

**NATIONAL SCIENCE FOUNDATION
4201 Wilson Boulevard
Arlington, VA 22230**

**FUNDING ARRANGEMENT
OISE-9531011
Amendment 060**

The renewal of this Funding Arrangement is entered into between the United States of America, (hereinafter referred to as “the Government”), represented by the National Science Foundation (hereinafter referred to as “NSF”), and the U.S. Civilian Research & Development Foundation (hereinafter referred to as “CRDF”), a non-profit organization incorporated in the Commonwealth of Virginia on August 11, 1995. This Renewal supercedes Amendment 003 to Funding Arrangement OISE-9531011. The terms and conditions of this renewal will be in effect for a minimum of five years from the time of signing.

BACKGROUND

The Freedom Support Act of 1992, PL 102-511, authorized the Director of the NSF to establish an endowed, non-governmental, nonprofit foundation in consultation with the Director of the National Institute of Standards and Technology. The CRDF was incorporated in the Commonwealth of Virginia on August 11, 1995 and was organized to operate exclusively for the charitable and educational purposes identified by The Freedom Support Act of 1992, PL 102-511 (Attachment A). To facilitate the initial operation of the CRDF, the NSF issued an initial endowment agreement in the amount of \$300,000 to the CRDF effective September 1, 1995 for initial startup activities. Since that time, CRDF has received annual contributions from NSF and other Federal agencies.

The CRDF was initially established by The Freedom Support Act of 1992, PL 102-511, with the following mission:

1. To provide productive research and development opportunities within the independent states of the former Soviet Union that offer scientists and engineers alternatives to emigration and help prevent the dissolution of the technological infrastructure of the independent states.
2. To advance defense conversion by funding civilian collaborative research and development projects between scientists and engineers in the United States and in the independent states of the former Soviet Union.
3. To assist in the establishment of a market economy in the independent states of the former Soviet Union by promoting, identifying, and partially funding joint research, development, and demonstration ventures between United States businesses and scientists, engineers, and entrepreneurs in those independent states.

4. To provide a mechanism for scientists, engineers, and entrepreneurs in the independent states of the former Soviet Union to develop an understanding of commercial business practices by establishing linkages to United States scientists, engineers, and businesses.
5. To provide access for United States business to sophisticated new technologies, talented researchers, and potential new markets within the independent states of the former Soviet Union.

In 2003, CRDF expanded the geographic scope of its activities beyond the countries of the former Soviet Union to other countries and regions of relevance to CRDF's core goals. CRDF modified its Articles of Incorporation which were certified as amended effective September 3, 2003 by the Commonwealth of Virginia and subsequently restated on November 16, 2007 (Attachment B). CRDF's geographic scope is detailed in CRDF's Business Plan (amended August 17, 2010) attached to this Amendment and incorporated by reference herein (Attachment C).

In these amended documents, CRDF's original goals were modified to the following:

1. Provide cooperative research and development (R&D) opportunities that enable scientists and engineers to address critical security, economic, education and other societal needs.
2. Advance peace and prosperity by funding civilian research and development projects that contribute to global nonproliferation objectives.
3. Promote the application of science and technology to economic growth through international partnerships and training that foster invention, innovation, entrepreneurship and the commercialization of technology.
4. Strengthen university research and education in science and engineering.

Definitions

Arrangement – This refers to the Funding Arrangement OISE-9531011.

Project – This refers to the work to be performed by CRDF as described in this Amendment.

Awards – These are the grants awarded by CRDF to achieve its stated purposes.

Awardees – These are the recipients of awards made by CRDF.

I. Purpose of Arrangement

- a. CRDF will be responsible for conducting all activities necessary to achieve the goals stated above in accordance with the Articles of Incorporation as amended and restated November 16, 2007. These activities include, but are not limited to:
- Promote and support, by funding and otherwise, joint R&D projects,
 - Make grants,
 - Enter into contracts,
 - Provide services,
 - Acquire, hold, administer and dispose of real personal property,
 - Establish field offices,
 - Receive, hold and disburse funds, and open bank accounts
 - Employ personnel and
 - Participate in joint ventures with organization with similar missions.

CRDF is to make a direct contribution to U.S. national security. The inclusion of support for scientists and engineers formerly engaged in work at organizations carrying out research on weapons of mass destruction in civilian research and development activities is to be encouraged by the CRDF.

- b. NSF shall:
- Provide funds to the CRDF in accordance with Section IIIA. "Funding."
 - Ensure CRDF compliance with auditing requirements in Section VII, "Audit and Records."
 - Ensure CRDF compliance with reporting requirements in Section IX, "Reporting Requirements."
- c. The Director of the NSF shall:
- Appoint Directors nominated by the Board of Directors,
 - Fill any vacancies on the Board occasioned by resignation, death, illness or expiration of term.

II. Arrangement Terms

- a. This Arrangement shall begin when signed by both parties and will remain in effect until all funds awarded by it and the interest earned by those funds have been expended.
- b. This Amendment is awarded pursuant to the authority of the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.).

- c. This Arrangement consists of the Freedom Support Act of 1992, PL 102-511 (Attachment A hereto), these Amendment Terms, the Special Conditions (Section III), and the Articles of Incorporation of the U.S. Civilian Research and Development Foundation as restated in the Commonwealth of Virginia on November 16, 2007 (Attachment B hereto), and the Business Plan (Attachment C hereto) as amended August 17, 2010. In the event of any conflict between the above, the order of precedence is as stated above.

III. Funding & Special Conditions

In accordance with the CRDF's responsibilities under this Arrangement, the following Special Conditions apply:

a. Funding

1. Funds in the amount of \$300,000 were provided by the initial endowment agreement dated September 29, 1995 to help support the CRDF for a period of 90 days for initial start-up activities.
2. Total funds in the amount of \$146,130,791 have been awarded as of September 31, 2009. As noted in the previous amendments, the arrangement, by way of interagency transfers, has received funds from various other federal agencies. Of the total amount awarded, \$17,144,865 was support directly from the National Science Foundation.
3. Additional funds under this Agreement may be provided by NSF through additional amendments hereto.

b. Special Conditions

1. The funds awarded under this Arrangement and any interest accrued on those funds shall be invested in accordance with the Business Plan [revised August 17, 2010]. Any interest earned shall be considered program income as defined by OMB Circular A-110 and will not be considered appropriated funds. Interest earned shall be utilized for purposes consistent with this and the program described in the Business Plan as set forth in Article 2 below.
2. The OMB Circular A-110 requirement that interest earned on advances of Federal funds shall be remitted to the Federal agency is waived. PL 102-511 states that the CRDF may invest any revenue provided to it through U.S. Government assistance, and by interest earned on such investment may be used only for the purposes authorized under this Arrangement.
3. It is understood that the activities of this Arrangement will be conducted in accordance with the programs and activities outlined in the Business Plan revised August 17, 2010 (Attachment C). The CRDF will provide written notification to

NSF of any material modifications to the plan that relate to funding provided under this Arrangement prior to their implementation.

c. America COMPETES Act

The America COMPETES (Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science) Act was signed into law (Public Law 110-69) on August 9, 2007. Implications for CRDF are as follows:

SEC 7008: Postdoctoral Research Fellows

“Mentoring - The Director shall require that all grant applications that include funding to support postdoctoral researchers include a description of the mentoring activities that will be provided for such individuals, and shall ensure that this part of the application is evaluated under the Foundation's broader impacts merit review criterion. Mentoring activities may include career counseling, training in preparing grant applications, guidance on ways to improve teaching skills, and training in research ethics.

Reports- The Director shall require that annual reports and the final report for research grants that include funding to support postdoctoral researchers include a description of the mentoring activities provided to such researchers.”

Section 7008 has been implemented via revisions to the relevant sections of the Grant Proposal Guide (GPG), the FastLane Project Reporting System, and the Representative Activities of Broader Impacts document that is posted on the NSF website.

- Each proposal that contains postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. The mentoring plan must not exceed one page.
- This one-page limitation also is applied to proposals with subawards, and separately submitted collaborative proposals.

SEC 7009: Responsible Conduct of Research

“The Director shall require that each institution that applies for financial assistance from the Foundation for science and engineering research or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.”

Section 7009 implementation requires that at the time of proposal submission to NSF, a proposing institution's Administrative Organizational Representative (AOR) must certify that the institution has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and

postdoctoral researchers who will be supported by NSF to conduct research. The requirement flows down to subawardees.

SEC 7010: Reporting of Research Results

Section 7010 requires that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the Foundation, are made available to the public in a timely manner and in electronic form through the Foundation's Website.

For the purpose of this Funding Arrangement, that will be at the end of the five-year period.

d. Activities Abroad

1. The CRDF should assure that activities carried on outside the United States are coordinated as necessary with appropriate Government (both U.S. and foreign) authorities and that appropriate licenses, permits, or approvals are obtained prior to undertaking proposed activities. The CRDF shall seek, to the extent possible and as required by corresponding U.S. regulations on funds received under this Arrangement, specific agreement on tax-free status for its awards and operations in the countries in which it carries out activities funded under this Arrangement.
2. The CRDF shall endeavor to include in any agreement or arrangement with the foreign awardees for rights and protection of U.S. properties substantively identical to those extant in relevant current intergovernmental agreements.
3. NSF does not assume responsibility for compliance by the CRDF or its grantees with the laws and regulations of the country in which work is to be conducted.

IV. Termination

Either party may terminate this Arrangement by providing 90 days written notice to the other party. In the event of termination, any unexpended or unobligated program funds will be returned to NSF in accordance with normal NSF policy and consistent with the CRDF's Articles of Incorporation as restated November 16, 2007. Any interest income earned by CRDF on funds provided by NSF will remain with CRDF and be used consistent with the CRDF's Business Plan.

V. Equipment and Property

- a. Notwithstanding any other provision of this Arrangement, the CRDF shall not receive title to any property or equipment purchased under its awards with funds provided under this Arrangement except as may specifically be authorized by the NSF. Title to all such equipment shall be vested in CRDF Grantees.

- b. Title to property or equipment purchased under this award for the use by the CRDF itself shall vest in the CRDF.

VI. Allowable Costs

Allowability of costs shall be determined in accordance with OMB Circular A-122, "Cost Principles for Non-Profit Organizations."

VII. Audit and Records

- a. Financial records, supporting documents, statistical records, and other records pertinent to this Arrangement shall be retained by the CRDF for a period of three years from the expiration of this Arrangement. Records that relate to audits, appeals, litigation, or the settlement of claims arising out of the performance of the project shall be retained until such audits, appeals, litigation, or claims have been disposed of.
- b. Unless court action or audit proceedings have been initiated, the CRDF may substitute electronic copies of original records.
- c. The NSF Director and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any pertinent books, documents, papers, and records of the CRDF to make audits, examinations, excerpts and transcripts. Further, any negotiated contract or grant in excess of \$50,000 made by the CRDF shall include a provision to effect that the CRDF, NSF, the Comptroller General, or any of their duly authorized representatives, shall have access to pertinent records for similar purposes.
- d. The CRDF shall arrange for the conduct of an annual audit as required by OMB - Circular A-133, "Audits of States, Local Governments and Non-Profit Organizations." Audits are to be conducted on an annual basis.

Any Federal Audit of this project deemed necessary by NSF shall build upon the results of such audit.

VIII. Liability

NSF cannot assume any liability for accidents, illness, or claims arising out of any work supported by this Arrangement or for unauthorized use of patented or copyrighted materials. The CRDF and its awardees are advised to take such steps as may be deemed necessary to insure or protect themselves and their employees and property.

IX. Reporting Requirements

- a. As a condition of this Arrangement CRDF shall submit an annual progress and financial report on activities funded under this Arrangement and on the progress

of the activities funded hereunder. This report should indicate the total number of projects supported, in whole or in part, by funds provided under this Arrangement during the reporting period, the associated total number of scientists engaged, and the overall financial condition of the CRDF.

- b. The annual report shall include a list of all awards made with funds provided under this Arrangement including the following information:
 - Project title
 - Award Amount
 - Start Date
 - End Date
 - Principal Investigator(s) Name(s)
 - Awardee Institution(s) Name(s)
 - Country(ies) of Awardee(s)
 - Total amount paid to date
- c. The annual report shall include a narrative report detailing key activities undertaken, significant accomplishments and problems that have arisen during the reporting period and plans for resolving them.
- d. The financial summary shall include:
 - Total amount obligated for awards
 - CRDF administrative and overhead costs
 - Amount of interest earned
- e. A Federal Cash Transactions Report, SF-272, shall be submitted to the NSF Division of Financial Management.
- f. Annual A-133 audit of the CRDF by a professional audit organization, as indicated in Section VII.4 above.
- g. All reports (unless otherwise specified) shall be submitted via the NSF Fastlane System unless otherwise directed by NSF.

X. Nondiscrimination

This Arrangement and any program assisted thereby are subject to the provisions of Title VI of the Civil Rights Act of 1964 (PL 42 U.S.C. § 2000d), Title IX of the Education Amendments of 1972 [20 U.S.C. §§ 1681 *et seq.*], the Rehabilitation Act of 1973 [29 U.S.C. § 794], the Age Discrimination Act of 1975 [42 U.S.C. §§ 6101 *et. seq.*], and all regulations and policies issued by the NSF pursuant to these statutes, and the Assurance of Compliance which the CRDF has filed within the NSF. Specifically, in accordance with these statutes, no person on grounds of race, color, national origin, sex, disability or

age, shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Arrangement.

The CRDF shall obtain the NSF Nondiscrimination Certification from each U.S. organization that applied to be or serves as a subrecipient, awardee, or subcontractor under this Arrangement (for other than the provision of commercially available supplies, materials, equipment or general support services) prior to entering into the subaward arrangement.

XI. Clean Air and Water

Applicable only if the award exceeds \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act [42 U.S. C. § 7413 (c)(1)] or the Clean Water Act [33 U.S.C. § 1319(1)] and is listed by the Environmental Protection Agency (EPA), or the award is not otherwise exempt.

The CRDF agrees as follows:

- a. To comply with all the requirements of Section 114 of the Clean Air Act [42 U.S.C. § 7414] and the Clean Water Act [33 U.S.C. § 1318], respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in Section 114 and Section 308 of the Clean Air Act and the Clean Water Act respectively, and all regulations and guidelines issued thereunder before the issuance of an award under this Arrangement.
- b. That no portion of the work required by this Arrangement will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date that this award was executed unless and until the 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 awards are being performed.
- d. To insert the substance of the provisions of these articles into any nonexempt award or subcontract.

XII. Animal Welfare

Any awardee performing research on vertebrate animals shall comply with the Animal Welfare Act [7 U.S.C. § 2131 et. seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR §§ 1.1-4.11] pertaining to the humane care, handling and treatment of vertebrate animals held or used for research, teaching or other activities supported by Federal awards. The CRDF 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*” (1996) are followed and 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).

XIII. Human Research Subjects

The CRDF is responsible for the protection of the rights and welfare of any human subjects involved in research, development and related activities supported by this Arrangement. The CRDF shall require that any U.S. organization that applies to be, or serves as an awardee under this Arrangement, agrees to comply with the NSF regulation entitled, “Federal Policy for the Protection of Human Subjects (45 CFR Part 690).

XIV. Research Involving Recombinant DNA Molecules

If an award issued under this Arrangement supports research involving recombinant DNA molecules, CRDF agrees, and shall require the awardee to agree, to comply with the requirements of the NSF Award and Administration Guide (AAG) Chapter VI.B.2.

This section applies to all research, for which NSF grant funds are used, that falls within the scope of the Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines), <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-02-052.html> as amended in April 2002, hereafter referred to as the “Guidelines”.

Recombinant DNA Research Outside the U.S.

Recombinant DNA research within the scope of the Guidelines that is performed outside of the U.S. using funds provided by NSF for transportation, salaries or direct research expenses must comply with the U.S. or host country standards. If the research is to be carried out in a country that has adopted guidelines comparable to those of the U.S., a document with information and endorsements assuring compliance to the host organization standards must be submitted to NSF. NSF funds may not be used to carry out research using recombinant DNA in a country that has not adopted national guidelines unless the research is in full compliance with the Guidelines and the procedures required for NSF-supported research within the United States.

XV. Use of U.S.-Flag Carriers

The Grant General Conditions (GC-1), Article X, http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gc110

- a. Use of U.S.-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 U.S. 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 U.S.-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 U.S. flag air carrier's designator code and flight number.

2. For the purposes of this requirement, U.S.-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 U.S. being performed by a foreign-flag air carrier:
 - (a) a U.S.-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 U.S.-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 U.S. flag air carrier.

b. Use of Foreign-Flag Air Carriers

There are limited 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 example, in 2008, the U.S. entered into an "Open Skies" Agreement with the European Union. This Agreement gives European Community airlines (airlines of Member States) the right to transport passengers and cargo on flights funded by the U.S. government, when the transportation is between a point in the United States and any point in a Member State or between any two points outside the United States. In accordance with the Agreement, however, a U.S.-flag air carrier must be used if: (a) transportation is between points for which there is a city-pair contract fare in effect for air passenger transportation services; or (b) transportation is obtained or funded by the Secretary of Defense or the Secretary of a Military Department. The conditions for use of a Member State airline apply to non-Federal employees as well (e.g., grantees). So, even though grantees are ineligible for city-pair contract fares, they must still use a U.S.-flag air carrier if a city-pair contract fare exists. For information on other "open skies"

agreements in which the United States has entered, please refer to GSA's website at [http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=24833 &noc=T](http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=24833&noc=T).

2. Involuntary Rerouting

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

3. Travel To and From the U.S.

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

- (a) the traveler's origin or destination airport, and use of U.S.-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 U.S.-flag air carrier service would increase the number of aircraft changes the traveler must make outside of the U.S. 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 U.S.

Use of a 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 U.S.-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 U.S., 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 U.S.-flag air carrier would double the travel time.

Agreed by

Cathleen A. Campbell
President and Chief Executive Officer
U. S. Civilian Research and Development Foundation

Date: _____

Larry Fuqua
Grants and Agreement Officer
National Science Foundation

Date: _____