



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

Effective January 30, 2017

Effective January 30, 2017, new NSF Phase II SBIR/STTR grants and funding amendments will begin referencing, and are subject to, the *Small Business Innovation Research/Small Business Technology Transfer Phase II Grant General Conditions (SBIR-II)* dated January 30th, 2017.

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1. Type of Award

The notice of award 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 the award amount, however, is subject to compliance with the grant terms and conditions, including Article 12, Allowable Costs, Article 14, Project Reporting Requirements, Article 13, Payments, Article 29, Price Reduction for Defective Cost or Pricing Data, and NSF's acceptance of the reports submitted by the grantee under Article 14. On the basis of its review of these reports and/or other pertinent information, NSF reserves the right to modify the payment schedule or 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 and/or duration of this grant. Similarly, if the grantee expects that the full scope of work will be completed at a total cost significantly lower than the award amount, it is the obligation of the grantee to promptly notify NSF.

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 conditions. A minimum of 50% of the research and/or analytical effort as measured by the budget must be performed by the grantee on an SBIR Phase II grant. On an STTR Phase II 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 research 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 Phase II Conditions* unless otherwise specified in the notice of award. 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 applies to commercial organizations, including small businesses.
- e. The grantee is responsible for ensuring that the Principal Investigator(s) (PIs) receive a copy of the grant conditions, including: the notice of award, 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 http://www.nsf.gov/awards/managing/special_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: <http://www.nsf.gov/bfa/dias/policy/gc1/policymatrix.pdf>. Notices of award are available to be viewed, printed and/or downloaded electronically via the NSF FastLane system at <https://www.fastlane.nsf.gov/fastlane.jsp>.

3. Prior Approval Requirements

Unless otherwise specified in the notice of award, the Federal administrative requirements for prior agency approval summarized in 2 CFR § 200.308, and the provisions of the governing cost principles, the requirement to obtain NSF prior approval applies only to the activities and

expenditures specified below.

- a. Consistent with 2 CFR § 200, written prior approval from the cognizant NSF Grants Officer is required for:
 1. Significant Project Changes
 - (a) Transfer of the project effort (see Article 9. See also 2 CFR § 200.308)
 - (b) Changes in objectives or scope (see Article 9. See also 2 CFR § 200.308)
 - (c) Long-Term Disengagement or change of PI/PD (see Article 9. See also 2 CFR § 200.308)
- b. Requests for the prior approvals identified above (as well as other types of grant related notifications or requests stipulated in the [PAPPG Chapter VII, Exhibit VII-1](#) must be submitted via the use of NSF's electronic systems.
- c. Written approval is required from the cognizant NSF Program Officer (e.g. via email) for any project revision that results in a 5% or greater budget reallocation.

4. Pre-Award Costs

- a. Grantees may approve pre-award costs incurred within the ninety 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 12.
- 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.

5. No-Cost Extensions

No-cost extensions to the project must be approved by NSF. Requests for no-cost extensions must be submitted to NSF at least 45 days prior to the expiration date of the grant, and must be submitted through the 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. 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, expected 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.

7. Equipment

a. Purchase

No item of equipment over \$5,000, other than items identified in the approved budget, may be purchased without the advance written approval of the cognizant NSF Program Officer.

b. Title

Unless otherwise specified in the grant, title to equipment purchased or fabricated with NSF grant funds will vest in the grantee organization upon acquisition in accordance with 15 USC 3710. Such equipment is considered exempt property and shall be acquired and used in accordance with paragraph c below. In special situations, the grant may require that title to equipment purchased, acquired or fabricated by the grantee with NSF funds pass directly to the government upon acquisition.

c. Conditions for Acquisition and Use of Equipment

1. Grantee Assurance. The grantee will assure that for each purchase of equipment, it is:
 - (a) Necessary for the research or activity supported by the grant;
 - (b) Not otherwise reasonably available and accessible;
 - (c) Of the type normally charged as a direct cost to sponsored agreements;
 - (d) Acquired in accordance with organizational practice.
2. General Purpose Equipment. Expenditures for general-purpose equipment are typically not eligible for support (see [PAPPG Chapter IX.D.2.b](#)).
3. Equipment Usage. The equipment must remain in use for the specified project for which it was obtained in accordance with 2 CFR § 200.313(c)(1), unless the provision in 2 CFR § 200.313(c)(4) applies.
4. Equipment Sharing. The equipment must be shared on other projects or programs in accordance with 2 CFR § 200.313(c)(1).
5. Property Management Standards. The grantee shall maintain a property

management system that, at a minimum, meets the requirements of 2 CFR

§200.313(d). Because of increasing threats to information technology systems, the grantee is reminded that, under 2 CFR §§ 200.313(d)(3) and (4), “[a] control system must be developed to ensure adequate safeguards to prevent loss, damage, or theft of the property” and “[a]dequate maintenance procedures must be developed to keep the property in good condition.” This requirement imposes on the grantee a duty to adequately maintain and to insure adequate safeguards against the loss, damage, or theft of information technology equipment and systems purchased with NSF funds.

6. Inventory Requirements.

- (a) In the event that title to equipment is vested in the Federal Government, such property shall be marked, tagged, or segregated in such a manner as to indicate clearly its ownership by the government. In accordance with the requirements of 2 CFR § 200.312(a), for all NSF-owned equipment having an original acquisition cost of \$5,000 or more, the grantee must submit an annual inventory report by NSF grant number of such property to the NSF Property Administrator, Division of Administrative Services (DAS). The report should include all NSF-owned equipment purchased or constructed under the grant or acquired by screening excess through the General Services Administration (GSA); and include the type of equipment, serial number, acquisition price, acquisition date and condition of the equipment. In the event that the grantee is in possession of NSF- owned equipment under multiple grants, the reporting must be specific to each NSF grant number.
- (b) A physical inventory of NSF-owned equipment shall be conducted every two years pursuant to 2 §CFR 200.313(d)(2). At the end of the grant, the grantee shall report the property to the Property Section for further agency utilization (See [PAPPG Chapter IX.D.5](#)).

7. Competition. The grantee shall not use equipment acquired with Federal funds to provide services to non-Federal outside organizations for a fee that is less than private companies charge for equivalent services, unless specifically authorized by Federal statute for as long as the Federal government retains an interest in the equipment in accordance with 2 CFR § 200.313(c)(3).

8. Right to Transfer Title.

- (a) In accordance with 2 CFR § 200.313(e), NSF may identify items of equipment having an acquisition cost of \$5,000 or more where NSF reserves the right to transfer title to the Federal Government or a third party named by the Federal Government at any time during the grant period.
- (b) In cases where NSF elects to transfer the title, disposition instructions will be issued no later than 120 days after the end date of the NSF-supported project for which it was acquired.

8. Rights in Technical Data

The grantee may retain rights in technical data, including software developed under this grant, except that the Government shall have the right to use such data for Governmental purposes. The final report delivered under this grant, including technical data, may be made available to the public by the Government, except for that portion of the report containing technical data properly identified and marked as set forth below. To the extent permitted by law, the Government will not release properly marked technical data (such as data relating to an invention or software) outside the Government, except for evaluation purposes, for a period of four years from the expiration of the Phase II grant or of the Phase I grant, when no Phase II grant is made, without approval of the grantee. The grantee must properly identify such data in any submission to the Foundation. Such data must be clearly labeled as proprietary and marked with a legend similar to the following:

"The following is information which (name of grantee) requests not be released to persons outside the Government, except for purposes of evaluation, for a period of four years from the end date of Grant No. (the NSF grant number) or the end date of a follow-on Phase II grant if awarded, whichever is later."

In addition to the rights vested in the Government to use such technical data during the four-year period mentioned above, the Government shall retain a royalty-free, irrevocable, worldwide license to use the data after the conclusion of the four year period whether or not the grantee has sought or obtained patent protection or claimed copyright protection.

9. Significant Project Changes

Consistent with 2 CFR § 200.308, the grantee is required to obtain prior written approval from the cognizant Program Officer and/or NSF Grants Officer whenever there are significant changes in the project or its direction as stipulated below.

a. *Transfer of the Project Effort (Subawards)*

1. NSF authorization to transfer a significant part of the research or substantive effort to another organization, in a manner that has been fully disclosed in the proposal, is not needed unless approval has been specifically withheld in the notice of award.
2. If it becomes necessary to transfer a significant part of the research or effort 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.3 for additional information). NSF approval of such changes will be by an amendment to the grant signed by the cognizant NSF Grants Officer.

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. This includes maintaining the necessary documentation on all subawards 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 guidance in 2 CFR § 200.331, grantees must adhere to the requirements for pass-through entities in establishing and managing subawards and contracts 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 6, 10, 11, 12, 15, 16, 17, 18, 21, 22, 23, 24, 30, 31, 32, 33, 34, 35, 37, 38, 39, , 42, 43, 44, 45 and 46. 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 objectives of the project stated in the proposal or agreed modifications thereto should be communicated via use of NSF's electronic systems. NSF approval of such changes will be by an amendment to the grant signed by the cognizant NSF Grants Officer.

c. *Long-Term Disengagement or Change of Principal Investigator/Project Director*

If a named Principal Investigator /Project Director 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)(iii) 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 3 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.

10. Procurement Standards

Whether or not approval of a procurement is required under Article 9.a., where appropriate, the grantee (including commercial organizations) is responsible for compliance with the procurement standards identified in 2 CFR § 200.318. The grantee also is responsible for ensuring that the provisions contained in Appendix II of 2 CFR § 200 are made a part of any contract whose award amount exceeds the simplified acquisition threshold (currently \$150,000).

See FAQ 200.110-6 of the *Frequently Asked Questions for The Office of Management and Budget's Uniform Administrative Requirements, Cost Principles, and Audit*

Requirements for Federal Awards at 2 CFR § 200 regarding Effective Dates and Grace Period for Procurement. See also FAQ 200.320-2 regarding Methods of Procurement - Sole Source for Research.

11. 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.C.2.g(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:
 - (a) 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.
 - (b) 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. *Use of Foreign-Flag Air Carriers*

There are certain circumstances under which use of a foreign-flag air carrier is permissible. These circumstances are outlined below:

1. *Airline "Open Skies" Agreements:*

A foreign flag air carrier may be used if the transportation is provided under an air transportation agreement between the United States and a foreign government, which the Department of Transportation has determined meets the requirements of the Fly America Act. For information on "open skies" agreements in which the United States has entered, please refer to the General Services Administration's (GSA) website at <http://www.gsa.gov/portal/content/103191>.

Note on US/European Union Open Skies Agreement

In 2007, the US entered into an "Open Skies" Agreement with the European Union ("EU"). This agreement was modified in June 2010. The current Agreement gives European Community airlines (airlines of Member States) the right to transport passengers and cargo on flights funded by the US government, when the transportation is between: (1) any two points outside the United States; or (2) a point in the United States and any point outside the United States that the EU airline is authorized to serve under the "Open Skies" Agreement.

In 2011, two significant changes were made to the US/EU Open Skies Agreement. First, EU airlines are now granted the right to transport civilian agency-funded passengers who are NOT eligible to travel on GSA Airline City Pair Contract fares (e.g., grantees) between a point in the United States and a point outside the United States even if there is a GSA Airline City Pair Contract fare in effect between the origin and destination points. An individual, however, who is traveling on a route for which there is a City Pair Contract fare in effect, *and who is eligible for such a fare* (e.g., Federal employee), is required to fly on a US carrier, absent another applicable exception.

Second, under the amended Agreement, EU airlines are now authorized to transport passengers between points in the United States and points outside the EU if the EU airline is authorized to serve the route under the Agreement. This includes flights that originate, arrive, or stop in the EU. Prior to this change, EU airlines were limited to flying passengers between points in the US and points in the EU.

2. *Involuntary Rerouting:*

Travel on a foreign-flag carrier is permitted if a US-flag air carrier involuntarily reroutes the traveler via a foreign-flag air carrier, notwithstanding the availability of alternative US-flag air carrier service.

3. *Travel To and From the US on non-European Community Airlines*

Use of a non-European Community foreign-flag air carrier is permissible if the airport abroad is:

- (a) the traveler's origin or destination airport, and use of US-flag air carrier service would extend the time in a travel status by at least 24 hours more than travel by a foreign-flag air carrier; or
- (b) an interchange point, and use of US-flag air carrier service would increase the number of aircraft changes the traveler must make outside of the US by two or more, would require the traveler to wait four hours or more to make connections at that point, or would extend the time in a travel status by at least six hours more than travel by a foreign-flag air carrier.

4. *Travel Between Points Outside the US on non-European Community Airlines*

Use of a non-European Community foreign-flag air carrier is permissible if:

- (a) travel by a foreign-flag air carrier would eliminate two or more aircraft changes en route;
- (b) travel by a US-flag air carrier would require a connecting time of four hours or more at an overseas interchange point; or
- (c) the travel is not part of the trip to or from the US, and use of a U.S.-flag air carrier would extend the time in a travel status by at least six hours more than travel by a foreign-flag air carrier.

5. *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.

12. Allowable Costs

- a. The allowability of costs¹ 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 applicable to for-profit organizations can be found in the Federal Acquisition Regulation, Part 31.

¹ Consistent with 2 CFR § 200.453, 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.

- c. Certain prior approval requirements contained in the governing cost principles have been modified by Article 3.

13. Payments

SBIR/STTR grantees are required to request payments electronically through the NSF's Award Cash Management Service (ACM\$). In the absence of an approved modification to this schedule, payments will be made by NSF as follows: The initial drawdown of: twenty-five percent (25%) can be processed after the effective date of the grant, twenty percent (20%) upon acceptance by NSF of each satisfactory interim report, and the remainder (15%) upon acceptance by NSF of a satisfactory final report as described in Article 14 and/or in the SBIR/STTR Program Solicitation.

To receive payment, SBIR/STTR grant recipients must register with the System for Award Management (SAM) at <http://www.sam.gov>. NSF will use the grantee company name, address and electronic funds transfer information from SAM to register the official address and banking information for payments. Next, the grantee should follow the instructions to register in the Award Cash Management Service (ACM\$) at: [ACM\\$ Information](#). Failure to submit an acceptable final report will result in withholding of payment and may be grounds for suspension or termination of the grant.

14. Project Reporting Requirements

a. General

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 interim reports (3-5 pages) submitted on a six-month schedule and a final report. With approval by the cognizant Program Officer and the grantee organization, the timing of the interim reports can be altered. The interim reports and the final report must be submitted electronically via Research.gov, and must include a completed, signed [SBIR report cover page](#). The Project Report system may be accessed at <http://www.research.gov/>.

The interim reports and the final report must be approved by the cognizant NSF Program Officer prior to release of payment. In instances where a report is considered unacceptable, the cognizant NSF Program Officer will reject the report and will provide the grantee with a written explanation for non-acceptance.

b. Interim Reports

For each interim report, the grantee organization shall provide information, at a minimum, in the "Participants/Organizations", "Accomplishments", "Products", and "Cover" modules in research.gov. In addition, a technical narrative should be uploaded, which should not exceed 5 pages and must include the following information:

1. Details about progress during the reporting period;
2. Problems encountered during the reporting period; and
3. Status of commercialization activities during the reporting period.

The PI must also include a milestone chart covering the progress for the reporting period, a total estimate of expenditures, cumulative estimated expenditures, level of effort in person-months by the PI and key personnel (including consultants and sub recipients) during the reporting period, and permanent equipment and/or major purchases or supplies during the reporting period. Interim reports are due no later than 30 days after the end of the respective six-month reporting period.

c. *Final Report*

The Phase II final report will detail: Participants, Activities and Findings, Publications and Products, and Contributions and shall have the following components:

1. Cumulative milestone information;
2. A technical narrative (not to exceed 15 pages); and
3. A Commercialization Report (not to exceed 10 pages).

The milestone information must cover the actual expenditures for the entire project. The same format used for the interim reports should be used for the final milestone information. The technical narrative must address the following: a summary of the research carried out over the entire duration of the project; the extent to which the stated Phase II objectives were met; problems encountered and resolutions implemented; problems remaining or unfulfilled research objectives; highlight any unexpected results, information or events which may have affected the project; and how these results could impact similar or related projects.

The commercialization section must have the following six parts (more details concerning the commercialization section are located at: <http://www.nsf.gov/eng/iip/sbir/reporting2.jsp>):

- Part 1: Company Data
- Part 2: Funding Commitment(s)
- Part 3: Phase IIB Supplement
- Data Part 4: Products and/or Processes
- Part 5: Company Employment and Revenue
- Part 6: Company Commercialization Efforts

The Phase II final report is due no later than 90 days after the end date of the grant. 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 NSF SBIR/STTR program has developed a telephone interview process (endorsed by the SBIR External Advisory Committee) to gather these commercialization results information on the 3rd, 5th and 8th anniversary of the Phase II grant. The telephone interview is part of the expanded grants management process within the SBIR/STTR program. Information on the company, including the current status of commercialization, the products and/or services developed, why commercialization may have failed, intellectual property situation, key strategy and/or investor relationships, revenue and investment data, and employment statistics will be collected for a database for subsequent analysis. Phase II grantees will be contacted by NSF to schedule an interview at the appropriate times.

d. *Project Outcomes Report for the General Public*

Unless otherwise specified in the grant, a project outcomes report for the general public must be submitted electronically via Research.gov, no later than 90 days following the end of the grant. 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.

15. 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 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.

16. Responsible Conduct of Research

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) NSF requires that grantees must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research (RCR) to undergraduates, graduate students and postdoctoral researchers who will be supported by NSF to conduct research. Training plans are subject to review, upon request.

Grantees must designate one or more persons to oversee compliance with the RCR training requirement. Grantees are responsible for verifying that undergraduate students, graduate students and postdoctoral researchers 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.

Grantees shall ensure that these RCR requirements flow down to all subrecipients, or are otherwise appropriately addressed in the subaward.

17. Reporting Subawards and Executive Compensation

The URL referenced in b.2.(a) below has changed to: <http://www.sam.gov>.

In accordance with the Office of Management and Budget guidance published in the Federal Register (FR) September 14, 2010 on *Requirements for Federal Funding Accountability and Transparency Act Implementation*, grantees must comply with the following award term, contained in 75 FR 22705:

a. *Reporting of first-tier subawards*

1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recover and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (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.fsrc.gov.
 - (b) 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.fsrc.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:
 - (a) the total Federal funding authorized to date under this award is \$25,000 or more;
 - (b) in the preceding fiscal year, you received—
 - (i) 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
 - (ii) \$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

- (c) 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 U.S.C. 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](#).

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

- (a) As part of your registration profile at www.sam.gov.
- (b) 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:

- (a) in the subrecipient's preceding fiscal year, the subrecipient received—
 - (i) 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
 - (ii) \$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
- (b) 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](#).

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

- (a) To the recipient.

- (b) 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:

1. subawards, and
2. the total compensation of the five most highly compensated executives of any subrecipient.

e. *Definitions*

For purposes of this award term:

1. Entity means all of the following, as defined in 2 CFR part 25:
 - (a) A Governmental organization, which is a State, local government, or Indian tribe;
 - (b) A foreign public entity;
 - (c) A domestic or foreign nonprofit organization;
 - (d) A domestic or foreign for-profit organization;
 - (e) A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
2. Executive means officers, managing partners, or any other employees in management positions.
3. Subaward:
 - (a) 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.
 - (b) 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).
 - (c) A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. Subrecipient means an entity that:
 - (a) Receives a subaward from you (the recipient) under this award; and
 - (b) Is accountable to you for the use of the Federal funds provided by the subaward.
5. 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)):
 - (a) *Salary and bonus.*
 - (b) *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 - (c) *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
 - (d) *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.
 - (e) *Above-market earnings on deferred compensation which is not tax-qualified.*
 - (f) Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

18. System for Award Management and Universal Identifier Requirements

In accordance with the Office of Management and Budget guidance published in the Federal Register (FR) September 14, 2010 on *Financial Assistance Use of Universal Identifier and Central Contractor Registration*, which has become the System for Award Management, grantees must comply with the following award term, contained in 75 FR 22706:

- a. *Requirement for System for Award Management (SAM).* Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain the currency of your information in SAM until you submit the final financial report required under this 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 award term.
- b. *Requirement for Data Universal Numbering System (DUNS) numbers.* If you are authorized to make subawards under this 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 unless the entity has provided its DUNS number to you.
2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

c. *Definitions.* For purposes of this award term:

1. *System for Award Management (SAM)* means the Federal repository into which an entity 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 <http://www.sam.gov>).
2. Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).
3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:
 - (a) A Governmental organization, which is a State, local government, or Indian tribe;
 - (b) A foreign public entity;
 - (c) A domestic or foreign nonprofit organization;
 - (d) A domestic or foreign for-profit organization; and
 - (e) A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
4. Subaward:
 - (a) 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.
 - (b) 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).
 - (c) A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. Subrecipient means an entity that:
 - (a) Receives a subaward from you under this award; and
 - (b) Is accountable to you for the use of the Federal funds provided by the subaward.

19. Unpaid Federal Tax Liability

Article 19 applies only to grantees that are corporations.

In accordance with the *Commerce, Justice, Science and Related Agencies Appropriations Act of 2012*, 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.

20. Criminal Convictions

Article 20 applies only to grantees that are corporations.

In accordance with the *Commerce, Justice, Science and Related Agencies Appropriations Act of 2012*, the grantee affirms that the corporation has not been convicted of a felony criminal violation under any Federal law.

21. 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 paragraph. The grantee further agrees that any transfer of copyright or any other rights to a subject writing, by it or anyone whom it has allowed to own such rights, will be made subject to the requirements of this article.

22. Program Income

a. *Definition*

The following provisions implement applicable portions of 2 CFR § 200.307. Program income means gross income earned by the grantee that is directly generated by a supported activity or earned as a result of the grant during the period of performance. Program income includes, but is not limited to, income from fees for services performed, the use of rental or real or personal property acquired under the grant, the sale of commodities or items fabricated under the grant, license fees and royalties on patents and copyrights and principal and interest on loans made with grant funds. Interest earned on advances of Federal funds is not program income. Except as otherwise provided in Federal statutes, regulations, or the terms and conditions of the grant, program income does not include rebates, credits, discounts and interest earned on any of them. Note that registration fees collected under NSF-supported conferences are considered program income.

b. *NSF Policy*

1. *Standard Treatment*

Unless otherwise specified in the grant, program income received or accruing to the grantee during the period of the grant is to be retained by the grantee, added to the funds committed to the project by NSF, and thus used to further project objectives. The grantee has no obligation to NSF with respect to program income received beyond the period of the grant. The grantee also shall have no

obligation to NSF with respect to program income earned from license fees and royalties for copyrighted material, patents, patent applications, trademarks and inventions produced under a grant (see PAPPG Chapter VIII.D.4). However, Patent and Trademark Amendments (35 USC 18) shall apply to inventions made under a grant. See also FAQ 200.307.1 of the *Frequently Asked Questions for The Office of Management and Budget's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 CFR § 200* regarding Fees and Royalties and Bayh-Dole.

Efforts should be made to avoid having unexpended program income remaining at the end of the grant. Program income earned during the project period should be expended prior to requesting reimbursement against the grant. In the event a grantee has unexpended program income remaining at the end of the grant, it must be remitted to NSF by crediting costs otherwise chargeable against the grant. If it is not possible to record the credit via ACM\$, the excess program income must be remitted to NSF electronically or by check payable to the National Science Foundation.

2. *Special Treatment*

In exceptional circumstances, NSF may approve use of a special grant provision to restrict or eliminate a grantee's control of income earned through NSF-supported activities if it determines that this would best serve the purposes of a particular program or grant. The special provisions may require treatment of the program income via use of the deductive method, the Federal share of program income be kept in a separate account, or reported on and/or remitted for such periods as may be reasonable under the circumstances.

If, in accordance with the grant terms and conditions program income is designated for deductive treatment, it must be remitted to NSF by crediting costs otherwise chargeable against the grant. Program Income in excess of the grant will be remitted to NSF electronically or by check payable to the National Science Foundation.

c. *Records Retention*

The grantee is required to retain appropriate financial and other records relating to project income earned during the grant period of performance and for three years beyond the date of submission of the final financial disbursements in ACM\$. For instructions regarding final disbursement reporting, see PAPPG Chapter VIII.E.

d. *Reporting Requirements*

On an annual basis, grantees are required to submit a Program Income Reporting Worksheet to NSF in order to report program income earned/expended for any of their grants during the previous twelve months or to validate that they did not earn/expend program income for any of their grants during the applicable period. The Program Income Reporting Worksheet utilizes the standard OMB-approved Government-wide data elements from the Program Income section of the Federal

Financial Report (SF 425) and is due 45 days after the end of the Federal Fiscal Year. The Program Income Reporting Worksheet and related instructions are available through Research.gov (<http://research.gov/programincome>).

Failure to report program income or to validate that no program income was earned or expended could result in suspension of future grant payments.

23. 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.

b. 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."

c. 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.

d. Metric System

The Metric Conversion Act of 1975 (15 USC §§ 205a-k) and Executive Order (E.O.) 12770 (3 CFR § 1991 comp.) encourage Federal agencies to use the Metric System in procurement, grants and other business-related activities. All reports and publications resulting from this NSF grant are encouraged to use the metric system of measurements.

24. Patent Rights²

Unless otherwise provided in the grant, if this grant is for experimental, developmental, or research work, the following clause (implementing the Bayh-Dole Act, [35 USC § 200 et seq.]) shall apply. The grantee shall include this clause in all subawards for experimental, developmental, or 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 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. 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.

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 Patent Rights clause and 35 USC § 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 US the subject invention throughout the world. If the grant 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

² Grantees are reminded that, in view of the U.S. 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 to patented inventions.

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, 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 publication, on sale, or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the US, 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.

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 US after a publication, on sale, or public use. The grantee will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

3. 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 granted.

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, provided that NSF may only request title within 60 days after learning of the failure of the grantee to disclose or elect within the specified times;
2. in those countries in which the grantee fails to file patent applications within the times specified in paragraph c. above, but prior to its receipt of the written

request of NSF, the grantee shall continue to retain title in that country; or in any country in which the grantee decides not to continue the prosecution of any application for, to pay the maintenance fees 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 grant sublicenses of the same scope to the extent the grantee was legally obligated to do so at the time the grant 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.

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 thirty 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.

f. *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, 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 US or foreign statutory bars.

3. The grantee will notify NSF of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

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

“This invention was made with Government support under (identify the grant) 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 US 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.

g. *Subcontracts*

1. The grantee will include this Patent Rights clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for the grantee in this Patent Rights clause, and the grantee will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors' subject inventions.

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

h. *Reporting on Utilization of Subject Inventions*

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 Patent Rights clause. 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.

i. *Preference for United States Industry*

Notwithstanding any other provision of this Patent Rights clause, 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 US 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 US. 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 grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the US or that under the circumstances domestic manufacture is not commercially feasible.

j. *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 NSF regulations at 45 CFR § 650.13 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 i. of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the US is in breach of such agreement.

k. *Communications*

All communications required by this Patent Rights clause must be submitted through the [iEdison Invention Information Management System](#) maintained by the National Institutes of Health unless prior 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, 4201 Wilson Boulevard, Arlington, VA 22230.

25. 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 VIII.E](#), except as noted in 2 CFR § 200.333.

26. 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.

27. Suspension or Termination

- a. Any suspension or termination action taken by NSF must be issued by a cognizant NSF Grants Officer and will be in accordance with this article and PAPPG Chapter XII.A.
- b. The grant may be suspended or terminated in whole or in part in any of the following situations by:
 1. NSF when the grantee fails to comply with the terms and conditions of the grant;
 2. NSF when the Foundation has cause;
 3. NSF when ordered by the Deputy Director under NSF's Regulation on Research Misconduct [45 CFR Part 689];
 4. mutual agreement of NSF and the grantee; or
 5. the grantee on written notice to NSF setting forth the reasons for such action, the effective date, and, in the case of partial termination, the portion to be terminated or suspended (with the understanding that if NSF determines that the unterminated portion will not accomplish the purposes of the grant, it may suspend or terminate the entire grant).

- 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; but NSF 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.
- e. 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 §§ 200.343 Closeout and 200.344 Post-closeout adjustments and continuing responsibilities.
- g. A notice of termination other than by mutual agreement and/or the final settlement amount may be subject to review pursuant to Article 28.
- 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.](#)

28. 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, 4201 Wilson Blvd., Arlington, VA, 22230. 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 VII.B.3.
- d. Pending resolution of the request for review, the notice of termination shall remain in effect.

29. Price Reduction for Defective Cost or Pricing Data

- a. If any price, including profit, negotiated in connection with this grant, was increased by any significant amount because (1) the grantee or its subrecipient furnished cost or pricing data that were not complete, accurate and current as certified in its Certificate of Current Cost Pricing data, (2) a subrecipient or prospective subrecipient furnished the grantee cost or pricing data that were not complete, accurate and current as certified in its Certificate of Current Cost Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the grant shall be amended to reflect the reduction.
- b. Any reduction in the grant price under paragraph a. above due to defective data from a prospective contractor that was not subsequently awarded the subaward shall be limited to the amount, plus applicable overhead and profit markup, by which the actual subaward price was not itself affected by defective cost or pricing data.
- c. If the cognizant NSF Grants Officer determines under paragraph a. of this clause that a price or cost reduction should be made, the grantee agrees not to raise the following matters as a defense:
 1. The grantee or subrecipient was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the grant would not have been modified even if accurate, complete and current cost or pricing data had been submitted.
 2. The cognizant NSF Grants Officer should have known that the cost or pricing data in issue were defective even though the grantee or subrecipient took no affirmative action to bring the character of the data to the attention of the cognizant NSF Grants Officer.
 3. The grantee or subrecipient did not submit a Certificate of Cost or Pricing Data.

Except as prohibited by c.3. of this article, an offset in an amount determined appropriate by the cognizant NSF Grants Officer based upon the facts shall be allowed against the amount of a grant price reduction if:

- The grantee certifies to the cognizant NSF Grants Officer that, to the best of the grantee's knowledge and belief, the grantee is entitled to the offset in the amount requested; and
- The grantee proves that the cost or pricing data (or price of amendment) is accurate and that the data was not submitted before such date.

An offset shall not be allowed if:

- The understated data was known by the grantee to be understated when the Certificate of Cost or Pricing Data was signed; or The Government proves that the facts demonstrate that the grant price would not have been increased in the amount to be offset even if the available data had been submitted before

the date of agreement of price.

- d. If any reduction in the grant price under this article reduces the price for which payment was made prior to the date of the amendment reflecting the price reduction, the grantee shall be liable to and shall pay the United States at the time such overpayment is repaid simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the grantee to the date the Government is repaid by the grantee at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2).

30. Non-Discrimination Statutes

- a. The grant 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 grant.
- b. By electronically signing a proposal, the Authorized Organizational Representative is providing the requisite Certification of Compliance with National Science Foundation Nondiscrimination Regulations and Policies. This Nondiscrimination Certification sets forth the nondiscrimination obligations with which all grantees must comply³. These obligations also apply to subrecipients and contractors under the grant. The grantee, therefore, shall obtain the NSF Nondiscrimination Certification from each organization that applies to be or serves as a subrecipient or contractor under the grant (for other than the provision of commercially available supplies, materials, equipment or general support services) prior to entering into the arrangement. Additional information may be found in PAPPG Chapter XI.A.

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.

³ The complete text of the Nondiscrimination Certification is available electronically in PAPPG, Chapter II, Exhibit II-6.

32. Animal Welfare

- a. Any grantee performing research on vertebrate animals⁴ shall comply with the Animal Welfare Act [7 USC §§ 2131 et seq.] and the regulations promulgated hereunder by the Secretary of Agriculture [9 CFR §§ 1.1-4.11] pertaining to the humane care, handling and treatment of vertebrate 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 Academy of Science (NAS) 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 NAS Guide). Further guidance on the use of vertebrate animals in NSF funded projects can be found in the PAPPG Chapter XI.B.3.
- b. Effective October 1, 2015, grantees 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 notice of award.

NOTE--The grantee may request registration of its facility and a current listing of licensed dealers from the Regional Office of the Animal and Plant Health Inspection Service (APHIS), United States Department of Agriculture, for the region in which its research facility is located. 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/>.

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 [PAPPG Chapter XI.B.2](#).

⁴ 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.

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 grant 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 granted 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.

See also FAQ 200.112-1 of the *Frequently Asked Questions for The Office of Management and Budget's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 CFR § 200* regarding Conflict of Interest.

37. Whistleblower Protection

Grantees are 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

Grantees are reminded that the governing cost principles cited in Article 12 limit the allowability of taxes to those the organization is required to pay. Grantees 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. Recipient Integrity and Performance Matters

Recipients shall 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 27 of these terms and conditions for NSF’s responsibilities regarding reporting award terminations to the OMB-designated integrity and performance system in accordance with Federal regulation.

40. Debarment and Suspension

Recipients 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 recipient 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 recipient 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.

41. Resolution of Conflicting Conditions

Should there be any inconsistency between any special conditions contained in the notice of award and these *Grant General Conditions* (GC-1), the special conditions in the notice of award shall control. Should there be any inconsistency between any special conditions contained in the notice of award, these General Conditions, and any NSF solicitation cited or included by reference in the notice of award, the matter should be referred to the cognizant NSF Grants Officer for guidance.

42. Public Access to Copyrighted Material

NSF’s Public Access Policy applies to awards, funded in whole or in part, as a result of proposals submitted, or due, on or after January 25, 2016. NSF’s Public Access Policy may be viewed at http://www.nsf.gov/news/special_reports/public_access/.

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, awardees 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. 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, hereafter referred to as the “Policy”. See also PAPPG Chapter XI.B.5.

Grantees are 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. (See also <http://osp.od.nih.gov/office-biotechnology-activities/biosecurity/dual-use-research-concern> for Frequently Asked Questions, case studies and other educational materials on DURC.)

Other Considerations

44. 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.

45. 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 grantees to share software and inventions or otherwise act to make the innovations they embody widely useful and usable.

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.

46. Government Permits and Activities Abroad

- a. 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.
- 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 U.S. are coordinated as necessary with appropriate U.S. and foreign government authorities and that necessary licenses, permits or approvals are obtained prior to undertaking the proposed activities.

47. Increasing Seat Belt Use in the United States

In accordance with Executive Order 13043, *Increasing Seat Belt Use in the United States*, dated April 16, 1997, "grantees are encouraged to adopt and enforce on-the-job seat a belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles."