



**NATIONAL SCIENCE FOUNDATION (NSF)
Small Business Innovation Research (SBIR)/Small Business Technology
Transfer (STTR) Phase I Grant General Conditions (SBIR/STTR-I)**

Effective January 30, 2023

Effective January 30, 2023, new NSF Phase I SBIR/STTR grants and funding amendments to existing SBIR/STTR Phase I grants will begin referencing, and are subject to, the Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Phase I Grant General Conditions (SBIR/STTR-I) dated January 30, 2023.

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1. Type of Award

The award notice specifies a pre-determined fixed amount of NSF support for the project described in the referenced proposal. This amount is based upon the budget approved by NSF for the referenced proposal, as amended. NSF anticipates that the full grant amount will be paid without regard to the actual cost subsequently incurred.

Payment of this amount, however, is subject to compliance with the grant terms and conditions, including Article Project Reporting Requirements, Article Payments, Article Allowable Costs and NSF's acceptance of the reports submitted by the grantee under Article Project Reporting Requirements. On the basis of its review of these reports and/or other pertinent information, NSF reserves the right to suspend or terminate the grant, if NSF determines that such action is appropriate. If estimated total expenditures are significantly less than the grant amount, NSF reserves the right to renegotiate the amount of this grant.

2. Grantee Responsibilities and Federal Requirements

a. The company (grantee) must identify an Authorized Organizational Representative (AOR) who is an officer of the company with financial responsibility, who is the addressee of the award notice and who approves all reports and required certifications.

b. The grantee has full responsibility for the conduct of the project or activity supported under this grant and for adherence to the grant terms and conditions. A minimum of two-thirds of the research and/or analytical effort as measured by the budget must be performed by the grantee on an SBIR grant. On an STTR grant, a minimum of 40% of the research, as measured by the budget, must be performed by the grantee and a minimum of 30% of the research, as measured by the budget, by the collaborating institution.

c. Although the grantee is encouraged to seek the advice and opinion of the Foundation on special problems that may arise, such advice does not diminish the grantee's responsibility for making sound scientific and administrative judgments and should not imply that the responsibility for operating decisions has shifted to the Foundation. The grantee is responsible for notifying NSF about (1) any allegation of scientific misconduct that it concludes has substance and requires an investigation in accordance with NSF misconduct regulations published at 45 Code of Federal Regulations (CFR) Part 689, and (2) any significant problems relating to the scientific, technical, administrative or financial aspects of the grant.

d. The requirements of this grant are contained in these *SBIR/STTR-I Grant General Conditions* unless otherwise specified in the award notice. The applicable Federal administrative standards are incorporated by reference and are contained in 2 CFR §200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance), Subparts C and D. NSF has determined 2 CFR §200 Subparts C and D also apply to commercial organizations, including small businesses.

e. The grantee is responsible for ensuring that the Principal Investigator(s) (PIs)¹ receive a

¹ For purposes of the terms and conditions, the term Principal Investigator (PI) and co-PI also includes the term Project Director and co-Project Director.

copy of the grant conditions, including: the award notice, the budget, these general terms and conditions, any special terms and conditions and any subsequent changes in the grant conditions. These grant conditions are made available to the grantee by NSF in electronic form at https://www.nsf.gov/awards/managing/sbirsttr_conditions.jsp, and may be duplicated, copied or otherwise reproduced by the grantee as appropriate. This provision does not alter the grantee's full responsibility for conduct of the project and compliance with all grant terms and conditions. A listing of National Policy Requirements that grantees must adhere to, where applicable, is located at: <https://nsf.gov/awards/managing/rtc.jsp>. Award notices are available to be viewed, printed and/or downloaded electronically via Research.gov at <https://www.research.gov/award-documents-web>.

3. NSF Responsibilities

a. The grantee has overall responsibility for NSF-funded grant, including providing grant oversight for technical/programmatic, financial, and administrative performance. The cognizant NSF Program Officer may participate in discussions of programmatic, technical, managerial and/or scheduling concerns; provide guidance and/or advice; review and, where required by the grant, approve technical or programmatic reports and requests submitted by the grantee; and may schedule desk and/or on-site reviews as necessary to resolve any NSF grant questions or resolve follow-up audit issues.

b. The grantee shall submit all requests for prior approval in accordance with the procedures identified in Article Prior Approval Requirements below.

c. The cognizant NSF Program Officer will only request additional work within the scope of the grant; will only issue instructions that do not constitute a project change as defined in Article Significant Project Changes; and will only suggest changes that will not increase or decrease the estimated cost or time required for performance under the grant.

4. Prior Approval Requirements

Unless otherwise stated in the award notice, the grantees must obtain NSF prior written approval as specified in these grant terms and conditions and in the applicable prior approval matrix. As a service to grantees, the most commonly requested prior approvals are listed below.

a. NSF prior written approval is required for:

1. Significant Project Changes

(a) Transfer of the project effort (see Article Significant Project Changes. See also 2 CFR §200.308)

(b) Changes in objectives or scope (see Article Significant Project Changes. See also 2 CFR §200.308)

(c) Long-Term Disengagement or change of PI/PD (see Article Significant Project Changes. See also 2 CFR §200.308)

b. Requests for NSF prior written approval specified in the applicable prior approval matrix must be submitted via the use of NSF's electronic systems. Those prior approval requirements

that do not already have a specific request type in NSF's electronic systems must be submitted via use of the "Other" category in Research.gov.

c. Written approval (e.g., via email) is required from the cognizant NSF Program Director for any project revision that results in a 5% or greater budget reallocation.

5. No-Cost Extensions

No-cost extensions to the project must be approved by NSF. Requests for no-cost extensions should be submitted to NSF at least 45 days prior to the expiration date of the award and must be submitted through NSF's electronic systems. The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use.

6. Significant Project Changes

Consistent with 2 CFR §200.308(c), the grantee is required to obtain NSF prior written approval whenever there are changes in the project as stipulated below.

a. Subawarding or Transferring Part of an NSF Award (Subaward)

1. If the intention to subaward or transfer part of the project to another organization has been disclosed in the proposal, NSF authorization is not needed unless approval has been specifically withheld in the award notice.
2. If it becomes necessary to subaward or transfer a significant part of an NSF award after a grant has been made, notification of this intent should be submitted via use of NSF's electronic systems and must be electronically signed by an Authorized Organizational Representative (AOR). The request shall include a clear description of the work to be performed and a proposed budget (see [PAPPG Chapter VII.B.4](#) or additional information). NSF approval of such changes will be by an amendment to the grant.
3. The grantee remains responsible for monitoring of the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward as outlined in 2 CFR §§200.331-332. This includes ensuring necessary documentation for all subawards is maintained for the same retention period as the grantee's and making it available to NSF upon request. The grantee shall include subaward activities in the annual and final project reports that are submitted to NSF.
4. Consistent with the requirements specified in 2 CFR §200.332, the grantee must adhere to the requirements for pass-through entities in establishing and managing subawards issued under the grant. In addition, grantees shall ensure that the following articles, if applicable, flow down to all subrecipients, or are appropriately addressed in the subaward instrument: Articles Consultant Services, Travel, Allowable Costs, Information Collection, Responsible and Ethical Conduct of Research, Safe and Inclusive Working Environments for Off-Campus or Off-Site Research, Reporting Subawards and Executive Compensation, System for Award Management and Universal Identifier Requirements, Copyrighted Material, Publications, Intangible Property, Audit and Records, Site

Visits, Non-Discrimination Statutes, Reporting Classifiable Information, Animal Welfare, Research Involving Recombinant or Synthetic Nucleic Acid Molecules, Clean Air and Water, Human Research Subjects, Life Sciences Dual Use Research of Concern (DURC), Whistleblower Protection, State Sales and Use Taxes, Build America, Buy America, Recipient Integrity and Performance Matters, Fee Payments, Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019, Liability, Sharing of Findings, Data and Other Research Products, Government Permits and Activities Abroad. If the grantee issues contracts exceeding \$2,000 for construction, alteration or repair that are within the scope of the Acts found in 2 CFR §200, Appendix II, “*Contract Provisions for Non-Federal Entity Contracts Under Federal Awards*,” the appropriate clauses applicable to construction activities also will be included in applicable contracts.

b. Changes in Objectives or Scope

A proposed change in the phenomenon or phenomena objectives of the project stated in the proposal or agreed modifications thereto should be communicated via Research.gov. NSF approval of such changes will be by an amendment to the grant.

c. Long Term Disengagement or Change of Principal Investigator

If a named PI or co-PI plans to or becomes aware that he or she will: (1) devote substantially less effort to the work than anticipated in the approved proposal (defined in 2 CFR §200.308(c)(3) as a reduction of 25% or more in time devoted to the project); (2) sever his or her connection with the grantee; or (3) be disengaged from the project for a continuous period of more than three months, or otherwise relinquish active direction of the project, he or she shall advise the appropriate official at the grantee, who shall initiate action appropriate to the situation in accordance with the guidelines described in [PAPPG Chapter VII.B.2](#).

7. Pre-award Costs

a. The grantee may approve pre-award costs incurred within the 90 calendar day period before the start date of the grant. Requests for approval of pre-award costs for periods greater than 90 calendar days must be submitted electronically via NSF’s electronic systems.

b. Pre-award costs must be necessary for the effective and economical conduct of the project and the costs must be otherwise allowable in accordance with Article Allowable Costs.

c. Pre-award expenditures are made at the grantee's risk. Grantee authority to approve pre-award costs does not impose an obligation on NSF: (1) in the absence of appropriations; (2) if a grant is not subsequently made; or (3) if a grant is made for a lesser amount than the grantee anticipated.

d. In accordance with 2 CFR §200.458, if pre-award costs are charged to the grant, these costs must be charged to the initial budget period, unless otherwise specified in the award notice.

8. Subaward Requirements

It is NSF’s expectation that NSF grantees will use the domestic subrecipient’s applicable federally negotiated indirect cost rate(s). If no such rate exists, the NSF grantee may either negotiate

a rate or use a *de minimus* indirect cost rate recovery of 10% of modified total direct costs.

9. Consultant Services

Costs for professional and consultant services, including those who are members of a particular profession or possess a special skill and who are not officers or employees of the performing organization, are allowable when reasonable in relation to the services rendered and when not contingent upon recovery of costs from NSF. If not included in the grant budget, anticipated services must be justified and information furnished on each individual's expertise, primary organizational affiliation, normal daily compensation rate and number of days of expected service. Consultants' travel costs, including subsistence, may be included. If requested, the grantee must be able to justify that the proposed rate of pay is reasonable. The reimbursement rates for consultants are a direct cost that cannot exceed the daily equivalent of the rate paid to an Executive Level IV Federal employee.

10. Project Reporting Requirements

Payment of the grant amount is conditioned upon the grantee's acceptance and compliance with the grant terms and conditions which include expending the approximate person-months proposed and delivery to NSF and its acceptance of required reports. The results of the grantees' efforts under this grant are to be documented in the form of a final report.

The Phase I final report (due within 15 days following the end date of the grant) must be submitted to the cognizant NSF Program Officer for review and acceptance using the SBIR/STTR Report Cover Page and in accordance with <https://seedfund.nsf.gov/resources/awardees/phase-1/reporting/>. Grantees shall submit final reports electronically via Research.gov. The Project Report system may be accessed at: <https://www.research.gov>. The final report should address progress in all activities of the project, including any activities intended to address the Broader Impacts criterion that are not intrinsic to the research. The company will provide a final total project expenditure chart as part of the Phase I final report.

If the Phase I grantee elects to submit a Phase II proposal prior to the completion of the Phase I grant, the grantee will provide a Phase I interim report that will be submitted with the Phase II proposal.

No later than 120 days following the end date of the grant, a project outcomes report for the general public must be submitted electronically via Research.gov. This report serves as a brief summary prepared specifically for the public, of the nature and outcomes of the project. This report will be posted electronically by NSF exactly as it is submitted. For information about the content of the report, see the [PAPPG Chapter VII.D.3](#).

In accordance with 2 CFR §200.344(i), if the grantee does not submit all required reports within one year of the period of performance end date, NSF must report the grantee's material failure to comply with the terms and conditions of the award with the OMB-designated integrity and performance system (currently Federal Awardee Performance and Integrity Information System (FAPIIS)). NSF may also pursue other enforcement actions per 2 CFR §200.339.

11. Payments

a. NSF SBIR/STTR grantees are required to request payments electronically through the Award Cash Management Service (ACM\$). Under ACM\$, grantees must provide award level detail at the time of the payment request. Grantees should request payments in amounts necessary to meet their current needs, pursuant to the guidelines contained in 31 CFR Part 205. Unless otherwise specified in the grant, the grantee agrees to comply with all applicable Treasury regulations and National Science Foundation implementing and reporting procedures, which are outlined in [PAPPG Chapter VIII](#).

b. In accordance with 2 CFR §200.305, where appropriate, grantees are required to maintain advances of Federal funds in interest-bearing accounts. Grantees may retain interest earned on amounts up to \$500 per year for administrative expenses. Any additional interest earned on Federal advance payments deposited in interest-bearing accounts must be remitted annually to the Department of Health and Human Services Payment Management System (PMS) through an electronic medium using either the Automated Clearing House (ACH) network or a Fedwire Funds Service payment. Instructions on submission of remittances can be found in [PAPPG Chapter VIII.D.3](#).

c. In the absence of an approved modification to this schedule, payments will be made by NSF as follows: The initial drawdown, for all but \$25,000 of the grant amount, can be made after the period of performance start date of the grant. The final \$25,000 will be made available upon approval by NSF of a satisfactory final report and upon submission of a Project Outcomes Report, as described in Article Project Reporting Requirements and/or in the SBIR/STTR Program Solicitation. If the grantee does not submit all reports as described in Article Project Reporting Requirements and 2 CFR §200.344, NSF must proceed to close out the project with the information available within one year of the period of performance end date. If grantees do not submit all reports in accordance with this section, and 2 CFR §200.344 (Closeout) within one year of the period of performance end date, NSF must report the non-Federal entity's material failure to comply with the terms and conditions of the grant with the OMB-designated integrity and performance system (currently FAPIIS). NSF may also pursue other enforcement actions per § 200.339.

d. In accordance with 2 CFR §200.344, unless the Federal awarding agency authorizes an extension, grantees must liquidate all financial obligations incurred under the Federal grant no later than 120 calendar days after the end date of the period of performance. NSF will financially close SBIR/STTR grants 120 days after the grant end date and the grant will be removed from the ACM\$ payment screen for active grants.

12. Copyrighted Material

a. Definition

Subject writing means any material that:

1. is or may be copyrighted under Title 17 of the USC; and
2. is produced by the grantee or its employees in the performance of work under this grant.

Subject writings include such items as reports, books, journal articles, software, databases, sound recordings, videotapes and videodiscs.

b. Copyright Ownership, Government License

Except as otherwise specified in the grant or by this paragraph, the grantee may own or permit others to own copyright in all subject writings. The grantee agrees that if it or anyone else does own copyright in a subject writing, the Federal government will have a nonexclusive, nontransferable, irrevocable, royalty-free license to exercise or have exercised for or on behalf of the US throughout the world all the exclusive rights provided by copyright. Such license, however, will not include the right to sell copies or phonorecords of the copyrighted works to the public.

c. Grants Affected by International Agreements

If the grant indicates it is subject to an identified international agreement or treaty, NSF can direct the grantee to convey to any foreign participant or otherwise dispose of such rights to subject writings as are required to comply with that agreement or treaty. In such cases, the standard clauses for Copyrighted Material or Patents Rights will be modified through the addition of the following:

“This project is supported under the cooperative program listed below. Your rights in inventions, writings and data may be affected.”

The applicable agreement or treaty will be identified immediately beneath that sentence.

d. Grantee Action to Protect Government Interests

The grantee agrees to acquire, through written agreement or an employment relationship, the ability to comply with the requirements of the preceding paragraphs and, in particular, to acquire the ability to convey rights in a subject writing to a foreign participant if directed by NSF under the previous

13. Publications

a. Acknowledgment of Support

The grantee is responsible for assuring that an acknowledgment of NSF support:

1. is made in any publication (including World Wide Web pages) of any material based on or developed under this project, in the following terms:

"This material is based upon work supported by the National Science Foundation under Grant No. (NSF grant number)."

2. is orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

Disclaimer

The grantee is responsible for assuring that every publication of material (including World Wide Web pages) based on or developed under this grant, except scientific articles or papers appearing in scientific, technical, or professional journals, contains the following disclaimer:

"Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

b. Copies for NSF

The grantee is responsible for assuring that the cognizant NSF Program Officer is provided access to, either electronically or in paper form, a copy of every publication of material based on or developed under this grant, clearly labeled with the grant number and other appropriate identifying information, promptly after publication.

14. Procurement Standards

a. The grantee (including commercial organizations) is responsible for compliance with the procurement standards identified in 2 CFR §200.317-327.

15. Travel

a. Allowability of Travel Expenses

1. Expenses for transportation, lodging, subsistence and related items incurred by project personnel and by outside consultants employed on the project (see [PAPPG Chapter II.D.2.f\(iv\)](#)) who are in travel status on business related to an NSF- supported project are allowable as prescribed in the governing cost principles.

2. Except as provided in the governing cost principles, the difference between economy airfare and a higher-class airfare is unallowable. A train, bus or other surface carrier may be used in lieu of, or as a supplement to, air travel at the lowest first-class rate by the transportation facility used. If such travel, however, could have been performed by air, the allowance will not normally exceed that for jet economy airfare.

b. Use of US-Flag Air Carriers

1. In accordance with the Fly America Act (49 USC 40118), any air transportation to, from, between, or within a country other than the US of persons or property, the expense of which will be assisted by NSF funding, must be performed by or under a code-sharing arrangement with a US-flag air carrier if service provided by such a carrier is available (see Comptroller General Decision B-240956, dated September 25, 1991). Tickets (or documentation for electronic tickets) must identify the US flag air carrier's designator code and flight number.

2. For the purposes of this requirement, US-flag air carrier service is considered available even though:

(a) comparable or a different kind of service can be provided at less cost by a foreign-flag air carrier;

(b) foreign-flag air carrier service is preferred by, or is more convenient for, NSF or traveler; or

(c) service by a foreign-flag air carrier can be paid for in excess foreign currency.

3. The following rules apply unless their application would result in the first or last leg of travel from or to the US being performed by a foreign-flag air carrier:

(d) a US-flag air carrier shall be used to destination or, in the absence of direct or through service, to the farthest interchange point on a usually traveled route.

(e) if a US-flag air carrier does not serve an origin or interchange point, a foreign-flag air carrier shall be used only to the nearest interchange point on a usually traveled route to connect with a US flag air carrier.

c. Short Distance Travel

For all short distance travel, regardless of origin and destination, use of a foreign-flag air carrier is permissible if the elapsed travel time on a scheduled flight from origin to destination airport by a foreign-flag air carrier is three hours or less and service by a US-flag air carrier would double the travel time.

16. Allowable Costs

a. The allowability of costs² and cost allocation methods for work performed under this grant, up to the amount specified in the grant, shall be determined in accordance with the governing cost principles as specified below and must conform with NSF policies, grant special provisions and grantee internal policies in effect on the start date of the grant.

b. The cost principles that govern Federal awards can be found in the Federal Acquisition Regulation, 48 CFR Part 31.

c. Certain prior approval requirements contained in the governing cost principles have been modified by Article Prior Approval Requirements.

17. Information Collection

Information collection activities performed under this grant are the responsibility of the grantee, and NSF support of the project does not constitute NSF approval of the survey design, questionnaire content or information collection procedures. The grantee shall not represent to

² Consistent with 2 CFR §200.453(c), for computing devices, charging as a direct cost is allowable for devices that are essential and allocable, but not solely dedicated, to the performance of the grant.

respondents that such information is being collected for or in association with the National Science Foundation or any other Government agency without the specific written approval of such information collection plan or device by the Foundation. This requirement, however, is not intended to preclude mention of NSF support of the project in response to an inquiry or acknowledgment of such support in any publication of this information.

18. Responsible and Ethical Conduct of Research

The plan to provide appropriate training and oversight in the responsible and ethical conduct of research to faculty and other senior personnel who will be supported by NSF to conduct research will go into effect for new proposals submitted or due on or after July 31, 2023.

In accordance with Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act (42 USC §1862o-1), as amended, NSF requires that the grantee must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research (RECR) to undergraduates, graduate students postdoctoral researchers, faculty, and other senior personnel who will be supported by NSF to conduct research. Such training must include mentor training and mentorship. Training plans are subject to review, upon request.

The grantee must designate one or more persons to oversee compliance with the RECR training requirement. The grantee is responsible for verifying that undergraduate students, graduate students postdoctoral researchers, faculty, and other senior personnel supported by NSF to conduct research have received training in the responsible and ethical conduct of research, in accordance with the plan the grantee has put in place for their organization.

The grantee shall ensure that these RECR requirements flow down to all subrecipients or are otherwise appropriately addressed in the subaward.

19. Safe and Inclusive Working Environments for Off-Campus or Off-Site Research

For grants that conduct research off-campus or off site³, the grantee is required to have a plan in place for that awarded proposal that describes how the following types of behavior will be addressed:

Abuse of any person, including, but not limited to, harassment, stalking, bullying, or hazing of any kind, whether the behavior is carried out verbally, physically, electronically, or in written form; or

- Conduct that is unwelcome, offensive, indecent, obscene, or disorderly.

The plan should also identify steps the grantee will take to nurture an inclusive off-campus or off-site working environment, e.g., trainings; processes to establish shared team definitions of roles, responsibilities, and culture, e.g., codes of conduct; and field support, such as mentor/mentee support mechanisms, regular check-ins, and/or developmental events.

³ For purposes of this requirement, off-campus or off-site research is defined as data/information/samples being collected off-campus or off-site, such as fieldwork and research activities on vessels and aircraft.

Communications within team and to the grantee should be considered in the plan, minimizing singular points within the communications pathway (e.g., a single person overseeing access to a single satellite phone), and any special circumstances such as the involvement of multiple organizations or the presence of third parties in the working environment should be taken into account. The process or method for making incident reports as well as how any reports received will be resolved should also be accounted for.

The plan must be disseminated to individuals participating in the off-campus or off-site research prior to departure. Grantees are not required to submit the plan for review by NSF, however, the plan is subject to review, upon request.

20. Reporting Fraud, Waste, and Abuse

a. Grantees must contact the OIG and the cognizant NSF Program Officer without delay when they first suspect fraud waste, or abuse. The OIG maintains a hotline to receive this information, which can be made through the OIG website at <https://oig.nsf.gov/contact/hotline> or by telephone at (800) 428-2189. Upon request, OIG will take appropriate measures to protect the identity of any individual who reports misconduct, as authorized by the Inspector General Act of 1978, as amended. Reports to OIG may also be made anonymously.

b. Examples of fraud, waste, and abuse relating to the SBIR/STTR program include, but are not limited to:

1. misrepresentations or material, factual omissions to obtain or otherwise receive funding under an SBIR/STTR award;
2. misrepresentations of the use of funds expended, work done, results achieved, or compliance with program requirements under an SBIR/STTR award;
3. fraud, theft, misuse, conversion, misappropriation, or embezzlement of SBIR/STTR award funds, including any use of award funds while not in full compliance with SBIR/STTR program requirements, or failure to pay taxes due on misused or converted SBIR/STTR award funds;
4. submission of a false claim or a false statement by any person in connection with any NSF SBIR/STTR program, activity, award, or operations;
5. concealment, forgery, falsification, or unauthorized destruction of government or program records;
6. fabrication, falsification, or plagiarism in applying for, carrying out, or reporting results from an SBIR/STTR award;
7. failure to comply with applicable federal costs principles governing an award;
8. extravagant, careless, or needless spending;
9. self-dealing, such as making a sub-award to an entity in which the PI has a financial interest without explicit NSF knowledge and approval;

10. acceptance by agency personnel of bribes, kickbacks, illegal gratuities, or gifts in exchange for grant or contract awards or other conflicts of interest that prevent the government from getting the best value; and,
11. Other violations of criminal or civil law, other violation of federal regulations, or other misconduct in connection with SBIR/STTR operations, programs, activities, or awards.

21. Reporting Subawards and Executive Compensation

This grant term was extracted verbatim from 2 CFR Appendix A to Part 170. For these purposes, the term “you” means the NSF grantee.

a. Reporting of first-tier subawards

1. **Applicability.** Unless exempt as provided in paragraph d. of this award term, you must report each action that equals or exceeds \$30,000 in Federal funds for a subaward to a non-Federal entity or Federal agency (see definitions in paragraph e. of this award term).

2. Where and when to report

(a) You must report each obligating action described in paragraph a.1. of this award term to www.fsr.gov.

i. The non-Federal entity or Federal agency must report each obligating action described in paragraph a.1. of this award term to www.fsr.gov.

ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. **What to report.** You must report the information about each obligating action that the submission instructions posted at www.fsr.gov specify.

b. Reporting Total Compensation of Recipient Executives

1. **Applicability and what to report.** You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if:

i the total Federal funding authorized to date under this award is \$30,000 or more as defined in 2 CFR §170.320;

ii in the preceding fiscal year, you received—

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards), and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards); and

(iii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 USC 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <https://www.sec.gov/fast-answers/answers-execomphm.html>).

2. Where and when to report. You must report executive total compensation described in paragraph b.1. of this award term:

i As part of your registration profile at <https://www.sam.gov>.

(ii) By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives

1. Applicability and what to report. Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:

i. in the subrecipient's preceding fiscal year, the subrecipient received—

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards) and,

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 USC 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <https://www.sec.gov/fast-answers/answers-execomphm.html>).

2. *Where and when to report.* You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year

(i.e., between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. Subawards

and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. Definitions. For purposes of this award term:

1. Federal Agency means a Federal agency as defined at 5 USC 551(1) and further clarified by 5 USC 552(f).

2. Non-Federal entity means all of the following, as defined in 2 CFR Part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization; and,

iv. A domestic or foreign for-profit organization.

3. *Executive* means officers, managing partners, or any other employees in management positions.

4. *Subaward*:

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR §200.330).

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

5. *Subrecipient* means a non-Federal entity or Federal agency that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

6. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR §229.402(c)(2)).

22. System for Award Management and Universal Identifier Requirements

This grant term was extracted verbatim from Appendix A to Part 25. For these purposes, the term “you” means the NSF grantee.

A. Requirement for System for Award Management

Unless you are exempted from this requirement under 2 CFR §25.110, you as the recipient must maintain current information in the SAM. This includes information on your immediate and highest level owner and subsidiaries, as well as on all of your predecessors that have been awarded a Federal contract or Federal financial assistance within the last three years, if applicable, until you submit the final financial report required under this Federal award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another Federal award term.

B. Requirement for Unique Entity Identifier

If you are authorized to make subawards under this Federal award, you:

1. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from you until the entity has provided its Unique Entity Identifier to you.
2. May not make a subaward to an entity unless the entity has provided its Unique Entity Identifier to you. Subrecipients are not required to obtain an active SAM registration but must obtain a Unique Entity Identifier.

C. Definitions

For purposes of this term:

1. *System for Award Management (SAM)* means the Federal repository into which a recipient must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <https://www.sam.gov>).
2. *Unique Entity Identifier* means the identifier assigned by SAM to uniquely identify business entities.
3. *Entity* includes non-Federal entities as defined at 2 CFR §200.1 and also includes all of the following, for purposes of this part:

- a. A foreign organization;
 - b. A foreign public entity;
 - c. A domestic or foreign for-profit organization; and
 - d. A Federal agency.
4. *Subaward* has the meaning given in 2 CFR §200.1.
 5. *Subrecipient* has the meaning given in 2 CFR §200.1.

23. Unpaid Federal Tax Liability

Article 23 applies only to grantees that are corporations.

In accordance with the Financial Services and General Governmental Appropriations Act, 2020, the grantee affirms that the corporation has no unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

24. Criminal Convictions

Article 24 applies only to grantees that are corporations.

In accordance with the Financial Services and General Governmental Appropriations Act, 2020, the grantee affirms that the corporation has not been convicted of a felony criminal violation under any Federal law within the preceding 24 months.

25. Intangible Property⁴

The following Intangible Property article (implementing the Bayh-Dole Act, [35 USC §200 et seq.] shall apply to all awards for scientific or engineering research unless special provisions have been negotiated. The grantee shall include this article in all subawards for scientific or engineering research activities.

a. Definitions

1. **INVENTION** means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the USC, to any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 USC §2321 et seq.).

2. **SUBJECT INVENTION** means any invention of the grantee conceived or first actually reduced to practice in the performance of work under this grant, provided that in the case of a

⁴ The grantee is reminded that, in view of the US Supreme Court decision in Stanford v. Roche, employee assignment agreements should include a present conveyance of rights (“I hereby assign” rather than a promise or intent to assign) in order to effectively convey patent rights to the institution, allowing the institution to meet its responsibility under the Bayh-Dole Act to provide the agency with a license of patented inventions.

variety of plant, the date of determination (as defined in section 41(d)) must also occur during the period of performance.

3. PRACTICAL APPLICATION means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

4. MADE when used in relation to any invention means the conception or first actual reduction to practice of such invention.

5. SMALL BUSINESS FIRM means a small business concern as defined at section 2 of Public Law 85-536 (15 USC 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this article, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

6. NON-PROFIT ORGANIZATION means a domestic university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 USC §501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC §501(a)) or any domestic non-profit scientific or educational organization qualified under a State non-profit organization statute.

7. STATUTORY PERIOD means the one-year period before the effective filing date of a claimed invention during which exceptions to prior art exist per 35 USC 102(b) as amended by the Leahy-Smith America Invents Act, Public Law 112-29.

8. CONTRACTOR means any person, small business firm or nonprofit organization, or, as set forth in section 1, paragraph (b)(4) of Executive Order 12591, as amended, any business firm regardless of size, which is a party to a funding agreement.

b. *Allocation of Principal Rights*

The grantee may retain the entire right, title and interest throughout the world to each subject invention subject to the provisions of this Intangible Property article and 35 USC Part 203. With respect to any subject invention in which the grantee retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world. If the award indicates it is subject to an identified international agreement or treaty, the National Science Foundation (NSF) also has the right to direct the grantee to convey to any foreign participant such patent rights to subject inventions as are required to comply with that agreement or treaty.

c. *Invention Disclosure, Election of Title and Filing of Patent Applications by Grantee*

1. The grantee will disclose each subject invention to NSF within two months after the inventor discloses it in writing to grantee personnel responsible for the administration of patent matters. The disclosure to NSF shall be in the form of a written report and shall identify the grant under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding of the nature, purpose, operation, and, to

the extent known, the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention, and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication, at the time of disclosure. In addition, after disclosure to NSF, the grantee will promptly notify NSF of the acceptance of any manuscript describing the invention for publication, or of any on sale or public use planned by the grantee.

2. The grantee will elect in writing whether or not to retain title to any such invention by notifying NSF within two years of disclosure to NSF. However, in any case where a patent, a printed publication, public use, sale or other availability to the public has initiated the one-year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by NSF to a date that is no more than 60 days prior to the end of the statutory period.

3. The grantee will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. If the grantee files a provisional application as its initial patent application, it shall file a non-provisional application within 10 months of the filing of the provisional application. The grantee will file patent applications in additional countries or international patent offices within either ten months of the first filed patent application, or six months from the date when permission is granted by the Commissioner of Patents to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

4. For any subject invention with NSF and grantee co-inventors, where NSF determines that it would be in the interest of the government, pursuant to 35 USC §207(a)(3), to file an initial patent application on the subject invention, NSF, at its discretion and in consultation with the grantee, may file such application at its own expense, provided that the grantee retains the ability to elect title pursuant to 35 USC §202(a).

5. Requests for extension of the time for disclosure to NSF, election and filing under subparagraphs 1., 2. and 3 may, at the discretion of NSF, be awarded. When a grantee has requested an extension for filing a non-provisional application after filing a provisional application, a one-year extension will be granted unless NSF notifies the contractor within 60 days of receiving the request.

d. *Conditions When the Government May Obtain Title*

The grantee will convey to NSF, upon written request, title to any subject invention:

1. if the grantee fails to disclose or elect the subject invention within the times specified in paragraph c. above, or elects not to retain title;

2. in those countries in which the grantee fails to file patent applications within the times specified in paragraph c. above, provided, however, that if the grantee has filed a patent application in a country after the times specified in paragraph c of this article, but prior to its receipt of the written request of NSF, the grantee shall continue to retain title in that country; or

3. in any country in which the grantee decides not to continue the prosecution of any non-provisional patent application for, to pay a maintenance, annuity or renewal fee on, or

defend in a reexamination or opposition proceeding on, a patent on a subject invention.

e. *Minimum Rights to Grantee*

1. The grantee will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the grantee fails to disclose the subject invention within the times specified in paragraph c. above. The grantee's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the grantee is a party and includes the right to award sublicenses of the same scope to the extent the grantee was legally obligated to do so at the time the award was made. The license is transferable only with the approval of NSF except when transferred to the successor of that part of the grantee's business to which the invention pertains.
2. The grantee's domestic license may be revoked or modified by NSF to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404. This license will not be revoked in that field of use or the geographical areas in which the grantee has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of NSF to the extent the grantee, its licensees or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
3. Before revocation or modification of the license, NSF will furnish the grantee a written notice of its intention to revoke or modify the license, and the grantee will be allowed 30 days (or such other time as may be authorized by NSF for good cause shown by the grantee) after the notice to show cause why the license should not be revoked or modified. The grantee has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

e. *Grantee Action to Protect Government's Interest*

1. The grantee agrees to execute or to have executed and promptly deliver to NSF all instruments necessary to: (i) establish or confirm the rights the Government has throughout the world in those subject inventions for which the grantee retains title; and (ii) convey title to NSF when requested under paragraph d. above, and to enable the Government to obtain patent protection throughout the world in that subject invention.
2. The grantee agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the grantee each subject invention made under this grant in order that the grantee can comply with the disclosure provisions of paragraph c. above, to assign to the grantee the entire right, title and interest in and to each subject invention made under the grant, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph c.1 above. The grantee shall instruct such employees through the employee agreements or other suitable educational programs on the importance of

reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

3. For each subject invention, the grantee will no less than 60 days prior to the expiration of the statutory deadline, notify NSF of any decision: not to continue the prosecution of a non-provisional patent application; not to pay a maintenance, annuity or renewal fee; not to defend in a reexamination or opposition proceeding on a patent, in any country; to request, be a party to, or take action in a trial proceeding before the Patent Trial and Appeals Board of the U.S. Patent and Trademark Office, including but not limited to post-grant review, review of a business method patent, *inter partes* review, and derivation proceeding; or to request, be a party to, or take action in a non-trial submission of art or information at the U.S. Patent and Trademark Office, including but not limited to a pre-issuance submission, a post-issuance submission, and supplemental.

4. The grantee agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement:

“This invention was made with Government support under (identify the NSF grant number) awarded by the National Science Foundation. The Government has certain rights in this invention.”

5. The grantee or its representative will complete, execute and forward to NSF a confirmation of a License to the U.S. Government and the page of a United States patent application that contains the Federal support clause within two months of filing any domestic or foreign patent application.

f. *Subawards*

1. The grantee will include this Intangible Property article, suitably modified to identify the parties, in all subawards, regardless of tier, for experimental, developmental or research work. The subawardee will retain all rights provided for the grantee in this Intangible Property article, and the grantee will not, as part of the consideration for awarding the subaward, obtain rights in the subawardees' subject inventions.

2. In the case of subawards, at any tier, when the prime award by NSF was a contract (but not a cooperative agreement), NSF, subawardee and contractor agree that the mutual obligations of the parties created by this Intangible Property article constitute a contract between the subawardee and the Foundation with respect to those matters covered by this Intangible Property article.

g. *Reporting on Utilization of Subject Inventions*

Upon request, the grantee agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the grantee or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the grantee and such other data and information as NSF may reasonably specify. The grantee also agrees to provide additional reports in connection with any march-in proceeding undertaken by NSF in accordance with paragraph j. of this Intangible Property article. As required by 35 USC §202(c)(5), NSF agrees it will not disclose such information to persons outside the Government without the permission of the grantee.

h. *Preference for United States Industry*

Notwithstanding any other provision of this Intangible Property article, the grantee agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the U.S.. However, in individual cases, the requirement for such an agreement may be waived by NSF upon a showing by the grantee or its assignee that reasonable but unsuccessful efforts have been made to award licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

i. *March-in Rights*

The grantee agrees that with respect to any subject invention in which it has acquired title, NSF has the right in accordance with procedures at [37 CFR §401.6](#) and the [NSF PAPPG Chapter XI.D.1.I.](#) to require the grantee, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the grantee, assignee or exclusive licensee refuses such a request, NSF has the right to grant such a license itself if NSF determines that such action is necessary:

1. because the grantee or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
2. to alleviate health or safety needs which are not reasonably satisfied by the grantee, assignee, or their licensees;
3. to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the grantee, assignee, or licensee; or
4. because the agreement required by paragraph j. of this Intangible Property article has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

j. *Communications*

All communications required by this Intangible Property article must be submitted through the [iEdison Invention Information Management System](#) maintained by the National Institutes of Health unless NSF prior written permission for another form of submission is obtained from the Patent Assistant at patents@nsf.gov or at Office of the General Counsel, National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA 22314.

26. Audit and Records

Financial records, supporting documents (including documentation of personnel expenses), statistical records and other records pertinent to this grant must be retained by the grantee for a period of three years from grant financial closeout as described in [PAPPG Chapter VII.E.](#), except

as noted in 2 CFR §200.334.

27. Site Visits

NSF, through authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by NSF on the premises of the grantee or a subrecipient under a grant, the grantee shall provide and shall require its subrecipients to provide all reasonable facilities and assistance for the safety and convenience of the NSF representatives in the performance of their duties. All site visits and evaluations shall be performed in such a manner that will not unduly delay the work.

28. Termination and Enforcement

a. Any suspension or termination action taken by NSF must be issued by a cognizant NSF Grants and Agreements Officer and will be in accordance with this article, 2 CFR §200.340, and [PAPPG Chapter XII.A.](#)

b. The grant may be suspended or terminated in whole or in part in any of the following situations:

1. By NSF, if the grantee fails to comply with the terms and conditions of a Federal award;

2. By NSF, to the greatest extent authorized by law, if an award no longer effectuates the program goals or agency priorities;

3. By NSF, with the consent of the grantee, in which case the two parties must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated;

4. By the grantee upon sending to NSF written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if NSF determines in the case of partial termination that the reduced or modified portion of the NSF award will not accomplish the purposes for which the NSF award was made, NSF may terminate the Federal award in its entirety;

5. By NSF, pursuant to termination provisions included in the NSF award; or

6. By NSF, when ordered by the Deputy Director under NSF's Regulation on Research Misconduct [45 CFR Part 689].

c. Normally, action by NSF to suspend or terminate a grant will be taken only after the grantee has been informed by NSF of any deficiency on its part and given an opportunity to correct it. NSF, however, may immediately suspend or terminate the grant without notice when it believes such action is reasonable to protect the interests of the Government.

d. No costs incurred during a suspension period or after the effective date of a termination will be allowable, except those costs which, in the opinion of NSF, the grantee could not reasonably avoid or eliminate, or which were otherwise authorized by the suspension or termination notice, provided such costs would otherwise be allowable under the terms of the

grant and the governing cost principles.

a. Within 30 days of the termination date, the grantee will furnish a summary of progress under the grant and an itemized accounting of costs incurred prior to the termination date or pursuant to d, above. Final allowable costs under a termination settlement shall be in accordance with the terms of the grant, including this article, and the governing cost principles, giving due consideration to the progress under the grant. In no event will the total of NSF payments under a terminated grant exceed the grant amount, or the NSF pro rata share of the total project costs when cost sharing was anticipated, whichever is less.

f. When an NSF grant is terminated or partially terminated, both NSF and the grantee remain responsible for compliance with the requirements in 2 CFR §§200.344 and 200.345.

g. A notice of termination other than by mutual agreement and/or the final settlement amount may be subject to review pursuant to Article Termination Review Procedure.

h. NSF will report grant terminations to the OMB-designated integrity and performance system in accordance with Federal regulation, but only after the grantee has had an opportunity to exhaust the review procedures contained in [PAPPG Chapter XII.B](#). See also Article Payments for additional information on FAPIIS.

29. Termination Review Procedure

a. A request for review of a notice of termination or settlement should be addressed to the Division Director, Division of Grants and Agreements (DGA), National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA, 22314. It must be postmarked no later than 30 days after the date of the letter notifying the grantee of the termination or settlement.

b. The request for review must contain a full statement of the grantee's position and the pertinent facts and reasons in support of such position.

c. Review of a notice of termination or settlement will be conducted in accordance with [PAPPG Chapter XII.B.3](#)

d. Pending resolution of the request for review, the notice of termination shall remain in effect.

30. Non-Discrimination Statutes

The award is subject to the provisions of Title VI of the Civil Rights Act of 1964 [42 USC §§2000d et seq.], Title IX of the Education Amendments of 1972 [20 USC §§1681 et seq.], the Rehabilitation Act of 1973 [29 USC §794], the Age Discrimination Act of 1975 [42 USC §§6101 et seq.], Equal Employment Opportunity [E.O. 11246], Limited English Proficiency (LEP) [E.O. 13166] and all regulations and policies issued by NSF pursuant to these statutes. Specifically, in accordance with these statutes, regulations and policies, no person on the basis of race, color, national origin, sex, disability, or age shall be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under the award.

31. Reporting Classifiable Information

NSF grants are intended for unclassified, publicly releasable research. The grantee will not be granted access to classified information. NSF does not expect that the results of the research project will involve classified information.

If, however, in conducting the activities supported under a grant, the PI is concerned that any of the research results involve potentially classifiable information that may warrant Government restrictions on the dissemination of the results, the PI should promptly notify the cognizant NSF Program Officer.

32. Animal Welfare

a. Any grantee performing research on live vertebrate animals⁵ shall comply with the Animal Welfare Act [7 USC §§2131 et seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR §§1.1-4.11] pertaining to the humane care, handling and treatment of live svertebrate animals held or used for research, teaching or other activities supported by Federal grants. The grantee is expected to ensure that the guidelines described in the National Academies of Science, Engineering and Medicine (NASEM) Publication, "*Guide for the Care and Use of Laboratory Animals*" are followed and to comply with the *Public Health Service Policy and Government Principles Regarding the Care and Use of Animals* (included as Appendix D to the NASEM Guide). Further guidance on the use of live vertebrate animals in NSF funded projects can be found in the [PAPPG Chapter XI.B.3](#).

b. Effective October 1, 2015, the grantee must include NSF-supported activities with live vertebrate animals as covered activities in their Office of Laboratory Animal Welfare (OLAW) Animal Welfare Assurance. Further, they must promptly report situations involving NSF-supported animal activities to OLAW as required by the [Public Health Service \(PHS\) Policy on Humane Care and Use of Laboratory Animals](#) Section IV.F.3. The cognizant NSF Program Officer also should be notified.

c. Any changes to, or lapses in, the Institutional Animal Care and Use Committee approved animal use protocols associated with an NSF grant should be reported promptly by the grantee to the cognizant NSF Program Officer.

d. In the event the grantee's multi-project Assurance is cancelled or lapses, the grantee must immediately notify the cognizant NSF Grants Officer(s) identified in the award notice.

e. Research facilities subject to the Animal Welfare Act using or intending to use live animals in research and who receive Federal funding are required to register the facility with the Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA). The location of the nearest APHIS Regional Office, as well as information concerning this and other APHIS activities may be obtained at <http://www.aphis.usda.gov/>.

⁵ In addition to vertebrate animals covered by the Animal Welfare Act, the requirements specified in this Article also are extended to rats, birds, and mice.

33. Research Involving Recombinant or Synthetic Nucleic Acid Molecules

If this grant supports research involving recombinant or synthetic nucleic acid molecules, the grantee agrees to comply with the [Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules](#) (NIH Guidelines), including the procedural requirements and any subsequent revisions as they are published in the Federal Register. Further information on research grants that involve recombinant or synthetic nucleic acid molecules can be found in the [PAPPG Chapter XI.B.2](#).

34. Clean Air and Water

(Applicable only if the grant exceeds \$150,000, or a facility to be used has been the subject of a conviction under the Clean Air Act [42 USC §7413(c)(1)] or the Clean Water Act [33 USC § 1319(c)] and is listed by the Environmental Protection Agency (EPA), or the grant is not otherwise exempt.)

The grantee agrees as follows:

- a. To comply with all the requirements of Section 114 of the Clean Air Act [42 USC §7414] and Section 308 of the Clean Water Act [33 USC §1318], respectively, relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in Section 114 and Section 308 of the Clean Air Act and the Clean Water Act, respectively and all regulations and guidelines issued thereunder before the issuance of the grant.
- b. That no portion of the work required by the grant will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date that the grant was issued unless and until EPA eliminates the name of such facility or facilities from such listing.
- c. To use its best efforts to comply with clean air standards and clean water standards at the facility in which the grant is being performed.
- d. To insert the substance of the provisions of this article into any nonexempt subaward.

35. Human Research Subjects

The grantee is responsible for the protection of the rights and welfare of any human subjects involved in research, development and related activities supported by this grant. The grantee agrees to comply with the NSF regulation, entitled, "*Protection of Human Subjects* [45 CFR Part 690]."

36. Investigator Financial Disclosure Policy

If the grantee employs more than 50 persons, the grantee must maintain an appropriate written and enforced policy on conflict of interest consistent with the provisions of [PAPPG Chapter IX.A](#).

37. Whistleblower Protection

The grantee is notified of the applicability of 41 USC §4712, as amended by P.L. 112-239, providing protection for whistleblowers.

38. State Sales and Use Taxes

The grantee is reminded that the governing cost principles cited in Article Allowable Costs limit the allowability of taxes to those the organization is required to pay. The grantee must avail themselves of any tax exemptions for which any activities supported by Federal funds may qualify, including any applicable exemptions from State or local sales and use taxes on the purchase of goods and services made with NSF grant funds.

39. Build America, Buy America

a. The grantee is subject to the Buy America Sourcing requirements under the Build America, Buy America provisions of the [Infrastructure Investment and Jobs Act](#) (IIJA) (P.L. 117-58, §§70911-70917) when using Federal funds for the purchase of goods, products, and materials on any form of construction, alteration, maintenance, or repair of infrastructure in the United States regardless of the appropriation.

These sourcing requirements require that all iron, steel, manufactured products, and construction materials used in Federally funded infrastructure projects must be produced in the United States. The grantee must implement these requirements in its procurements, and this article must flow down to all subawards and contracts at any tier. For legal definitions and sourcing requirements, the grantee must consult NSF's Implementation of the Act on the Build America, Buy America website.

b. When supported by rationale provided in IIJA §70914, the grantee must submit a waiver request to the cognizant NSF Program Officer and Grants and Agreements Officer. Non-compliant purchases must not be made in advance of waiver approval. Guidance on the submission of an NSF waiver request is available on the [Build America, Buy America](#) website.

40. Recipient Integrity and Performance Matters

The grantee must fully comply with the requirements stipulated in [Appendix XII to Part 200](#) of 2 CFR §200, entitled "*Award Term and Condition for Recipient Integrity and Performance Matters.*" See also Article Termination and Enforcement of these terms and conditions for NSF's responsibilities regarding reporting grant terminations to the OMB-designated integrity and performance system in accordance with Federal regulation. In addition, Article Payments specifies NSF responsibilities to report in FAPIIS a grantee's failure to submit all required final reports.

41. Debarment and Suspension

The grantee shall fully comply with the requirements stipulated in Subpart C of 2 CFR Part 180, entitled "[Responsibilities of Participants Regarding Transactions](#)" as supplemented by NSF's regulations at 2 CFR Part 2520.

The grantee is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 2 CFR Part 180, entitled "*Covered Transactions,*" includes a term or condition requiring compliance with Subpart C. The grantee also is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transaction. The recipient acknowledges that failing to disclose the information required under 45 CFR §180.335 may result in the termination of the grant, or pursuance of other available remedies, including

suspension and debarment.

42. Public Access to Copyrighted Material

NSF's policy on public access to copyrighted material ([Public Access Policy](#)) reflects the Foundation's commitment to making certain that, to the extent possible, the American public, industry and the scientific community have access to the results of federally funded scientific research. Pursuant to this policy, the grantee must ensure that all articles in peer-reviewed scholarly journals and papers in juried conference proceedings:

- are deposited in a public access compliant repository (as identified in the Public Access Policy);
- are available for download, reading and analysis within 12 months of publication;
- possess a minimum set of machine-readable metadata elements as described in the Public Access Policy;
- are reported in annual and final reports with a persistent identifier.

Either the final printed version or the final peer-reviewed manuscript is acceptable for deposit.

43. Potential Life Sciences Dual Use Research of Concern (DURC)

This Article applies to all research, for which NSF grant funds may be used, that potentially falls within the scope of the [US Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern](#) as published in September 2014, and/or would fall under the Department of Health and Human Services [Framework for Guiding Decisions about Proposed Research Involving Enhanced Potential Pandemic Pathogens](#), as published in January 2017, hereafter referred to as the "Policy". See also [PAPPG Chapter XI.B.5](#).

The grantee is responsible for monitoring the research progress and for implementation of all appropriate biosafety and biosecurity risk mitigation measures including compliance with all applicable laws and regulations related to that implementation, including the Policy specified above. While the White House Office of Science and Technology Policy has lifted the research funding pause on [gain of function research](#) as of January 2017, NSF will not consider funding research that would lead to a gain of function for agents associated with the U.S. Government Policy on Dual Use Research of Concern. NSF will not fund research that involves the creation, transfer or use of enhanced potential pandemic pathogens except under special circumstances where the potential benefits to society far outweigh the risks and all other conditions of the Policy are met.

- Each organization involved in the conduct of NSF-supported research that utilizes select agents or other enhanced potential pandemic pathogens, as defined by the Policy, must have a standing Institutional Biosafety Committee (IBC) or other Institutional Review Entity (IRE) whose role is the review of research involving agents covered by the Policy.
- Use of the select agents or other potential pandemic pathogens as defined by the Policy must be registered with the Centers for Disease Control and Prevention or USDA as directed under the [Select Agent Regulations](#).

- In the rare cases where NSF funds research that involves the creation, transfer, or use of enhanced potential pandemic pathogens, then special award conditions will be applied to ensure adequate oversight by the cognizant NSF Program Officer or other NSF official. Award terms and conditions also will specify the establishment of a risk mitigation plan for the research that must be reviewed and approved by the IRE and NSF, as well as the requirement of maintenance of records of institutional review of the research and risk mitigation activities for three years after completion of the project.

44. Breach of Personally Identifiable Information

A grantee that uses or operates a Federal information system or creates, collects, uses, processes, stores, maintains, disseminates, discloses, or disposes of Personally Identifiable Information (PII) within the scope of an NSF grant, must have procedures in place to respond to a breach of PII. These procedures should promote cooperation and the free exchange of information with NSF, as needed to properly escalate, refer and respond to a breach. The grantee must notify the cognizant NSF Grants and Agreements Officer upon learning that a breach of PII within the scope of an NSF grant has occurred.

45. Post-award Disclosure of Current Support and In-Kind Contribution Information

If an organization discovers that a PI or co-PI on an active NSF grant failed to disclose current support or in-kind contribution information⁶ as part of the proposal submission process (see [PAPPG Chapter II.D.2.h\(ii\)](#)), the AOR must submit the following information within 30 calendar days of the identification of the undisclosed current support or in-kind contribution through use of the Notification and Request Module in Research.gov.

Post-award Disclosure of Project Support Information

- PI/co-PI Name:
- Project Title:
- Award Number (if available):
- Source of Support:
- Primary Place of Performance:
- Project Start and End Date:
- Total Award Amount (including Indirect Costs): \$
- Brief Description of the Major goals of the project:
- Description of any Overlap/Duplication of the project with the NSF award:
- Impact on the ability of the PI/co-PI to carry out the NSF award:
- Person-Month(s) (or Partial Person-Months) Per Year Committed to the Project:

⁶ The post-award disclosure requirement applies to current support (including in-kind contributions) that was active as of the date the proposal was submitted to NSF. See [NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending Support](#) which has been developed to assist users in determining the types of activities that must be disclosed.

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

Post-award Disclosure of In-Kind Contribution Information

- PI/co-PI Name:
- Source of Support:
- Primary Place of Performance:
- Summary of In-kind Contributions:
- Description of any Overlap/Duplication of the project with the NSF award:
- Impact on the ability of the PI/co-PI to carry out the NSF award:
- Person-Month(s) (or Partial Person-Months) Per Year Committed to the Project:

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2023, 2024):

Enter the number of person-month(s) (or partial person-months):

- Dollar Value of In-kind Contribution: \$

Upon receipt and review of the information provided, NSF may consult with the AOR, or designee, if necessary. Based on the results of this review, the Foundation will determine the impact of the new information on the NSF-funded grant, and, where necessary, take appropriate action.

46. Fee Payments

Payment of fee is allowable only if expressly authorized by solicitation and the terms and conditions of the NSF award.

47. Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019

Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019 (Public Law 115-232) prohibits the head of an executive agency from obligating or expending loan or grant funds to procure or obtain, extend, or renew a contract to procure or obtain, or enter into a contract (or extend or renew a contract) to procure or obtain the equipment, services, or systems as identified in section 889 of the NDAA for FY 2019.

(a) In accordance with 2 CFR §200.216 and §200.471, for all awards that are issued on or after August 13, 2020, recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(c) See Public Law 115-232, section 889 for additional information.

48. Limitation of Funds

This award shall be limited to amounts currently obligated to the award. The grantee bears the risk of making its own obligations, expenditures, or commitments above the current obligation of funds on this award and under no circumstance is NSF required to increase the award ceiling to accommodate additional obligations, expenditures, or commitments.

49. Resolution of Conflicting Conditions

Should there be any inconsistency between any special conditions contained in the award notice and these General Conditions, the special conditions in the award notice shall control.

Should there be any inconsistency between any special conditions contained in the award notice, these General Conditions, and any NSF solicitation cited or included by reference in the award notice, the matter should be referred to the cognizant NSF Grants Officer for guidance.

50. Resolution of Disagreements and Disputes

Disagreements and disputes of fact arising under this grant that are not resolved through informal discussions will be subject to the written decision of the cognizant NSF Grants and Agreements Officer. This decision will be final unless, within 30 days of receipt of the decision, the grantee makes a written request for review to the Division Director, Division of Grants and Agreements (DGA), NSF. The request for review must contain a full statement of the grantee's position and the pertinent facts and reasons in support of the position. Review will follow the procedures stipulated under [PAPPG Chapter XII.B.3](#).

Other Considerations

51. Liability

NSF cannot assume any liability for accidents, bodily injury, illness, breach of contract, any other damages or loss, or any claims arising out of any activities undertaken pursuant to the grant, whether with respect to persons or property of the grantee or third parties. The grantee is advised to insure or otherwise protect itself or others, as it may deem desirable.

52. Government Permits

For grants that include activities requiring permits from appropriate Federal, State or local government authorities, the grantee should obtain any required permits prior to undertaking the proposed activities.

53. Sharing of Findings, Data and Other Research Products

a. NSF expects significant findings from research and education activities it supports to be promptly submitted for publication, with authorship that accurately reflects the contributions of those involved. It expects investigators to share with other researchers, at no more than incremental cost and within a reasonable time, the data, samples, physical collections and other supporting materials created or gathered in the course of the work. It also encourages the grantee to share software and inventions or otherwise act to make the innovations they embody widely useful and usable.

b. Adjustments and, where essential, exceptions may be allowed to safeguard the rights of individuals and subjects, the validity of results, or the integrity of collections or to accommodate legitimate interests of investigators.

54. Partnerships with Foreign Collaborators

The NSF must have advance knowledge of proposed or funded grantee activities with foreign entities.

Accordingly, prior to making a commitment to such foreign entities as described above, and prior to negotiating the terms of any potential international agreement, the grantee shall submit to the NSF advance notification of proposed plans for international scientific cooperative programs that involve the use of personnel, facilities and/or services or in-kind contributions.

Advance notification to the NSF should identify the projects and individuals involved and the purpose of the cooperative program, and should specify the duration, location and magnitude of the proposed activity.

These provisions are not intended to require notifications to the NSF of the routine use of the grantee's services and facilities by foreign investigators or the routine use of foreign facilities by grantee staff in accordance with the grantee's standard policies and procedures.

55. Government Permits and Activities Abroad

a. For awards that include activities requiring permits from appropriate Federal, State or local government authorities, the grantee should obtain any required permits prior to undertaking the proposed activities.

b. The grantee must comply with the laws and regulations of any foreign country in which research is to be conducted. Areas of potential concern include:

- (1) requirements for advance approval to conduct research or surveys;
- (2) special arrangements for the participation of foreign scientists and engineers; and
- (3) special visas for persons engaged in research or studies. NSF does not assume responsibility for grantee compliance with the laws and regulations of the country in which the work is to be conducted.

c. The grantee also should assure that activities carried on outside the US are coordinated as necessary with appropriate US and foreign government authorities and that necessary licenses, permits or approvals are obtained prior to undertaking the proposed activities.