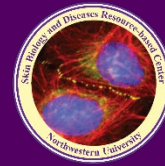


Northwestern University Skin Biology and Diseases Resource-based Center



Request for Proposals

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

Eligible applicants are: a) established, federally funded investigators with no prior work in skin biology who apply their expertise to a skin disease-related problem; b) junior faculty members who choose to investigate a novel aspect of cutaneous biology; 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. Investigators from outside of the Dermatology Department are encouraged to apply. Senior investigators from the dermatology department are eligible for the Minority and Sex Awareness Program (MSA), see below. The ultimate goal of these SBDRC-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, and renewal of the parent award grant if in the 5th year. Four new or renewed proposals will be funded.

The format of the application is as follows:

- **2-3 Page Research Plan** summarizing the background, significance, and specific aims of the study
- **Projected use of the SBDRC Core(s)**
- **Projected Budget and Budget Justification** of proposed study (*Limit: \$25K direct costs; at least 40% of budget must be allocated for SBDRC Core services; Departmental letter of support required for any payroll cost share, effort not charged directly to the award*)
- **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.

Given our interest in diversity, we would like to fund one proposal that focuses on a project that fits into our MSA. The proposal should focus on either: 1) Biological differences between skin from males vs. females or 2) the basic differences between skin from various ethnic and racial groups. MSA proposals will be accepted from any member of the SBDRC. Of note, cultured keratinocytes, and other cutaneous cells (e.g. fibroblasts), as well as tissue from different sexes and ethnic/racial groups are available through the SBDRC Core banks.

Application deadline is May 15, 2022

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 May 30, 2021. **Awardees are expected to immediately prepare any materials for IRB, Human Subjects Education, IACUC and VAS, as approval of certifications must all be completed before funding for any of the 4 projects are awarded and can be disbursed.** Although the official date for these awards is targeted to be August 2022, this date depends on completion of these just-in-time approvals and transfer of funds from the NIH.

The SBDRC supports three service **Cores** which facilitate the 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 **[Translational and Experimental Skin Testing and Immune Tracing \(TEST IT\) 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.

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 or Dr. Robert Lavker r-lavker@northwestern.edu