



Advanced Science Research Center Seed Grant Program 2021
Submission Deadline: **Wednesday, June 2, 2021 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 2021 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: <http://www.cuny.edu/research/compliance/human-subjects-research-1.html>

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 three-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 July 2021.*** 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. The earliest available start date will be August 1, 2021 and the latest available start date will be October 1, 2021.

Grant funds may be used for Personnel (e.g., Summer Salary (limited to \$6,000, with 26.7% fringe the total maximum cost is \$7,602), Research Staff, Fringe) and items other than personnel services (OTPS), including 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 Wednesday, June 2, 2021** using the online proposal submission form, which can be accessed through the following link:

https://asrc.formstack.com/forms/asrc_seedprogram_2021

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: ASRC21_LastNameOfLeadPI_signature.pdf

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

File name: ASRC21_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:

Nina Gray, PhD, agray@gc.cuny.edu

Executive Director, Advanced Science Research Center

Associate Dean for the Sciences, The Graduate Center, CUNY

Appendix A. ASRC Faculty and Core Facility Directors as of May 2021.

For additional information regarding facilities available at the ASRC, please visit our [webpage](#).

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

Susanna Mingote Associate Professor	smingote@gc.cuny.edu	Memory formation, dopamine neuromodulation, signaling between neurons and astrocytes, rodent behavior, neuropsychiatric diseases including schizophrenia
Orie Shafer Professor	oshafer@gc.cuny.edu	Neural basis of circadian rhythms and entrainment, sleep, environmental light, and neuropeptide signaling
Pinar Ayata Assistant Professor	payata@gc.cuny.edu	Neuroimmunology, microglia, environmental risk factors for neurodegeneration, metabolic-epigenetic interface, cellular stress response
A. Duke Shereen MRI Facility Director/Research Associate Professor	ashereen@gc.cuny.edu	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
Ye He Live Imaging Facilities Director/Research Assistant Professor	yhel@gc.cuny.edu	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
Jia Liu Epigenetics and Rodent Behavior Facility Director/Research Associate Professor	jliu1@gc.cuny.edu	Epigenetic regulation of glia and neurons, effects of stress on gene expression changes, behavioral analysis from psychiatric disorder
Structural Biology Initiative		
Kevin Gardner Director	kgardner@gc.cuny.edu	Structural biology, NMR spectroscopy, X-ray crystallography, protein/ligand interactions, biochemistry
Shana Elbaum-Garfinkle Assistant Professor	selbaumgarfinkle@gc.cuny.edu	liquid phase separation; neurodegeneration; protein self-assembly; disordered proteins; single-molecule fluorescence; soft matter material science; C. elegans genetics
Amedee des Georges Assistant Professor	adesgeorges@gc.cuny.edu	Structure and dynamics of membrane proteins - cryo-electron microscopy

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

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

*Dr. Aramini will leave his position July 2021, but the NMR Core Facility will remain an available resource for users.