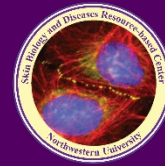


Northwestern University Skin Biology and Diseases Resource-based Center



Request for Proposals

The NIH-funded multidisciplinary Northwestern **Skin Biology and Diseases Resource-based Center (SBDR)** is offering **Pilot and Feasibility** award funding for proposals that involve research in cutaneous biology.

Eligible applicants are: a) junior faculty members who choose to investigate a novel aspect of cutaneous biology; b) established federally funded investigators with no prior work in skin biology who apply their expertise to a skin disease-related problem; and c) any faculty scientist who proposes a project that engages a clinician in translational research that contributes to our understanding or potential therapy of skin disease or investigates diversity (eg, probes sex or skin or color differences). Investigators from outside of the Dermatology Department are encouraged to apply. The ultimate goal of these SBDR-funded Pilot and Feasibility studies is the future submission of proposals that will lead to new federally funded skin-related grants and continued cutaneous biology research.

Pilot and Feasibility studies are funded at \$25,000/year for 1 year, with a possible 2nd year renewal pending a progress report, proposal for new aims for a 2nd year (with a new title), and renewal of the parent award grant if in the 5th year. Three new or renewed proposals will be funded.

The format of the application is as follows:

- **2-3 Page Research Plan** summarizing background, significance, specific aims, and special approaches of the study
- **Projected use of the SBDR Core(s): Core directors are delighted to discuss potential use**, including availability of skin cells and tissue from diverse patient populations
- **Projected Budget and Budget Justification** of proposed study (*Limit: \$25K direct costs; ≥40% of budget must be allocated for SBDR Core services and charged directly*)
- **NIH Biosketch** of PI
- List of **Current PI Funding**
- Data Sharing Plan
- Must be ready to submit/provide IRB and ACUC approvals before funding is provided.

Application deadline is March 28, 2024

Applications may be submitted on our website:

skinresearch.northwestern.edu

Projects will be evaluated by our Pilot and Feasibility Committee and funding decisions will be made by April 15, 2024. **Awardees are expected to immediately prepare any materials for IRB/Human Subjects approvals, ACUC approvals as appropriate (using the precise title of the proposal).** The official start date for these awards is targeted to be August 1, 2024. However, **all 3 sets of such approvals must be completed and submitted before funding for any of the 3 projects are sent from the NIH and disbursed.**

The SBDR supports three service **Cores** that facilitate completion of projects funded by the Pilot and Feasibility study mechanism:

The **Skin Tissue Engineering and Morphology (STEM) Core** provides human skin tissues and primary cultures of skin cells, particularly human and mouse keratinocytes, fibroblasts and melanocytes. This Core generates 3-D skin equivalent cultures of human and mouse keratinocytes, including using disease-specific keratinocytes that can be co-cultured with melanocytes and/or fibroblasts. This Core also provides histopathology and immunohistochemical staining.

The **Translating Experimental Skin Testing with Immune Tracing, Informatics and Technology (TEST IT²) Core** provides: (i) Immune monitoring (in vitro and in vivo in mice and humans at a single cell level, including multispectral imaging, transcriptome, secretome and protein analysis and (ii) an immunology-focused human studies facility for probing human disease and testing the impact of environmental agents and drugs prior to clinical trials. This Core also provides access to a tissue repository and has a dedicated bioinformaticist to assist in interpretation.

The **Gene Editing, Transduction and Nanotechnology (GET iN) Core** generates constructs to deliver: (i) cDNA; ii) stem-loop shRNA/MiR precursors; iii) mature RNAi; and iv) MiR inhibitors into skin cells. Vectors are available to: (i) generate iPS cells from skin cells; (ii) generate reporter cells for *in vivo* and *in vitro* cell tracking; (iii) simultaneously express multiple transgenes and shRNAs; and (iv) target expression by vectors with skin cell-specific promoters. CRISPR/Cas9 editing is available by both viral constructs and non-viral delivery of Cas protein. The Core also uses nanotechnology-based innovations to deliver material into skin cells and human skin.

Please pass this call for grant applications to those who may be interested.

Questions regarding the Pilot and Feasibility Program or the application process can be directed to:

Dr. Amy Paller apaller@northwestern.edu, Dr. Rui Yi yir@northwestern.edu, or Dr. Kurt Lu kurt.lu@northwestern.edu