart Association

- Early-stage investigators (ESI), as defined by NIH (<https://grants.nih.gov/policy/early-investigators/index.htm>)
- Applicants must have an independent faculty position at the time of the application.
- Individuals from underrepresented racial and ethnic groups as well as individuals with disabilities are encouraged to apply.
- Investigators at non-domestic (non-U.S.) entities (foreign institutions) are not eligible to apply.
- PKD RRC key personnel are not eligible to apply or receive funding.
- PKD RRC Coordinating Site will confirm the applicant's funding history. Applications that are non-compliant will be administratively withdrawn.
- Higher priority will be given to investigators who have not held a pilot award during this U24 funding cycle.

Full Application: Deadline 5 PM EST May 3, 2024

The application must be typed in Arial font, 11 point or larger with single spacing and margins of at least ½ inch on all sides. Page numbers should be included. Appendices are not allowed. All tables, graphics, and supporting documentation must be contained within the proposal itself. No additional materials may be submitted after the receipt date.

- Email a single PDF containing the Application to info@pkd-rrc.org. **The deadline for submitting the proposal is 5 PM May 3, 2024.** An email confirming receipt will be sent to the applicant.
- The Application should include the following sections:
 1. **NIH PHS 398 face page**
 2. **Abstract** (250 words or less)
 3. **Detailed Budget Form and Justification**
As described below.
 4. **Biographical Sketches**
An NIH biographical sketch with other support (current and pending) is required for the PI and any key personnel.
 5. **Research Plan** (Up to 2 pages total)
 - A. Specific Aim (s): What is the reagent and state the critical research gap that will be filled by the new reagent.
 - B. Research Strategy
 1. Background and Significance: Discuss why the new reagent is important to the field of PKD. What is the gap that is being filled and what is the status of any existing reagents?
 2. Innovation: Briefly discuss any pioneering or high-risk approaches that are proposed and how they will advance the field.
 3. Research Approach: Describe preliminary data and the scientific plan for generating the reagent. Describe any potential pitfalls and how they will be addressed. Include a timeline and describe the strategy for validation in collaboration with the PKD RRC. Describe how the reagent will be made accessible to a broad research community.
 6. **Literature Cited** (No limit)
 7. **Vertebrate Animals and/or Human Subjects** (No Limit)
 8. **Resource Sharing Plan** (No Limit)

Budget

Applicants may request up to \$63,500 (direct + indirect costs) for one year, with no more than \$50,000 in direct costs. A maximum of \$10,000 may be used to support the principal investigator's salary and fringe. A narrative justification should be provided for key personnel and any major equipment (cost greater than \$5,000) deemed to be necessary for the proposed project. This is a federal grant, so federally negotiated F&A rates apply.

Application Review

The PKD RRC Central Coordinating Site will review applications that are submitted for completeness and compliance with this funding opportunity announcement. Applications that are incomplete, non-compliant and/or nonresponsive will not be reviewed. Higher priority will be given to investigators who have not held a pilot award during this U24 funding cycle. Applications will be reviewed by at least three subject matter experts and will be given scores for Significance, Investigator, Innovation, Approach, Environment, and an Overall Score based on the NIH Scoring System for Research Applications (1-9). Reviewers will strongly consider the goals of this funding opportunity in their evaluation of proposals. All decisions are final, and appeals will not be accepted for applications submitted in response to this solicitation. Funding is expected to begin by July 1, 2024.

Expectations of Awardees Receiving Pilot Funding from the PKD RRC

- Awardees are expected to join the PKD RRC as external members and will participate in the monthly meetings of one sub-committee that will provide ongoing feedback.
- Awardees may be asked to participate in future grant reviews for the pilot program.
- Awardees are expected to present their research at the PKD RRC annual symposium and/or educational activities organized by the PKD RRC
- Investigators are expected to cite support from the PKD RRC in all related publications and presentations.

If you have any questions about the PKD RRC Pilot and Feasibility Program, your eligibility, or the application process, please contact us at info@pkd-rrc.org.

The Pilot and Feasibility program is supported by the NIDDK Grant U24DK126110

PKD RRC Sub-Committees

In vivo Models of PKD (mouse, zebrafish or others)

In vitro Models of PKD (cell lines, organoids)

Clinical Resources

Molecular Sub Committee (antibodies, protein detection, vectors)

Pre-Clinical Testing (Strategies for testing therapies, drug delivery).