

Advanced Science Research Center Seed Program 2019

Submission Deadline: Monday, September 30, 2019 5:00pm

The Advanced Science Research Center (ASRC) Seed Program provides funding to enhance scientific research opportunities that can be advanced by taking advantage of the analytical and human resources available through the ASRC. The program encourages an interdisciplinary approach that leverages the ASRC's five Initiatives (Nanoscience, Photonics, Structural Biology, Neuroscience and Environmental Sciences) and 13 core facilities (<https://asrc.gc.cuny.edu/facilities/>). For the 2019 Seed Program, grants will fund collaborative research projects between tenured, tenure-track, and research-track faculty at CUNY colleges and faculty at the ASRC. We will award eight \$15,000 grants in Research Foundation funds for a nine-month period (November 1, 2019 – July 31, 2020).

The primary goal is to seed research that will become the basis of 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. 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 ways to secure additional funding. Peer-reviewed publications may also arise from this work, and we encourage all such efforts.

It is strongly encouraged that you discuss your proposal, prior to submission, with an ASRC Investigator or Core Facility Director 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 tenured, tenure-track or research-track faculty at CUNY campuses are eligible to apply. Lecturers, adjunct faculty, postdoctoral fellows, and full-time Higher Education Officers are not eligible.
2. Proposals require collaborative research with faculty (tenured/tenure-track/research) at the ASRC, with a preference for programs of study that integrate across multiple ASRC initiatives.
3. Proposals must demonstrate a need for and efficient use of ASRC core facilities and faculty expertise.
4. A faculty member may participate in and submit only *one* proposal for the present round of the competition.
5. Proposals without a clearly defined research question or hypothesis and its affiliated research plan will not be considered.
6. Previous awardees are eligible if prior awards led to an external proposal submission. Evidence of previous awards needs to be provided as part of the application process.
7. The 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 chief results from 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 initiated using 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. 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 twitter feed.

Proposal Evaluation

There will be an internal ASRC preliminary review to evaluate feasibility of each proposal. Proposals that move forward will be reviewed by a CUNY faculty committee that includes at least two faculty from outside the ASRC who have previously received seed funding. The review will be based on the following criteria:

- Clearly defined research question or hypothesis
- Compelling description of rationale, innovation, and experimental plan
- Potential to yield meaningful, rather than incremental, scientific advancement
- Technical quality of the proposed research
- Defined plan to pursue future external funding to extend the research program, including an explanation of how the data generated and collaboration with the ASRC and/or use of ASRC resources will strengthen a future proposal

Reviewers will also look for a demonstrated record of scholarly achievement and promise. The potential for external co-funding (e.g., from industry partners) will be viewed favorably.

All award decisions are final and appeals/reconsiderations are not allowed.

Funding and Budget Guidelines

Funds are available to provide up to 8 awards with budgets up to \$15,000. Awards will provide Research Foundation funds for a nine-month period (November 1, 2019 – July 31, 2020).

Grant funds may be used for Personnel (e.g., Summer Salary, Research Staff; including fringe) and items other than personnel services (OTPS), including research supplies, time on shared equipment at the ASRC or ASRC core facility user fees. The minimum budget for use of ASRC resources/facilities should be \$7,500 of the \$15,000 total budget. Seed Funding will not support Academic Year Effort (Released Time).

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.

Submission Guidelines

Complete proposals must be submitted via the online proposal submission form, which can be accessed through the following link:

http://asrc.formstack.com/forms/asrc_seedprogram_2019

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 scanned copy including PI and college Grants Officers endorsement signatures are required.

File name: ASRC19_LastNameOfLeadPI_signature.pdf

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

File name: ASRC19_LastNameOfLeadPI_proposal.pdf

Note: *The Signature page and full proposal are available for download as Microsoft Word documents but must be converted to PDF format after completion and before submission. Only PDF documents will be acceptable.*

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 pages single-spaced, exclusive of references and citations, with one-inch borders and 11-point, Times New Roman or equivalent font. The role of each investigator must be clearly stated, as should the proposed interactions with ASRC faculty and/or use of ASRC facilities. Finally, explain how the proposed project may support future grant proposals.
3. **Biographical sketch:** From each participating faculty member, preferably in NSF or NIH format.
4. **Proposed budget:** For the nine-month funding period
5. **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.
6. **List of current and pending funds,** including no cost extensions and startup funds. 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.*

Submission Timetable

Complete submissions must be uploaded by **5:00 PM on Monday, September 30, 2019.**

Please direct any questions to:

Nina Gray, PhD

Executive Director, Advanced Science Research Center

Associate Dean for the Sciences

The Graduate Center, CUNY

agray@gc.cuny.edu

Funding decisions will be made and announced in October 2019.

Appendix A. ASRC Faculty and Core Facility Directors as of August 2019.

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

Name	Email	Research Interests
Nanoscience Initiative		
Rein Ulijn Director	Rein.Ulijn@asrc.cuny.edu	Responsive materials, peptide nanotechnology, bio/nano interfaces, bio/electronic interfaces, self-assembly, adaptive systems
Adam Braunschweig Associate Professor	Adam.Braunschweig@asrc.cuny.edu	Solar energy, carbohydrate nanotechnology, 4D printing, Nanopatterning, Responsive Materials, Organic Materials, Self-Assembly
Xi Chen Assistant Professor	Xi.Chen@asrc.cuny.edu	Bio-inspired materials, Energy harvesting, Nanomechanics, Sensors, and Actuators
Tong Wang Imaging Facility Director/Research Assistant Professor	Tong.Wang@asrc.cuny.edu	Electron microscopy, cryo-EM, single particle reconstruction, protein structures, DNA, self-assembly, bionanotechnology,
Tai-De Li Surface Science Facility Director/Research Assistant Professor	Tai-De.Li@asrc.cuny.edu	Soft materials, nanobioscience, nanorheology, mechanobiochemistry, nano-surface science
Milan Begliarbekov Nanofabrication Facility Director/Research Assistant Professor	Milan.Begliarbekov@asrc.cuny.edu	Lithography, thin film deposition, dry etching, metrology, thermal processing, and characterization
Neuroscience Initiative		
Patrizia Casaccia Director	Patrizia.Casaccia@asrc.cuny.edu	Neurobiology (developmental myelination, axonal damage), microbiome (gut-brain cross talk and lipid metabolism), epigenetic regulation in glia and neurons in the brain (effect of environment on gene expression)
Susanna Mingote Associate Professor	Susana.Mingote@asrc.cuny.edu	Memory formation, dopamine neuromodulation, signaling between neurons and astrocytes, rodent behavior, neuropsychiatric diseases including schizophrenia.

Orie Shafer Professor	Orie.Shafer@asrc.cuny.edu	Circadian rhythms, environmental entrainment factors, sleep.
A. Duke Shereen MRI Facility Director/Research Associate Professor	Ahmed.Shereen@asrc.cuny.edu	Structural and functional neuroimaging (MRI, EEG), neuromodulation (TMS/TDCS), brain development and aging, imaging biomarkers, neurodegenerative diseases, speech and language, memory, cognition, multimodal and simultaneous MRI/EEG/TMS/TDCS/eye-tracking/physiological-sensing methods development
Ye He Live Imaging Facilities Director/Research Assistant Professor	Ye.He@asrc.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	Jia.liu@asrc.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	Kevin.Gardner@asrc.cuny.edu	Structural biology, NMR spectroscopy, X-ray crystallography, protein/ligand interactions, biochemistry
Shana Elbaum-Garfinkle Assistant Professor	Shana.Elbaum@asrc.cuny.edu	liquid phase separation; neurodegeneration; protein self-assembly; disordered proteins; single-molecule fluorescence; soft matter material science; C. elegans genetics
Amedee des George Assistant Professor	Amedee.desGeorges@asrc.cuny.edu	Structural and functional study of the regulation of large macromolecular complexes using cryo-electron microscopy.
Daniel A. Keedy Assistant Professor	Daniel.Keedy@asrc.cuny.edu	Protein conformational heterogeneity, allostery, protein:ligand interactions, X-ray crystallography, computational biology, protein design
Bruce Johnson Sr. Research Director, Computational Sciences	Bruce.Johnson@asrc.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	Rinat.Abzalimov@asrc.cuny.edu	Biomolecular mass spectrometry, protein structure and dynamics, macromolecule/liquid interactions
Environmental Sciences Initiative		
Charles J. Vörösmarty Director	Charles.Vorosmarty@asrc.cuny.edu	Earth system science, hydrology and water resources, metro and regional-scale environmental analysis
Peter Groffman Professor	Peter.Groffman@asrc.cuny.edu	Microbial ecology, biogeochemistry of soils and water, urban ecology, nutrient cycling
Dianne Greenfield Associate Professor	Dianne.Greenfield@asrc.cuny.edu	Phytoplankton ecology and oceanography, coastal and estuarine biogeochemistry, harmful algal blooms, nutrient cycling, molecular tools and technologies
Andrew Reinmann Assistant Professor	Andrew.Reinmann@asrc.cuny.edu	Terrestrial carbon cycling, nutrient cycling, forest ecology, urban ecology, climate change, land use and land cover change
Zachary Tessler Coastal Science Synthesis Facility Director/Research Assistant Professor	Zachary.Tessler@asrc.cuny.edu	River Delta risk and sustainability, coastal oceanography, land ocean interaction
Brian Giebel ALCIS Facility Director/Research Assistant Professor	Brian.Giebel@asrc.cuny.edu	Atmospheric Chemistry, Geochemistry, Isotope Ratio Mass Spectrometry, Gas Chromatography, Stable Isotope Reference Standardization and Calibration Techniques
Ricardo Toledo-Crow Next Generation Environmental Sensors Facility Director/ Research Associate Professor	Ricardo.Toledo-Crow@asrc.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, optoelectronic 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	younes.radi@asrc.cuny.edu	In-house PCB prototyping, anechoic test chamber, high-end spherical nearfield measurement system, planar nearfield scanning