

2022 Human Cognitive and Behavioral Science – Request for Applications

Grants awarded through this RFA are intended to produce foundational knowledge about the neurobehavioral differences associated with ASD. Many of these projects are expected to inform or relate to the development or refinement of tools needed for translational efforts, such as biomarkers and outcome measures. Special emphasis is placed on objective, quantitative measures that may be used in conjunction with standardized clinical measures and genomic information to better triangulate phenotypic and neurobiological variability within and across individuals with ASD.

Two tracks are offered within this RFA solicitation: Explorer and Expansion. The Explorer track is appropriate for early-stage projects where establishing feasibility and proof-of-concept are the most relevant outcomes of the grant period. The total budget is \$500,000 or less, inclusive of 20 percent indirect costs, over a period of up to two (2) years. The Expansion track is appropriate for more mature projects with evidence of feasibility and preliminary validity, for which goals such as scalability, generalizability and/or ecological validity are now the most relevant translational outcomes. The total budget is \$900,000 or less, inclusive of 20 percent indirect costs, over a period of up to three (3) years.

[Policies and Procedures](#)

Application Deadline
April 25, 2022

Maximum Budget

Explorer Track
\$500,000 up to two (2) years

Expansion Track
\$900,000 up to three (3) years

Important Dates

Application Available
February 7, 2022

RFA Informational Session
February 25, 2022

Application Deadline
April 25, 2022

Award Notification

August 2022

Award Start Dates
October 1, 2022
November 1, 2022
December 1, 2022

SFARI Mission

The mission of the Simons Foundation Autism Research Initiative (SFARI) is to improve the understanding, diagnosis and treatment of autism spectrum disorders (ASD) by funding innovative research of the highest quality and relevance.

Background and Objective

A thorough understanding of the human condition is bedrock to scientific research that aims to improve the lives of affected individuals. To this end, the scientific community has made tremendous advances in deciphering the genetic architecture of ASD, which includes genomic analyses of SFARI-funded cohorts, such as [SPARK](#), [Simons Searchlight](#) and the [Simons Simplex Collection](#).

To better understand the cognitive and behavioral foundations of ASD, SFARI released its first investigator-initiated Human Cognitive and Behavioral Science request for applications (RFA) in 2021 dedicated to supporting the unique opportunities and challenges inherent to studies that directly involve participants with ASD. This inaugural RFA committed approximately \$6.9 million in funding to innovative projects that leverage recent advances in cognitive neuroscience and quantitative behavioral analysis. SFARI is excited to build upon this momentum through the 2022 Human Cognitive and Behavioral Science RFA, which further refines scientific opportunities and budgetary options.

Scientific Priorities and Scope

The Human Cognitive and Behavioral Science RFA prioritizes research that produces foundational knowledge about the neurobehavioral differences associated with ASD. Many of these projects are expected to inform or relate to the development and refinement of tools needed for translational efforts, such as biomarkers and outcome measures. Special emphasis is placed on objective, quantitative measures that may be used in conjunction with standardized clinical measures and genomic information to better triangulate phenotypic and neurobiological variability within and across individuals with ASD.

In particular, we encourage studies that capitalize on approaches that are informed by recent advances in computer vision, machine learning and speech processing, as well as psychophysics and non-invasive neuroscience techniques (e.g., EEG and MRI). SFARI has a strong interest in developmentally focused studies in areas that include, but are not limited to, communicative, social and ritualistic/stereotyped behavior, as well as sensory and motor function. SFARI also recognizes the importance of domains of function, such as attention, learning and memory, and sleep, in influencing core ASD diagnostic domains. Applications may propose either laboratory-based or real-world measures of behavior (i.e., wearables/"digital phenotyping").

We encourage proposals conceptualized within rigorously defined theoretical/computational or neurobiologically-grounded frameworks. Importantly, proposals addressing current theories of autism should include experiments to directly examine falsifiable hypotheses. We also welcome studies that deepen our understanding of cognitive constructs that are often modeled in experimental animals. These may include, but are not limited to, learning and memory, attention, repetitive behaviors, stereotypy, sensory processing and motor function. For applications that wish to conduct parallel studies in both humans and in experimental models (e.g., mouse models, induced pluripotent stem cells), please contact scienceRFA@simonsfoundation.org for further guidance from the SFARI science team.

SFARI considers the following as out-of-scope for this RFA: studies with a primary focus on developing new clinical rating scales, or survey-based assessments, or online adaptations of traditional paper and pencil tests or existing assessments, such as cognitive (IQ) or social-cognitive tests. In addition, we discourage applications with a primary focus on psychosocial factors, or those proposing interventional clinical trials or treatments. Applications primarily focused on infrastructure or recruitment support of cohorts would also be considered unresponsive.

Level and Duration of Funding

To enhance support of projects all along the continuum of translation, SFARI now offers two tracks within this RFA solicitation: Explorer and Expansion. Applicants should select which track best matches the maturity and goals of their research proposal, as review criteria will be appropriately tailored for each track.

Explorer track

This track is appropriate for early-stage projects where establishing feasibility and proof-of-concept are the most relevant outcomes of the grant period. The total budget is \$500,000 or less, inclusive of 20 percent indirect costs, over a period of up to two (2) years. Allowable indirect costs to the primary institution for subcontracts are not included in the \$500,000 total budget threshold (see [grant policies](#)).

Expansion track

This track is appropriate for more mature projects with evidence of feasibility and preliminary validity, for which goals such as scalability, generalizability and/or ecological validity are now the most relevant translational outcomes. The total budget is \$900,000 or less, inclusive of 20 percent indirect costs, over a period of up to three (3) years. Allowable indirect costs to the primary institution for subcontracts are not included in the \$900,000 total budget threshold.

As with all SFARI-funded projects, it is at the foundation's discretion to modify final budgets and scientific scope as needed. Grant progress will be critically evaluated at the end of each annual funding period before support for the upcoming year will be approved.

Participant Recruitment and Sample Sizes

Given the heterogeneity and multifactorial causes of ASD, SFARI places a premium on the use of well-characterized and sufficiently powered cohorts. SFARI is particularly interested in research study designs that stratify participants by genetic etiologies or other biologically meaningful criteria.

To facilitate recruitment of cohorts with well-characterized ASD and associated neurodevelopmental disabilities, SFARI has developed the Research Match program. Research Match is a robust in-house program to help investigators recruit participants from Simons collections, including [SPARK](#) and [Simons Searchlight](#). RFA applicants are strongly encouraged, but not required, to use Research Match as part of their participation recruitment strategy.

SPARK Research Match

SPARK Research Match is a service that matches researchers with participants from SPARK, a landmark genetic research project with over 100,000 individuals diagnosed with autism, plus their biological family members. To date, SPARK Research Match has supported over 160 studies with SPARK families, ranging from validation of remote novel measurements in very large samples to local laboratory neuroimaging and treatment protocols.

This service matches researchers with participants with rare genetic conditions associated with ASD. Our unique Simons Searchlight communities include individuals with high-support needs, who are historically underrepresented in research studies, but for whom clinical impact may be particularly meaningful. Examples of potentially impactful studies might include quantitative investigations of communication, motor function or sleep. Previous Research Match projects have included psychophysics experiments, novel eye tracking-based measures, and genetic research. To facilitate future research on these rare conditions, SFARI is also offering additional support for research conducted at upcoming patient advocacy organization [conferences](#).

Eligibility

All applicants and key collaborators must hold a Ph.D., M.D. or equivalent degree and have a faculty position or the equivalent at a college, university, medical school or other research facility.

Principal investigators (PIs) who do not have substantial expertise with ASD participants should include a close collaborator with such expertise on their grant application (e.g., multi-PI application).

Applications may be submitted by domestic and foreign nonprofit organizations; public and private institutions, such as colleges, universities, hospitals, laboratories, and units of state and local government; and eligible agencies of the federal government. There are no citizenship or country requirements.

Resubmissions and Multiple Applications

Unsuccessful applications submitted to previous SFARI RFAs may be resubmitted to this RFA, if relevant. For all resubmissions, we ask principal investigators (PIs) to submit a statement of changes describing substantive changes to the application since the previous submission. If the previous application was externally reviewed, this document should include point-by-point responses to the reviewers' critiques. If the revised application does not include substantive changes, it is unlikely that the outcome will change. This is especially true for applications that were not externally reviewed, as this decision is often based on the relevance of the project to SFARI's mission.

Investigators may submit multiple applications on different topics. However, it is highly unlikely that two awards will be made to the same PI within one RFA cycle.

Instructions for Submission

Applications must be completed electronically and submitted using forms provided at [proposalCENTRAL](#). Please log in as an applicant, go to the grant opportunities tab, scroll to "Simons Foundation" and click "Apply Now" for the SFARI – Human Cognitive and Behavioral Science program. For assistance, please call 800-875-2562 or email pcsupport@altum.com.

Details concerning application requirements and submission can be found in our instructions or on [proposalCENTRAL](#). If you have other questions, please review our [FAQ](#).

Informational Sessions for Potential Applicants

To answer questions about this RFA, SFARI will hold an informational session for interested applicants on February 25th, 12–12:45p.m. EST. Click [here](#) to register.

Our Commitment to Diversity, Equity and Inclusion

Many of the greatest ideas and discoveries come from a diverse mix of minds, backgrounds and experiences. The Simons Foundation is committed to grantmaking that inspires and supports greater diversity and inclusiveness by cultivating a funding environment that ensures representation of all identities and differences and equitable access to information and resources for all applicants and grantees.

The Simons Foundation provides equal opportunities to all applicants for funding without regard to race, religion, color, age, sex, pregnancy, national origin, sexual orientation, gender identity, genetic disposition, neurodiversity, disability, veteran status or any other protected category under federal, state and local law. The foundation also funds programs directed at supporting scientists from disadvantaged backgrounds or underrepresented groups, often working closely with professional societies and other funding agencies.

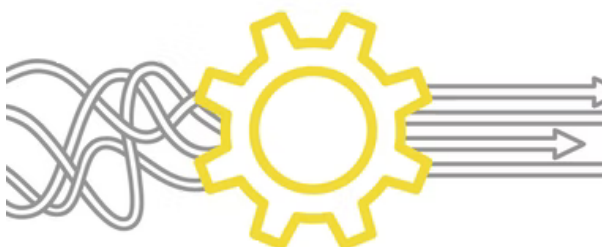
Of particular relevance to the Human Cognitive and Behavioral Science Award program, applicants are also encouraged to consider the [SPARK Research Match Diversity, Equity and Inclusivity \(DEI\) request for applications \(RFA\)](#), which aims to address historic disparities in research participation by Black or African American individuals.

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