



Advanced Science Research Center Seed Grant Program 2022  
Submission Deadline: **Friday, July 1, 2022, 11:59pm**

The Advanced Science Research Center (ASRC) Seed Grant Program provides funding to CUNY researchers pursuing interdisciplinary STEM projects that strive to inform and potentially lead to improved human, societal, and environmental well-being in the years to come. We seek to support creative, collaborative, and convergent research that addresses complex questions relevant to the most pressing challenges in STEM. A primary goal is also to seed research that will become the basis for new external funding. As such, submissions that have a clearly defined research question and a goal to collect critical preliminary data for a future grant proposal will be prioritized.

The program encourages proposals that leverage the ASRC's five Initiatives (Nanoscience, Photonics, Structural Biology, Neuroscience and Environmental Sciences), [15 core facilities](#), and their analytical and human resources through collaboration.

The 2022 Seed Program will award six 12-month, \$20,000 grants (in Research Foundation funds) to CUNY tenured, tenure-track, or research-track faculty who are pursuing collaborative, interdisciplinary research projects that are well-defined, compelling, innovative, and have a potential to yield meaningful, rather than incremental, advances. Researchers in any STEM field may apply, but those that take advantage of the ASRC's facilities and resources will be prioritized.

In addition, awardees will participate in a symposium at the end of the funding period to present their findings to researchers from across CUNY, with the opportunity to discuss next steps towards securing additional funding and peer-reviewed publication.

**It is strongly encouraged that you discuss your proposal, prior to submission, with the ASRC Investigator(s) and/or Core Facility Director(s) that you propose to work with to ensure feasibility. However, it is expected that the PI take full responsibility for writing the proposal. See Appendix A for a list of ASRC Faculty and Core Facility Directors, and visit <https://asrc.gc.cuny.edu/facilities/> for a description of the core facilities.**

**Eligibility and Expectations**

1. Only CUNY tenured, tenure-track, or research-track faculty are eligible to apply. Lecturers, adjunct faculty, postdoctoral fellows, and full-time Higher Education Officers are not eligible.
2. A faculty member may participate in and submit only *one* proposal for the present round of the competition.
3. Proposals from faculty who have not received an ASRC Seed grant within the last three years will be prioritized, as will junior faculty seeking to collect data for their first externally funded grant, and faculty seeking first time funding for novel interdisciplinary collaborations.
4. Proposals without a clearly defined research question or hypothesis and affiliated research plan will not be considered. Similarly, proposals without a stated plan of how future external funding will be pursued will not be reviewed.
5. Proposals should demonstrate a need for funding from the ASRC's Seed Grant Program and use of ASRC facilities and resources, such as use of core facilities or collaboration with ASRC faculty.

6. The appropriate Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) must approve research involving human or animal subjects prior to the release of any funds. *Without IRB/IACUC approval funding will not be allocated for any human or animal subjects research.* For more information about IRB and human subjects research, visit: <https://www.cuny.edu/research/research-compliance/human-research-protection-program/>

### **Awardee Reporting**

1. Awardees will be expected to present progress on their seed-funded research at a public forum to take place at the ASRC near the end of the project period. At that event, they will also discuss opportunities and plans to apply for external funding to extend the research funded by the seed grant.
2. Additionally, awardees will be required to submit a two-page written report at the conclusion of the project period. A grant proposal or submitted manuscript resulting from the work funded by the seed grant will be accepted in lieu of a written report.
3. If used, ASRC core facilities should be properly acknowledged in any publications or presentations that emerge from their use.
4. Future eligibility for this program is contingent on compliance with these requirements and use of funds in line with the program's goals and guidelines.
5. The ASRC will promote successful outcomes from seed grants through a variety of channels, including its website, newsletters, and social media feeds.

### **Proposal Evaluation**

Proposal review will be based on the following criteria:

- Clarity and significance of the defined research question or hypothesis
- Potential of the proposed study to yield meaningful, rather than incremental, scientific advances toward informing and potentially improving human, societal, and environmental well-being
- Demonstrated rationale for interdisciplinary experimental approaches and well-founded collaboration plan
- Technical quality and feasibility of the proposed research
- Rationale for seed grant funding and support from the ASRC
- Plan to pursue future external funding to extend the research program
- Demonstrated record of scholarly achievement and promise.

Proposals will be reviewed by ASRC faculty and faculty affiliates. ***Funding decisions will be announced in August 2022.*** All award decisions are final, and appeals will not be considered. Unfortunately, we will not be able to provide written feedback due to the volume of applications we typically receive.

### **Funding and Budget Guidelines**

Funds are available to provide up to six awards with budgets up to \$20,000. Awards will provide Research Foundation funds for a 12-month period that will start date on September 1, 2022.

Grant funds may be used for Personnel (e.g., Summer Salary (salary limited to \$6,000), Research Staff, Fringe) and items other than personnel services (OTPS) (e.g. research materials and supplies, time on shared equipment at the ASRC or ASRC core facility user fees, and participant costs.) Funding may not support Academic Year Effort (Released Time), travel, or meeting/conference costs.

In all instances, funding is subject to the availability of funds and budgetary approvals. Funds that are unspent at the end of the funding period will be returned to the ASRC, unless a no-cost extension is approved by the ASRC Executive Director at least two months prior to the end date.

## **Submission Guidelines**

Complete submissions must be uploaded by **11:59 PM on Friday, July 1, 2022** using the online proposal submission form, which can be accessed through the following link:  
[https://asrc.formstack.com/forms/asrc\\_seedprogram\\_2022](https://asrc.formstack.com/forms/asrc_seedprogram_2022)

The following documents must be uploaded at the time of proposal submission. All documents must be uploaded as PDFs and named in the format specified below. All documents must be submitted on the appropriate forms, which can be downloaded at the following link:  
<http://www.asrc.cuny.edu/faculty-opportunities/seed-program/>

**Signature page:** a completed signature page that includes PI, co-PIs, and college Grants Officers endorsement signatures is required; electronic signatures are acceptable.

*File name: ASRC22\_LastNameOfLeadPI\_signature.pdf*

**Full proposal:** to be submitted on the proposal template available for download online. See full requirements below.

*File name: ASRC22\_LastNameOfLeadPI\_proposal.pdf*

**Note:** *The full proposal template is available for download as a Microsoft Word document, but must be converted to a PDF after completion and before submission. Only PDF documents will be accepted.*

**The full proposal document must include the following:**

1. **Proposal Summary:** 200 words maximum. Please include project title and the names/affiliations of the PI and all co-PIs (not included in the 200-word limit).
2. **Narrative description of the project:** No more than three single-spaced pages, exclusive of references and citations, with one-inch borders and 11-point, Times New Roman or equivalent font. The description should provide (a) sufficient background for an interdisciplinary STEM audience to understand the stated rationale, context, and goals of the defined research question and/or hypothesis; (b) innovation and potential impact of the proposed work within the field; (c) the experimental approach(es) and timeline; and (d) statement on why support from the ASRC is essential. Finally, explain how the proposed project will support future grant proposals.
3. **Collaboration plan:** No more than one single-spaced page. The role of each investigator must be clearly stated, as should the proposed interactions with ASRC faculty and/or core facility directors. The plan should also include a description of the foundation for the collaboration, how the collaboration will be fostered and managed, and how conflict and improvement activities will be addressed.
4. **Biographical sketch:** From each participating faculty member, preferably in NSF or NIH format.
5. **Proposed budget:** For the 12-month funding period.
6. **Budget justification:** Clearly indicate any personnel who will be carrying out the proposed research and their effort, and the distribution of funds needed for other costs, including for use of specific ASRC facilities.
7. **List of current, pending, and completed funding** (from the past five years), including no cost extensions, startup funds, and grants completed within the past five years. This section must list the percent effort on existing/pending grants as well as for the current proposal.

**Note:** *Incomplete proposals will not be accepted by the online process.*

Please direct any questions to:

Josh Brumberg, PhD, [jbrumberg@gc.cuny.edu](mailto:jbrumberg@gc.cuny.edu)

Acting Executive Director, Advanced Science Research Center

Dean for the Sciences, The Graduate Center, CUNY

**Appendix A. ASRC Faculty and Core Facility Directors as of March 2022.**For additional information regarding facilities available at the ASRC, please visit our [webpage](#).

Name	Email	Research Interests
<b>Nanoscience Initiative</b>		
<b>Rein Ulijn</b> Director	<a href="mailto:rulijn@gc.cuny.edu">rulijn@gc.cuny.edu</a>	Responsive materials, peptide nanotechnology, bio/nano interfaces, bio/electronic interfaces, self-assembly, adaptive systems
<b>Adam Braunschweig</b> Professor	<a href="mailto:abraunschweig@gc.cuny.edu">abraunschweig@gc.cuny.edu</a>	Solar energy, carbohydrate nanotechnology, 4D printing, Nanopatterning, Responsive Materials, Organic Materials, Self-Assembly
<b>Xi Chen</b> Assistant Professor	<a href="mailto:xchen@gc.cuny.edu">xchen@gc.cuny.edu</a>	Bio-inspired materials, energy harvesting, nanomechanics, sensors, and actuators
<b>Tong Wang</b> Imaging Facility Director/Research Associate Professor	<a href="mailto:twang1@gc.cuny.edu">twang1@gc.cuny.edu</a>	Electron microscopy, cryo-EM, single particle reconstruction, protein structures, DNA, self-assembly, bionanotechnology
<b>Tai-De Li</b> Surface Science Facility Director/Research Associate Professor	<a href="mailto:tli@gc.cuny.edu">tli@gc.cuny.edu</a>	Soft materials, nanobioscience, nanorheology, mechanobiochemistry, nano-surface science
<b>Milan Begliarbekov</b> Nanofabrication Facility Director/Research Assistant Professor	<a href="mailto:mbegliarbekov@gc.cuny.edu">mbegliarbekov@gc.cuny.edu</a>	Lithography, thin film deposition, dry etching, metrology, thermal processing, and characterization
<b>Maya Nair</b> Research Assistant Professor, Nanoscience Initiative	<a href="mailto:mnair@gc.cuny.edu">mnair@gc.cuny.edu</a>	2D materials, atomic structure, electronic properties, nano materials, surface science, scanning probe microscopy and photoemission spectroscopy
<b>Neuroscience Initiative</b>		
<b>Patrizia Casaccia</b> Director	<a href="mailto:pcasaccia@gc.cuny.edu">pcasaccia@gc.cuny.edu</a>	Neural development, neurodegeneration, glial tumors, lipid and amino acid metabolism, epigenetics, mechanotransduction, genes/environment.

<b>Susanna Mingote</b> Associate Professor	<a href="mailto:smingote@gc.cuny.edu">smingote@gc.cuny.edu</a>	Memory formation, dopamine neuromodulation, signaling between neurons and astrocytes, rodent behavior, neuropsychiatric diseases including schizophrenia
<b>Orie Shafer</b> Professor	<a href="mailto:oshafer@gc.cuny.edu">oshafer@gc.cuny.edu</a>	Neural basis of circadian rhythms and entrainment, sleep, environmental light, and neuropeptide signaling
<b>Pinar Ayata</b> Assistant Professor	<a href="mailto:payata@gc.cuny.edu">payata@gc.cuny.edu</a>	Neuroimmunology, microglia, environmental risk factors for neurodegeneration, metabolic-epigenetic interface, cellular stress response
<b>A. Duke Shereen</b> MRI Facility Director/Research Associate Professor	<a href="mailto:ashereen@gc.cuny.edu">ashereen@gc.cuny.edu</a>	Structural and functional neuroimaging (MRI, EEG), neuromodulation (TES), brain development and aging, imaging biomarkers, neurodegenerative diseases, speech and language, memory, cognition, multimodal and simultaneous MRI/EEG/TES/eye-tracking/physiological-monitoring
<b>Ye He</b> Live Imaging Facilities Director/Research Assistant Professor	<a href="mailto:yhel@gc.cuny.edu">yhel@gc.cuny.edu</a>	Confocal microscopy, Two photon, Live imaging, super resolution imaging, 3D/4D imaging, MALDI MS imaging, glial development and diseases, brain tumor, ion channel, Drosophila neuronal development
<b>Jia Liu</b> Epigenetics and Rodent Behavior Facility Director/Research Associate Professor	<a href="mailto:jliu1@gc.cuny.edu">jliu1@gc.cuny.edu</a>	Epigenetic regulation of glia and neurons, effects of stress on gene expression changes, behavioral analysis from psychiatric disorder
<b>Structural Biology Initiative</b>		
<b>Kevin Gardner</b> Director	<a href="mailto:kgardner@gc.cuny.edu">kgardner@gc.cuny.edu</a>	Structural biology, NMR spectroscopy, X-ray crystallography, protein/ligand interactions, biochemistry
<b>Shana Elbaum-Garfinkle</b> Assistant Professor	<a href="mailto:selbaumgarfinkle@gc.cuny.edu">selbaumgarfinkle@gc.cuny.edu</a>	liquid phase separation; neurodegeneration; protein self-assembly; disordered proteins; single-molecule fluorescence; soft matter material science; C. elegans genetics
<b>Amedee des Georges</b> Assistant Professor	<a href="mailto:adesgeorges@gc.cuny.edu">adesgeorges@gc.cuny.edu</a>	Structure and dynamics of membrane proteins - cryo-electron microscopy

<b>Daniel A. Keedy</b> Assistant Professor	<a href="mailto:dkeedy@gc.cuny.edu">dkeedy@gc.cuny.edu</a>	Protein conformational heterogeneity, allostery, protein:ligand interactions, X-ray crystallography, computational biology, protein design
<b>Bruce Johnson</b> Sr. Research Director, Computational Sciences	<a href="mailto:bjohnson@gc.cuny.edu">bjohnson@gc.cuny.edu</a>	NMR (Nuclear Magnetic Resonance) data analysis including signal processing and visualization NMR Metabolomics
<b>Denize Favaro</b> NMR Facility Director/Research Assistant Professor	<a href="mailto:dfavaro@gc.cuny.edu">dfavaro@gc.cuny.edu</a>	Protein structure and dynamics using Nuclear Magnetic Resonance spectroscopy
<b>Rinat Abzalimov</b> Biomolecular Mass Spectrometry Facility Director/Research Assistant Professor	<a href="mailto:rabzalimov@gc.cuny.edu">rabzalimov@gc.cuny.edu</a>	Biomolecular mass spectrometry, protein structure and dynamics, macromolecule/liquid interactions
<b>Eta Isiorho</b> Macromolecular Crystallization Facility Director/Research Assistant Professor	<a href="mailto:eisiorho@gc.cuny.edu">eisiorho@gc.cuny.edu</a>	Macromolecular X-ray crystallography, protein structure
<b>Environmental Sciences Initiative</b>		
<b>Charles J. Vörösmarty</b> Director	<a href="mailto:cvorosmarty@gc.cuny.edu">cvorosmarty@gc.cuny.edu</a>	Earth system science, hydrology and water resources, metro and regional-scale environmental analysis
<b>Peter Groffman</b> Professor	<a href="mailto:pgroffman@gc.cuny.edu">pgroffman@gc.cuny.edu</a>	Microbial ecology, biogeochemistry of soils and water, urban ecology, nutrient cycling
<b>Dianne Greenfield</b> Associate Professor	<a href="mailto:dgreenfield@gc.cuny.edu">dgreenfield@gc.cuny.edu</a>	Phytoplankton and microbial oceanography, coastal biogeochemistry and ecology, harmful algal blooms, nutrient cycling, molecular tools and technologies
<b>Andrew Reinmann</b> Assistant Professor	<a href="mailto:areinmann@gc.cuny.edu">areinmann@gc.cuny.edu</a>	Terrestrial carbon cycling, nutrient cycling, forest ecology, urban ecology, climate change, land use and land cover change
<b>Brian Giebel</b> ALCIS Facility Director/Research Assistant Professor	<a href="mailto:bgiebel@gc.cuny.edu">bgiebel@gc.cuny.edu</a>	Microplastics, Organic Contaminants, Atmospheric Chemistry, Geochemistry, Isotope Ratio Mass Spectrometry, Stable Isotope Reference Standardization

<b>Ricardo Toledo-Crow</b> Next Generation Environmental Sensors Facility Director/ Research Associate Professor	<a href="mailto:rtoledocrow@gc.cuny.edu">rtoledocrow@gc.cuny.edu</a>	Environmental sensor development and calibration, sensor deployment, <i>in          situ</i> sensing, remote sensing
<b>Photonics Initiative</b>		
<b>Andrea Alù</b> Director	<a href="mailto:Aalu@gc.cuny.edu">Aalu@gc.cuny.edu</a>	Photonics, metamaterials, plasmonics, electromagnetics, acoustics, nanophotonics
<b>Gabriele Grosso</b> Assistant Professor	<a href="mailto:ggrosso@gc.cuny.edu">ggrosso@gc.cuny.edu</a>	2D-matter optical properties, quantum information-processing systems, opto- electronic devices
<b>Matthew Sfeir</b> Associate Professor	<a href="mailto:msfeir@gc.cuny.edu">msfeir@gc.cuny.edu</a>	Ultrafast laser techniques, light harvesting, optoelectronic probes
<b>Younes Ra'di</b> RF/mm-wave Facility Director/Research Assistant Professor	<a href="mailto:yradi@gc.cuny.edu">yradi@gc.cuny.edu</a>	In-house PCB prototyping, anechoic test chamber, high-end spherical nearfield measurement system, planar nearfield scanning