

STEM CELL AND AGING (SCA) COBRE PILOT GRANT PROGRAM (PGP) Request for Full Applications

<https://www.lifespan.org/centers-services/cobre-center-stem-cells-and-aging>

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1. Timeline for proposal submission:

Letters of Intent due	July 14, 2024
Invitation to submit full application	August 1, 2024
Full proposal submission deadline	September 1, 2024
Notification	October 1, 2024
Project start	November 1, 2024

2. Overview of the Program

The goal of the COBRE for Stem Cells and Aging (SCA) Pilot Grant Program (PGP) is to provide a scientific and mentoring platform to support teams of basic scientist and clinician scientists who will advance translational research on regenerative medicine and age-related diseases in Rhode Island and nationwide. These investigators will be sought from the early-stage faculty members of Brown University and University of Rhode Island (URI) and affiliated teaching hospitals.

The goals of the SCA Pilot Grant Program include:

1. Awarding **pilot grants to acquire preliminary data in support of external applications**. The SCA COBRE PGP will take full advantage of Brown University and affiliated hospitals as well as URI's collaborative environment through the support of early-career faculty representing a broad range of disciplines.
2. Focusing on applications with **high potential of translating basic research into clinical practice**. Successful proposals will have convinced the reviewers (the SCA COBRE Phase III Pilot Grant Program Steering and Review Committee) that their research strategy is feasible and shows a clear path to preclinical or clinical implementation and/or commercialization.
3. **Mentoring for junior investigators from senior extramurally-supported investigators**. The SCA COBRE PGP will provide early-stage faculty members with mentoring that is targeted and specific to their skill level, stage of development, and project needs.

4. **Opportunities to increase the diversity within the scientific community.** The SCA COBRE PGP will provide awardees with additional monetary means to include and support youngest researchers from groups and backgrounds underrepresented in science and provide them with the opportunity to participate in research over the summer and expand their research experience.

5. **Post-award support for early-stage investigators in developing best strategies aiding securing extramural funding.** The goal of the pilot grant program is to establish Mentoring Teams consisting of experienced, extramurally-funded investigators, both basic- and clinical- scientists, who will work with awardees post-award and help with development of strategies aiding in securing extramural funding.

6. **Advancing research focused on regenerative medicine and age-related diseases.** The goal of the SCA COBRE PGP is to develop a multi-disciplinary approach for treatment of age-related diseases through mentoring a new generation of researchers including basic- and clinical scientists.

7. **Opportunities to develop new multidisciplinary collaborations and test new ideas.** The program will encourage clinical scientists to team up with basic scientists to work on collaborative projects addressing important clinical needs linked thematically to age-related diseases and regenerative medicine.

We envision that funding from our program will allow scientists and clinicians to work together along a common continuum thematically focused on regenerative medicine and age-related diseases with the long-term goals of developing ways of the knowledge gained through such collaborations to be utilized to improve care for patients.

3. Eligibility requirements

PIs must hold a full-time faculty appointment at Brown or URI at the Assistant or Associate Professor rank. Individuals holding postdoctoral fellowships or other positions that lack independent status are not eligible to lead pilot projects.

At least one of the pilot investigators must be an **early-stage investigator** who has not served as the PI of a federally funded grant. There will be no limitations based on grants from private foundations. Federal/non federal career development grants will not limit eligibility. Team of investigators must include at least one basic- and one clinician-scientist.

Candidates cannot receive funding from other COBRE programs or another IDeA mechanism of support.

4. Funding and grant period

- Funding will be limited to \$50k for one year (\$100k for the entire two-year project).
- Additional \$4.5k per year will be available to PI to support a summer stipend for the minority student.
- Overlap with ongoing funded projects is not allowable.
- Funds for travel to a major conference related to the topic of their project will be allowed, and travel to present their work will be encouraged.
- Funding will be released upon IRB or IACUC approvals.

Awards are made for two years. However, the PGP steering committee will conduct a review of funded projects during the tenth month of the first year of funding and the second-year funding will be contingent upon the satisfactory, PGP steering committee and External Advisory Committee-approved, progress in the following areas: demonstration of significant progress in the proposed research, submission of manuscripts and grants related to the proposed research, receipt of an invitation to speak or chair a session at a national meeting, publication of an invited review article or book chapter related to SCA COBRE supported research.

5. Letters of Intent

Letters-of-intent (LOIs) are solicited once a year, a few months before RFAs for full proposals are released. In the timeframe between LOI and full proposal submission, info and consultation sessions with CORE Directors and Biostatisticians will be held. The goal of these sessions is for the prospective PIs to take full advantage of the services offered by the SCA Core Facilities and Biostatistical expertise to ensure adequate experimental design and size of experimental groups. Discussion sessions with SCA PGP Directors will also be offered.

Core resources and pre-consultations

Before the LOI and or full proposal submission deadlines we invite teams of applicants to:

- consult the scope of the project with the program directors Dr. [Pat Dubielecka](#) and/or Dr. [Adam Olszewski](#)
- discuss the experimental outline with the Biostatistician [Dr. Zhijin Wu](#), and
- consult with SCA COBRE Core Facility directors:
 - Mark Dooner ([Flow Cytometry/Mass Cytometry Core](#)),
 - Dr. Sicheng Wen ([Extracellular Vesicles Core](#)),
 - Dr. Olin Liang ([Lentiviral Construct Core](#)).

Info sessions with program directors will provide an outline of the thematic focus of the upcoming RFAs and encourage collaborations between clinician- and basic- scientists with an emphasis on identifying barriers that may exist in clinical translation and how these may be overcome. During these pre-submission sessions biostatistics and bioinformatic consultations and study design guidance will be provided, as it will be for the funded project for the duration of the award. **Two drop-in info sessions** are planned in the first and third weeks of November. Pre-application experimental design-focused sessions with our Core Leaders are strongly encouraged.

6. Full proposal

Proposal for this PGP must focus on multidisciplinary aspects of stem cell biology, regenerative medicine and the pathobiology of age-related disease.

Utilization of SCA COBRE Core facilities is strongly encouraged. A sharing plan that is appropriate for the proposed aims is required. Methods to ensure the identity and validity of key biological and/or chemical resources (which may include cell lines, specialty chemicals, antibodies, other biologics) are required.

In structuring the full proposal PIs are to follow NIH proposal outline compliant with [NIH PHS 398 forms](#) and need to contain the following components:

1	Administrative data	UFunds.brown.edu form
2	Biosketches	NIH format, for both PIs and all key personnel
3	Specific Aims	1 page maximum (one PDF with Research Strategy)
4	Research Strategy	6 pages maximum (not including references)
5	Leadership Plan	1 page maximum
6	Budget	NIH format
7	Budget justification	
8	Departmental letter of support	

Biosketches

Applicants, mentors, and any key personnel, must submit NIH-formatted biosketches on the current NIH “Non-fellowship” template available (with instructions) at:

<https://grants.nih.gov/grants/forms/biosketch.htm>

Specific Aims (1 page)

The Specific Aims page is a crucial section of the proposal. It should provide a concise summary outlining the primary objectives and goals of the proposed research project. This section serves as a roadmap for the rest of the grant application, providing reviewers with a clear understanding of the project's focus and significance. The Specific Aims page should be clear, focused, and compelling, showcasing the project's significance and the applicant's capability to execute the proposed research.

The Specific Aims page can be combined with Research Strategy in a single PDF (for a total 7-page file).

Research strategy (6 pages)

The research strategy must be formatted with margins at minimum 0.5 inch, and font size 11 points. It should contain sections describing the project's:

- Significance (typically ~0.5-1 page),
- Innovation (typically ~0.5-1 page), and
- Approach; include sections on:
 - a. Approach for scientific rigor (including biostatistical design) and
 - b. Consideration of sex and other biological variables.

References are excluded from the 6-page limit for Research Strategy.

Leadership plan (1 pages)

Clear **leadership plan** must be provided and adhere to NIH guidelines in terms of describing:

- roles/areas of responsibility of the PIs,
- fiscal and management coordination,
- process for making decisions on scientific direction and allocation of resources,
- data sharing and communication among investigators,
- publication and intellectual property policies,
- procedures for resolving conflicts.

Budget and Budget justification

Budget must be provided in the NIH format using the NIH PHS 398 form:

<https://grants.nih.gov/grants/funding/phs398/fp4.pdf>

The budget can include personnel, consultant, research supply costs, and travel costs, among else. The cost of biostatistical support or analyses and the use of SCA COBRE core services should be included explicitly in the budget. The following items are not allowed:

- Equipment with durable items valued more than \$5,000
- Patient care.

Budget justification should provide detailed justifications for all items requested in the budget.

Departmental support

A letter of support from the individual's departmental chair stating that the faculty member's academic and, if relevant, hospital appointment is not contingent upon obtaining SCA COBRE support, and that the investigator is able to commit 10% effort to his/her pilot research project. We allow negotiations as to the % of effort for clinical investigators.

7. Application review process

SCA COBRE Pilot Grant Program Steering Committee (PGPSC) members will review and score the applications using NIH Study Section guidelines. Primary and secondary reviewers will be assigned to each application. Meeting will be held to discuss the submitted proposals, and a written summary will be provided summarizing strengths and weaknesses for the Significance, Investigator(s), Innovations, Approach and Environment. Scale 1 (best)-9 (worst) will be used. A score for each criterion and overall score will be provided. Two additional criteria will be scored:

1. the strength of the investigative team that must include basic scientists and clinicians, and
2. the extent to which the proposed work utilizes the SCA Core Facilities.

Scale 0 (low priority) - 2 (high priority) will be used. In addition, written recommendations to the Investigators on how to possibly address the identified weaknesses will be also provided. The merit of the application will be based on the likelihood that the proposed work will advance our understanding of the pathogenesis of age-related diseases and stem cell biology, the potential of the investigators, the quality of the environment and the prospects for successfully completing the proposed aims and obtaining extramural funding. The following criteria will be assessed:

- *Overall theme of the project*

- Relevance to the stem cell biology and pathobiology of age-related diseases
- Hypothesis-based and mechanistic orientation
- Potential for NIH funding; significance and innovation
- *Scientific approach*
 - Quality and relevance of preliminary data
 - Focus and feasibility of experimental approach
 - Appropriateness of the model system or patient cohort
 - Utilization of appropriate and innovative methods
 - Justified and innovative use of cores
 - Rigorous approach to data analysis
- *The investigators*
 - Qualifications of the PIs; quality of the PI's research environment; adequate resources/facilities
 - Opportunity to apply adequate percent effort to the project; evidence of mentoring for junior faculty
 - Feasibility of completing the aims in 2 years
 - Evidence of networking with collaborators or consultants

Important note: The scope of utilization of the Cores, proposed utilization of methodologies and technologies provided by the Core Facilities will be considered in the review of the PGP applications and prioritized in the funding decisions.

8. Mentors and mentoring plan

Each investigative team must identify mentors and work with them in developing their proposal. Team of clinical- and basic-scientist mentors are recommended. **Mentors of awarded grants will receive salary support for the 2-year period at 2.5% effort (at NIH salary cap).** The mentoring plan, including mentor funding, will be developed in collaboration with the PGP Steering Committee, who will review progress yearly and decide on continuation of funding. Mentoring plan will be developed after receiving the award for each PI (it is not a part of the initial application).

In addition to project-specific mentors, mentoring and scientific oversight provided by the SCA COBRE PGP Steering and Review Committee will be available to the awardees not only in the duration of the award but also post-award and it will be structured towards providing best available guidance aimed at securing extramural funding by the awardees. We have selected members of the Steering Committee for this body to represent both basic- and clinical- scientists actively involved in translational work, therefore scientific questions put forward can be quickly vetted for their clinical relevance and the scientific validity of a new proposed project can be conditioned by clinical knowledge. Overall, Mentoring will be provided by three entities: an investigators' mentors, members of the PGP steering committee and PIs of the current COBRE grants in Rhode Island collectively named Mentoring Council. The Mentoring Council will work closely with each early-stage investigator to outline a training plan tailored for each early-stage investigator with the emphasis on balancing the need for training with their other institutional commitments, which is especially critical for early-stage clinician-scientists. The Mentoring Council will be available to the investigator(s) and their mentors to assist in proposal preparation, will meet with the investigators quarterly in the duration of the award and assist post-award in extramural grant preparation.

Mentoring Council

The Mentoring Council will be available to assist the SCA COBRE PGP awardees on the preparation of their R01 or similar proposal. Initial proposal is to be developed with a team of mentors. Proposal will undergo the same review process as outlined above. Written comments will be provided to PIs and Mentoring teams and a secondary review process will be conducted at the subsequent quarterly meeting. We will work with the Office of the Vice-President for Research (OVPR) at Brown University to identify appropriate funding mechanisms in synergy with the career stage and the scope of the proposal. We will work with federal agency program managers by arranging meetings at the agencies and/or bringing extramural program managers to campus to help you develop a productive relationship with program managers.

9. Educational activities available to Awardees:

All members of the SCA COBRE are required to attend the biweekly SCA COBRE seminar series. In these meetings PIs will be required to present progress on a quarterly basis. Mentors will be required to present their program updates to foster collaborations and exchange of ideas.

Biostatistics advisory sessions will be held with Dr. Zhijin Wu and her team to discuss individual project needs and appropriateness of statistical methods fitting the project.

A **grant writing workshop** will be organized yearly at the Pilot Grant Program Retreat with invited internal and external speakers and guest participants from NIH, ACS, NSF or another major funding organization.

COBRE investigators will participate in existing **technology transfer educational programs** run by the Brown Forum for Enterprise, sponsored by the Technology Ventures Office (TVO), Brown University.

Participation in the following trainings will be encouraged:

- Building an Inclusive Community,
- Creating a Respectful Workplace,
- Cultural Humility,
- Mitigating Bias,
- Understanding the Impact of Unconscious Bias in a University Setting: A Module for Faculty and Staff

10. Post-award mentorship:

Our goal is to provide post-award mentorship, advisory and grantsmanship services to synergize efforts in transforming funded pilot projects into competitive applications successful in securing federal-level funding. With the decision of awarding an application, a structured mentoring oversight will be initiated to assure that investigators receiving SCA COBRE funding maximize their productivity.

11. Responsibilities of the awardees and mentors

Awardees

The awarded investigators will be required to demonstrate ongoing commitment of at least 10% (negotiable for clinicians) effort to their research project.

Investigators will be expected to participate in all COBRE activities including research seminars, career development workshops, diversity promoting training, and retreats. Investigators are expected to hold regular meetings with the primary mentors and give quarterly presentations to the community.

Each quarter, pilot investigators and their mentor(s) will meet with the COBRE Mentoring Council to discuss scientific progress and career development activities. The following criteria will be considered:

- Did progress meet expectations?
- If progress was unsatisfactory, was this due to insufficient effort or unexpected circumstances?
- Have the data obtained so far supported, modified, or disproved the working hypothesis?
- Will the project lead to publishable results or is there a need for a change in direction?
- Is the significance of the research sufficient to warrant continued funding?
- What is the potential for external funding?

Written summaries addressing all these criteria will be provided to PI and mentoring Council. Quarterly progress reports will be discussed at the annual meetings. If needed, remedial plans will be then provided by Mentoring Council in a written form.

Within 9 months of support, the pilot investigator(s) will be expected to present an outline of an extramural proposal that will include: agency, title, specific aims, methods and significance. These outlines will be discussed in details at the quarterly meetings and our retreat, comments will be provided to PIs and the complete application will be subsequently prepared. Within 6 months of the end of the project, the pilot investigators will be expected to have submitted an extramural funding application.

Mentors

In order to support mentors' service to the SCA COBRE Pilot Grant Program, each will be provided with support equivalent to 2.5% effort (based on NIH cap).

The following will be expected of mentors:

- chair project-specific advisory committee meetings held immediately after data presentation by the mentee at the quarterly meeting, covering the following agenda:
- evaluation progress towards manuscripts and grant applications,
- guidance on responding to manuscript reviews/summary sheets,
- review of recent experiments focusing on experimental design, technical issues, interpretation and statistical analysis (the written document is to be distributed).
- hold regular meetings with the investigators individually or as part of a lab meeting to review progress and address problems,
- attend quarterly seminars when the mentored investigator is presenting his/her results,
- provide feedback on manuscript reviews and NIH summary sheets, once a year,
- present at the SCA COBRE seminar meeting,
- provide feedback on poster or platform talks presented at the COBRE annual retreat,
- assist in the preparation of a peer-reviewed grant proposal(s) during the second year of their Awardees support, attend SCA COBRE PGPSC meetings.