

**National Foundation of Science and Advanced Technologies (NFSAT)  
U.S. Civilian Research and Development Foundation (CRDF)  
Ministry of Education and Science of the Republic of Armenia (MES RA)**

**PROGRAM ANNOUNCEMENT**

**Basic Research in Armenian Universities (BRAU) Program**

***I. Introduction***

On a competitive basis, the National Foundation for Science and Advanced Technologies (NFSAT), the U.S. Civilian Research and Development Foundation (CRDF), and the Ministry of Education and Science of the Republic of Armenia (MES RA) will support the establishment of a Research Center (RC) at an Armenian state university. Contingent on a contribution secured by the recipient institution of up to US\$60,000, NFSAT and CRDF will provide US\$150,000 in funding and the MES RA will provide US\$90,000 for an award of up to US\$240,000 towards a total project budget of US\$300,000. NFSAT, CRDF, and the MES RA will support one award for up to **US\$300,000**.

**A. Program Goals**

The main goal of the BRAU program is to develop the basic research capabilities of Armenian state universities by establishing a high-level Research Center (RC) in the field of basic sciences (natural, exact and technical). The RC created in the selected state university should develop and combine world-level research and educational processes by establishing active links with external scientific organizations, including those falling within the jurisdiction of differing government or scientific structures.

The BRAU program intends to:

- a) Modernize the technical research equipment base in the selected Armenian state university;
- b) Introduce new mechanisms into the education process, including opportunities for students to directly engage in research activities early in their academic careers;
- c) Promote linkages in both research and education with other Armenian and international institutions, regardless of their institutional or governmental affiliation, including research institutes affiliated with the National Academy of Sciences (NAS);
- d) Provide special competitive opportunities for promising young investigators to carry out their research initiatives, including fellowships or stipends.

**B. Program Features**

- At the projected levels of program funding, the program will support one RC at an Armenian state university.
- The newly created RC will be supported for period of three years.
- The RC is expected to be funded at the following approximate levels: for Year 1, up to US\$220,000; and for Years 2 and 3, up to US\$40,000 per year.

No more than two proposals will be accepted from each university, including its branches. Each institutional Scientific Board may provide only two solicitations and the rector of each university may sign only two proposals.

**The deadline for proposal submissions to NFSAT and CRDF is 6:00 pm local time on Tuesday, March 15, 2005.**

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For explanatory purposes or for the sake of clarification, this Program Announcement may be translated into one or more languages other than English. In the event of discrepancies between such translations and the English-language version, the English-language version shall serve as the definitive variant in determining the interpretation of any provision of this Announcement.

### C. Required Research Center Features

The Research Center (RC) should be a State University center for high-level research. It should develop and combine research and educational programs of the University and its partner organizations. The RC should establish permanent links between the University and other research institutions to mutually benefit the development of scientific cooperation and education.

Though the overall structure of the program is flexible, the RC is expected to:

- Be based at an Armenian state higher education university;
- Produce new mechanisms for integrating the experience of world-level research into the educational experiences of undergraduate, graduate and postgraduate students;
- Serve the long-term needs of the host University and partner organizations (NAS organizations, industries, etc.) by means of a fruitful partnership and mutual utilization of RC resources;
- Implement broad and imaginative activities in Research, Education and External Linkages;
- Be managed by a Program Director who is a researcher and who takes active part in the educational activities of the project; as well as a team of three Program Managers for the Research, Education, and External Linkages components and an administrative coordinator;
- Provide special competitive opportunities for promising young investigators for fellowships or stipends, and devote a minimum of US\$10,000 from each year's budget to this purpose;
- Demonstrate a co-funding commitment for twenty percent of the total from a local source such as the host institution, local or regional government, for-profit company, or local donor or philanthropist.

### D. Timetable

- **The deadline for proposals to be submitted is 6:00 pm local time on Tuesday, March 15, 2005.**
- Each proposal will receive an expert review, and a select group will receive site visits. Site visits to selected institutions will take place in August 2005.
- It is envisioned that the awarded RC will be announced by NFSAT, CRDF and the MES RA on approximately Friday, September 16, 2005.

### E. Program Sponsorship and Funding

- Fifty percent of the funding (up to US\$150,000) is provided through a grant to the National Foundation for Science and Advanced Technologies (NFSAT) from the U.S. Civilian Research and Development Foundation (CRDF).
- Thirty percent (up to US\$90,000) of the funding will be provided by the Ministry of Education and Science of the Republic of Armenia (MES RA) from the state budget.
- The awarded University is required to demonstrate a co-funding commitment for twenty percent (up to US\$60,000) of the total amount of the project from its own or other local sources.

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### **F. Program Administration**

This program is jointly administered by the National Foundation of Science and Advanced Technologies (NFSAT), the U.S. Civilian and Research Development Foundation (CRDF) and the Ministry of Education and Science of RA (MES RA).

## ***II. The Basic Research in Armenian Universities (BRAU) Program***

### **A. Overview**

The main purposes of the BRAU program are to promote the development of the Armenian scientific community and to replenish the scientific system with young specialists who have good skills in contemporary research fields. To obtain these objectives, the NFSAT and MES RA will focus their joint efforts on establishing a Research Center at a State University that will help meet contemporary research demands. This program will establish a modern, self-sustaining research institution that promotes high-quality scientific research and educational programs, training and experience in research management, support of young investigators, and close cooperation with other leading research, educational, government and regional institutions.

### **B. Eligibility Requirements**

All proposals submitted to the BRAU program must meet the following eligibility requirements:

- Proposals must come from an Armenian state higher education university. The following universities are eligible to apply to this program:
  1. Yerevan State University (YSU)
  2. Armenian Agricultural Academy (AAA)
  3. State Medical University of Armenia (SMUA)
  4. Armenian State Pedagogical University
  5. Gyumri State Pedagogical Institute
  6. Vanadzor State Pedagogical Institute
  7. State Engineering University of Armenia (SEUA)
- No more than two proposals can be submitted from the same university.
- Please note that proposals from universities with branch locations will be considered as applications from the same institution. This includes the following institutes:
  - YSU Yerevan and YSU Ijevan.
  - SEUA Yerevan and SEUA Gyumri, Vanadzor, Goris and Kapan.
- The university rector may not participate in the program as a Program Director or Program Manager.
- No individual may appear as a Program Director or Program Manager in more than one application under this competition, and a Program Director may not be a Program Manager.
- Priority will be given to proposals that demonstrate the participation of Former Weapon Scientists.

### **C. Regulations**

All activities carried out in the BRAU program must meet the following regulatory requirements.

- If human subjects are involved in any research, the Principal Organization must comply with the provisions of the regulations entitled “Human Research Subjects” (See Appendix 2).
- All travel to be funded from NFSAT’s contribution to the award must comply with the provisions of the Fly America Act. Please refer to the following weblink for more information about the rules of the Fly America Act: [http://www.crdf.org/AwardsAdministration/fly\\_america\\_act.pdf](http://www.crdf.org/AwardsAdministration/fly_america_act.pdf)
- All research involving Recombinant DNA molecules must comply with the provisions of the U.S National Institutes of Health Guidelines. Please refer to the following website for more information: [http://www.crdf.org/AwardsAdministration/general\\_award\\_terms\\_conditions.html](http://www.crdf.org/AwardsAdministration/general_award_terms_conditions.html)

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### D. Proposal Submission

- Each proposal must include a cover sheet (Form A) with the original signatures of the program director, the three program managers, and the institution rector.
- ***Three hard copies in Armenian and three hard copies in English must be submitted to NFSAT by the proposal submission deadline of 6:00pm on Tuesday, March 15, 2005.***
- Proposals submitted only by facsimile will not be accepted.
- In addition, applicants must submit an electronic copy of the proposal to NFSAT and CRDF by the proposal submission deadline. Applications must be sent to NFSAT at [brau@nfsat.am](mailto:brau@nfsat.am) and to CRDF at [armenia@crdf.org](mailto:armenia@crdf.org).
- All electronic copies of proposals must be submitted as ONE electronic file.

### Contact Information:

Aleksandr Khachunts  
Chairman's Adviser  
National Foundation for Science and Advanced Technologies (NFSAT)  
26, Azatutyan Ave., Yerevan, 375014, Armenia  
Tel: (374-1) 28-81-92  
Fax: (374-1) 28-13-80  
[brau@nfsat.am](mailto:brau@nfsat.am)

All proposals received by the NFSAT and CRDF must be complete. Any proposal not containing all required forms and sections as described below in Section II H may be ruled ineligible. Any proposal received after March 15, 2005 will be ruled ineligible. No modifications may be made to any proposal once it has been received and approved by the NFSAT and CRDF. If circumstances change so significantly after the proposal submission that the project can no longer be carried out as proposed, the Program Director should notify the NFSAT and indicate that the proposal is being withdrawn from the competition.

### E. Proposal Review

- All proposals will be screened for eligibility and completeness upon receipt.
- NFSAT will recruit independent external reviewers, including U.S. reviewers through CRDF, to evaluate the proposals using the evaluation criteria described in Section II.F.
- Based on the results of the external review, a select group of applicants will be visited by a bi-national group that includes NFSAT, CRDF and MES RA representatives. One award will be chosen based on the peer-review results and the site visit results.

### F. Evaluation Criteria

The independent external reviewers will evaluate the proposals using the following criteria:

1. **Intrinsic Scientific Merit:** The likelihood that the project may lead to new knowledge or novel perspectives or processes that will have a substantial impact on one or more fields of science.
2. **Integration of Research and Education:** The likelihood that the proposed center will involve students and younger researchers (six years or less since receipt of Ph.D./Kandidat or nine years or less since receipt of graduate degree) in the research program in meaningful ways.
3. **Administrative Innovation:** The use of novel administrative or organizational structure, including sharing of resources between institutions and other new external linkages, etc.
4. **Technical Expertise:** The experience of the researchers, the technical soundness of the proposed approach, the adequacy of technical resources (existing and requested) available to the Center.
5. **Management:** The soundness of the plan to manage and coordinate the project.
6. **Young Investigators:** The promotion of a sound research environment for young investigators.

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7. **Sustainability:** Plans for maintaining the equipment and continuing the project work after the award period has ended.

### G. Confidentiality

NFSAT and CRDF will treat all proposals as confidential material and will require all independent experts and NFSAT Scientific Board members to respect the confidentiality of proposals. However, proposal authors are advised that successful proposals will be treated as being in the public domain. Therefore, at the author's discretion, specific information in the proposal that is business-confidential and not intended for public dissemination should be clearly labeled as such at the top and bottom of the applicable page of the proposal. Such passages will be withheld from public distribution if the proposal is successful. Proposals that do not result in awards are not subject to public dissemination.

### H. Proposal Contents

Each proposal must contain all of the following elements prescribed below. All proposals should be typed single-spaced with margins of 2.5 cm on the sides, top and bottom. All pages including forms should be numbered consecutively in the upper right corner. The proposal should present a plan for a three-year project. **Full proposals should not exceed 35 pages (not including Cover Page, Budget Form B, and co-funding documents), and are due March 15, 2005.**

1. **Cover Page** (Form A) signed by the university rector, program director and three program managers.
2. **Abstract.** In one concise paragraph, summarize all relevant aspects of the project, with special attention to its objectives, methods, and potential results.
3. **Project Summary** (up to 6 pages). Describe and explain the project's goals in the fields of science and education, and explain how it will meet the BRAU program goals stated in Section IA above. Provide a description of the plans for research and education activities of the RC, the plans for establishing internal and external links, and expected results. Other sources of financial support should be indicated. The summary should highlight the innovative features of the proposed RC.
4. **List of Leading Project Participants Besides Those Mentioned in Form A (up to 2 pages).** Leading project participants or leading specialists responsible for the implementation of specific planned items of the RC.
5. **Research Plan** (up to 3 pages). Provide a narrative description of a three-year research plan that reflects the scientific program of the Center. The narrative should describe the scientific problems to be addressed and how the center's research projects are expected to contribute to their solution. The research plan should indicate why a Center-based strategy is beneficial or necessary and how the research will be integrated with education. The plan should include a mechanism for the inclusion of students in research projects in an ongoing and substantial way.
6. **List of Sources.** Provide a list of reference sources in the same numerical order as mentioned in the text of the project.
7. **Management Plan** (up to 3 pages). Please describe the proposed management structure for the proposed RC, including key personnel and their responsibilities. Include an organizational diagram if needed. Explain how the scientific and educational goals will be integrated under the management structure of the RC and how funds and equipment will be allocated and shared.

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8. **Education Plan** (up to 3 pages). Provide a narrative summary of the educational features of the Center. It should illustrate plans for attracting the highest quality professors and students (both undergraduate and graduate), as well as how the center will be integrated into the University.
9. **Linkages Plan** (up to 2 pages). Provide a clear description of plans to create or enhance linkages beyond the host institution, including, where appropriate, other organizations within Armenia; Academy of Sciences organizations; industry; local, regional or Governmental bodies; and international institutions. All proposals should include preliminary plans for international linkages of some sort.
10. **Integration Statement** (up to 1 page). Provide an explanation of how the three program components (research, education and external linkages) are related and how they are integrated, both functionally and conceptually.
11. **Young Investigators Support** (up to 2 pages). Provide a clear plan for a competition to provide special support for young investigators (as defined in Section IIF.2). This competition should account for no less than US\$10,000 of the total budget. Young investigators need not be located at the host institution.
12. **Projected Milestones and Sustainability Plan** (up to 2 pages). Indicate realistic qualitative and quantitative milestones the center hopes to achieve during the three years it is supported by the BRAU grant. Describe what aspects of the project will be used to evaluate its success. Explain how these milestones will affect the RC's future research plans. Describe the plans for sustaining the RC after the grant is over and indicate how the RC will attract additional collaborations and funding sources.
13. **Instrumentation Plan** (up to 2 pages). Submit a plan to acquire instrumentation for the Center. Include a description of planned usage for each major piece of equipment (equipment valued at US\$20,000 or more) and list possible users at the institution and elsewhere in Armenia. For major instrumentation, a plan for shared usage throughout the region should be included and it should be shown that the equipment requested is not readily available in Armenia.
14. **Detailed Budget** (up to 2 pages). Form B and budget narrative. Provide a three-year budget (in US dollars) that includes the following categories: individual financial support, equipment, stipends and fellowships, travel, subscriptions, and institutional support. The recommended budget is US\$220,000 for year 1 and no more than US\$40,000 for years 2 and 3. Please refer to section II.I. for specific budget guidelines.
15. **Summary Information on Each Project Participant Mentioned in Items 1 and 4**. Full CVs should be provided for the Program Director and the three Program Managers, and not more than 1/3 page per additional participant. Each CV should include the person's name, title, educational background, current and previous institutional affiliations with dates, area of expertise, and a list of at least 3 publications.
16. **Co-funding Documents**. Universities should submit: a) a letter of commitment for support from co-funding sources (host university, ministries, regional or local government, for-profit company, etc.) in the form given in Appendix 3. The letters must specify a willingness to provide financial support for the project in the amount of 20% of the total project budget (US\$60,000 if proposing the project total maximum of US\$300,000). The letter of support must be approved and originally signed by a head and chief accountant of the co-funding sources (host university ministries, regional or local government, for-profit company, etc.).

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### I. Budgetary Guidelines

The following costs are permitted under the budgetary guidelines for this program:

#### **1) Individual Financial Support (IFS)**

Individual Financial Support (IFS) is defined as payments to individual project participants for work performed on the project (i.e., labor costs). Individual financial support is calculated based on the level of effort and the professional level of each participant.

A month for full-time personnel is considered 22 days, with each day made up of 8 hours of work. Individual financial support of the program managing team should not exceed an **average** of US\$250 per person per month. Actual individual financial support requests may not exceed US\$300 per person per month for individuals in the position of Program Director or Research, Education and Linkage Managers.

Typical IFS daily rates for a number of professional levels are shown below. Please take this chart, as well as geographical, cost-of-living, and other factors, into consideration when calculating individual financial support for project personnel.

<u>Position</u>	<u>Range of Maximum IFS Daily Rates</u>	<u>Maximum Rate Not to be Exceeded</u>
Program Director	\$11.37 to \$13.64	\$13.64
Research, Education and Linkage Manager	\$11.37 to \$13.64	\$13.64
Researcher/Engineer	\$6.82 to \$11.37	\$11.37
Technical/Scientific Support Staff	\$4.55 to \$6.82	\$6.82
Student	\$3.18 to \$6.82	\$6.82
Administrative/Clerical Support Staff	\$2.28 to \$4.55	\$4.55

#### **2) Young Investigator Support**

Support for Young Investigators is a grant requirement and must be at least US\$10,000 in each grant year. This support may take any or all of the following forms:

- Stipends:** Undergraduate and graduate students involved in the project may receive additional stipends. Actual individual stipends should be calculated based on the level of effort and the daily rates listed in the chart above.
- Fellowships:** Each year, on a competitive basis, graduate or undergraduate students may be awarded funds for travel to carry out research or fieldwork related to the project or to travel to international scientific conferences or workshops.
- Additional Courses or Training:** English language training must be offered to students involved in the project. Additional training areas for students might include: a) technology commercialization training; b) management training; c) training on how to use new equipment; and d) courses on special topics in special disciplines that are not included in standard university courses.

#### **3) Additional Courses or Training**

All team members may receive training in areas such as management training or training on how to use new equipment. Individual financial support for trainers may not exceed US\$100 per month.

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### **4) Research Equipment and Materials**

Includes computers, but does not include any office equipment. The recommended minimum amount for research equipment and materials is US\$170,000. All single items costing US\$1,000 or more must be justified in the Budget Narrative.

### **5) Office Supplies**

May include RC laboratory repairs, furniture, copy machine, paper, cartridges, etc. The maximum cost for this category is US\$10,000 for the three-year award period. All single items costing US\$1,000 or more must be justified in the Budget Narrative.

### **6) Travel**

- a) **International Travel:** Includes travel to international conferences and workshops and to meet with international colleagues to discuss potential collaborations. Transportation and per diem support for scientific travel of project personnel in connection with the project should be described in the Budget Narrative. All personnel must travel on the lowest-cost applicable round-trip airfare. Travel funded out of the NFSAT portion of the grant must be in compliance with the Fly America Act (please see America Act: [http://www.crdf.org/AwardsAdministration/fly\\_america\\_act.pdf](http://www.crdf.org/AwardsAdministration/fly_america_act.pdf) for the specific guidelines of the Fly America Act). Health insurance is required for all international travel. For research visits of two weeks or less, living allowances should follow U.S. government per-diem guidelines. Applicants should refer to a website listing current U.S. government per-diem rates, such as <http://policyworks.gov/org/main/mt/homepage/mtt/perdiem/perd05d.html> or <http://www.govexec.com/travel>. For research visits of two weeks or longer, per diem is allowed at US\$2,000 per month or the prorated equivalent. The maximum total stay abroad of individual project personnel is 3 months per 12-month period of an award.
- b) **Domestic Travel:** Includes research activities and fieldwork within Armenia related to the project.

### **7) Subscriptions**

Includes scientific journal subscriptions and book purchases.

### **8) Publications Expenses**

Includes expenses for publishing articles in scientific journals.

### **9) Secondary Collaborator Expenses**

Secondary collaboration is the delegation of any portion of the project to a secondary institution other than the host institution. Secondary collaboration may be in the form of sub-contracted work and may include any allowable costs described in this section. All personnel and facilities involved in secondary collaboration must be specifically listed and described in the proposal. A separate budget justification must be included for each secondary collaboration in the Budget Narrative.

### **10) Other Expenses**

Must be described in the Budget Narrative.

**11) Host Institution Support:** Includes communication and other service expenses connected with the RC's activities. Host institution support must be calculated at 10% of direct expenses.

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***Checklist of Documents Required for Proposal Submission:***

- #1 Cover Sheet (Form A)
- #2 Abstract
- #3 Project Summary
- #4 List of Leading Project Participants
- #5 Research Plan
- #6 List of Sources
- #7 Management Plan
- #8 Education Plan
- #9 Linkages Plan
- #10 Integration Statement
- #11 Young Investigators Support
- #12 Projected Milestones and Sustainability Plan
- #13 Instrumentation Plan
- #14 Budget (Form B and Budget Narrative)
- #15 Summary Information on Each Project Participant
- #16 Co-funding Documents
- #17 FOR PROPOSALS INVOLVING HUMAN SUBJECTS ONLY: (1) IRB/IEC Approval, (2) Human Subjects Governmental Approval, and (3) Confirmation of FWA

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**RC Form A Page 1 of 3**  
**COVER SHEET FOR BRAU PROGRAM APPLICATION**

I. CENTER NAME _____	
A. Host University _____	
B. Scientific Field(s) of Proposed Activity _____	
II. UNIVERSITY RECTOR	
A. Name Last _____ First _____ Patronymic _____	
B. Sex M ___ F ___	C. Date of Birth (date/month/year) _____
D. Highest Degree Earned _____ Field _____ Year Awarded _____	
E. Office Phone _____ Fax _____ E-mail _____	
F. Professional Title/Position _____	
G. Professional Affiliation and Complete Mailing Address  _____	
Signature* (only TWO applications may be submitted from each university) _____ Date _____	
III. PROGRAM DIRECTOR – <i>the Program Director is the primary person responsible for the program</i>	
A. Name Last _____ First _____ Patronymic _____	
B. Sex M ___ F ___	C. Date of Birth (date/month/year) _____
D. Highest Degree Earned _____ Field _____ Year Awarded _____	
E. Office Phone _____ Fax _____ E-mail _____	
F. Professional Title/Position _____	
G. Do you have any experience in weapons-related subjects? YES <input type="checkbox"/> NO <input type="checkbox"/>	
If "Yes," please provide the appropriate weapons code from <b>Appendix 1</b> describing this individual's experience in the area to the right and provide a <b>brief description</b> of the weapons-related experience in the space below. Weapons Researcher Code: _____	
Description of weapons research: _____	
H. Professional Affiliation and Complete Mailing Address  _____	
Signature* _____ Date _____	

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IV. PROGRAM MANAGER, RESEARCH

A. Name  
Last \_\_\_\_\_ First \_\_\_\_\_ Patronymic \_\_\_\_\_

B. Sex M \_\_\_ F \_\_\_ C. Date of Birth (date/month/year) \_\_\_\_\_

D. Highest Degree Earned \_\_\_\_\_ Field \_\_\_\_\_ Year Awarded \_\_\_\_\_

E. Office Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

F. Professional Title/Position \_\_\_\_\_

G. Do you have any experience in weapons-related subjects? YES  NO

If "Yes," please provide the appropriate weapons code from **Appendix 1** describing this individual's experience in the area to the right and provide a **brief description** of the weapons-related experience in the space below. Weapons Researcher Code: \_\_\_\_\_

Description of weapons research: \_\_\_\_\_

H. Professional Affiliation and Complete Mailing Address

\_\_\_\_\_  
Signature\* Date

V. PROGRAM MANAGER, EDUCATION

A. Name  
Last \_\_\_\_\_ First \_\_\_\_\_ Patronymic \_\_\_\_\_

B. Sex M \_\_\_ F \_\_\_ C. Date of Birth (date/month/year) \_\_\_\_\_

D. Highest Degree Earned \_\_\_\_\_ Field \_\_\_\_\_ Year Awarded \_\_\_\_\_

E. Office Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

F. Professional Title/Position \_\_\_\_\_

G. Do you have any experience in weapons-related subjects? YES  NO

If "Yes," please provide the appropriate weapons code from **Appendix 1** describing this individual's experience in the area to the right and provide a **brief description** of the weapons-related experience in the space below. Weapons Researcher Code: \_\_\_\_\_

Description of weapons research: \_\_\_\_\_

H. Professional Affiliation and Complete Mailing Address

\_\_\_\_\_  
Signature\* Date

VI. PROGRAM MANAGER, EXTERNAL LINKAGES

A. Name  
Last \_\_\_\_\_ First \_\_\_\_\_ Patronymic \_\_\_\_\_

B. Sex M \_\_\_ F \_\_\_ C. Date of Birth (date/month/year) \_\_\_\_\_

D. Highest Degree Earned \_\_\_\_\_ Field \_\_\_\_\_ Year Awarded \_\_\_\_\_

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E. Office Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

F. Professional Title/Position \_\_\_\_\_

G. Do you have any experience in weapons-related subjects? YES  NO

If "Yes," please provide the appropriate weapons code from **Appendix 1** describing this individual's experience in the area to the right and provide a **brief description** of the weapons-related experience in the space below. Weapons Researcher Code: \_\_\_\_\_

Description of weapons research: \_\_\_\_\_

H. Professional Affiliation and Complete Mailing Address

Signature\*

Date

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**RC Form B  
 Budget**

<b>Category</b>					<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
<b>1.</b>	<b>Individual Financial Support (IFS)</b>							
	<b>Name</b> (continue on separate sheet if necessary)	<b>Daily Rate</b>	<b># of Days Per Month</b>	<b># of Months</b>				
<b>2.</b>	<b>Young Investigator Support, including</b>							
	a. Stipends							
	<b>Name</b> (continue on separate sheet if necessary)	<b>Daily Rate</b>	<b># of Days Per Month</b>	<b># of Months</b>				
	b. Fellowships							
	c. Additional courses or training							
<b>3.</b>	<b>Training for Other Team Members</b>							
<b>4.</b>	<b>Research Equipment and Materials</b>							
<b>5.</b>	<b>Office Supplies</b>							
<b>6.</b>	<b>Travel</b>							
	a. International (including Former Soviet Union)							
	b. Domestic (only in Armenia)							
<b>7.</b>	<b>Subscriptions</b>							
<b>8.</b>	<b>Publications Expenses</b>							
<b>9.</b>	<b>Secondary Collaborator Expenses</b>							
<b>10.</b>	<b>Other Expenses</b> (please list)							
	<b>Subtotal</b>							
<b>11.</b>	<b>Host Institution Support</b> (calculate at 10% of subtotal)							
	<b>Total Requested from NFSAT and NAS RA</b>							
	<b>Total Co-Funding from the Host Institution</b> (please describe in the Budget Narrative)							
	<b>Total Co-Funding from Other Sources</b> (please describe in the Budget Narrative)							
	<b>Total Project Cost</b>							

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**APPENDIX 1**  
**FORMER FSU WEAPONS RESEARCHER CODE LIST**

Former Weapons Researcher – defined as project participants who are currently or were formerly actively engaged in research at a current or former weapons laboratory or institution. Five categories of former weapons researchers are provided below (Categories B, C, and D are classified as Weapons of Mass Destruction researchers):

<b><i>CATEGORY A: MISSILE TECHNOLOGY EXPERTS</i></b>	
<b>CODE</b>	<b>DESCRIPTION</b>
<b>A1</b>	Design, construction and performance of air, space, surface and underwater - launched missiles. Materials and technologies for these missiles. Production of engines, fuels, composites, integrated elements, radio-electronic equipment, different testing devices for missiles.
<b>A2</b>	Techniques for guidance and control of missiles from launching to impact. Includes optical guidance, television guidance, wire guidance, present and terminal guidance, internal guidance, command guidance, and homing guidance.
<b>A3</b>	Missile handling and launching, including transportation, storage, and preparation for launching. Air, space, surface and underwater launching and support equipment and technologies; Checkout equipment and procedures. Guided missile ranges.
<b>A4</b>	Techniques and systems for tracking missiles as defensive measures. Can be from surface installations or air and space-borne platforms.
<b><i>CATEGORY B: CHEMICAL WEAPONS EXPERTS</i></b>	
<b>B1</b>	Design and performance of missile warheads and rockets for delivery of chemical weapons.
<b>B2</b>	Materials, facilities and performance processes needed for the production of chemical weapon agents and their key precursors.
<b>B3</b>	Dissemination of chemical weapon agents.
<b>B4</b>	Basic knowledge on CW design and their effect on human system.
<b><i>CATEGORY C: BIOLOGICAL WEAPONS EXPERTS</i></b>	
<b>C1</b>	Design and performance of missile warheads and rockets for delivery of biological weapons.
<b>C2</b>	Biopolymer production related to biological warhead capabilities.
<b>C3</b>	Dissemination of biological weapon agents.
<b>C4</b>	Basic knowledge on BW design and their effect on human system.
<b><i>CATEGORY D: NUCLEAR WEAPONS EXPERTS</i></b>	
<b>D1</b>	Basic knowledge of Nuclear Weapons design, construction, characteristics and the effect on human system,
<b>D2</b>	Design, construction and performance of missile warheads for delivery of nuclear weapons.
<b>D3</b>	Design, construction and performance of the equipment and Components for Uranium and Plutonium separation.
<b>D4</b>	Design, construction and performance of the equipment connected with Heavy Water Production.
<b>D5</b>	Design, construction and performance of the equipment for Development of Detonators.
<b>D6</b>	Design, construction and performance of Explosive Substances and Related Equipment.
<b>D7</b>	Design, construction and performance of the equipment and Components for Nuclear Testing.
<b>D8</b>	Design, construction, performance and operation of production-type nuclear reactors for fissile and tritium-content materials production (breeding).
<b>D9</b>	Design, construction, performance of nuclear reactors and units for submarine and for military space program.
<b><i>CATEGORY E: OTHER</i></b>	
<b>E1</b>	Design, construction, and performance of powerful laser facilities for military applications.
<b>E2</b>	Design, construction and performance of accelerator facilities for military applications in space programs
<b>E3</b>	Others

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**Appendix 2**

**Human Research Subjects**

The NFSAT and CRDF comply with all U.S. laws and regulations pertaining to the treatment of human subjects in scientific research and development. The NFSAT and CRDF policy on funding proposals involving human subjects research requires both the Program Director and their respective institution(s) to certify that:

They have obtained Institutional Review Board (IRB) or Institutional Ethics Committee (IEC) approval of the research (or a determination that written approval is not required, *e.g.*, exempt research) from an IRB/IEC registered with the U.S. Department of Health and Human Services' Office of Human Research Protections (OHRP);

They have obtained the required approval(s) (or a determination that written approval is not required) from the applicable governmental office(s) for the research, including but not limited to the filing of the required applications related to investigational new drugs or investigational devices;

They have a Federal wide Assurance (FWA) on file with OHRP, and it will comply with the FWA throughout the term of the Project Agreement. The FWA represents a public commitment to comply with the human subjects protections standards of the Belmont Report and the Common Rule;

They will conduct the research in accordance with the National Science Foundation (NSF) regulation entitled, "***Protection of Human Subjects***" [45 CFR § 690 *et seq.*];

If the proposal involves human research subjects, the Program Director must provide the following additional documentation:

- 1) Copies of Institutional Review Board (IRB) or Institutional Ethics Committee (IEC) approval of the project or a formal written determination that said approval is not required, *e.g.* exempt research. The IRB/IEC must be registered with the U.S. Department of Health and Human Services' Office of Human Research Protections.
- 2) Copies of required approval(s) (or determination that said approval is not required) from the applicable governmental bodies for the research, including but not limited to the filing of required applications related to investigational new drugs or investigational devices.
- 3) Confirmation that the institution(s) has a Federal wide Assurance (FWA) on file with the U.S. Office for Human Research Protections (<http://ohrp.osophs.dhhs.gov/>) and certification that it will comply with the FWA throughout the term of any resulting award. If an FWA has not been obtained, please so note in the proposal. Please be advised that, in the event the proposal is selected for an award, an FWA must be applied for and received by the Program Director's institution(s) prior to the issuance of any project agreement.

These materials, indicating an approval or an exemption of the project to use human subjects must be submitted to both NFSAT and CRDF. Applicants are required to submit these materials as separate documents in addition to the proposal file. Failure to submit this additional information may result in substantial processing delays or in the proposal being declared ineligible.

Prior to the issuance of any award agreement, the Program Director and the institution(s) must provide certification that all project participants involved in the project have undertaken appropriate training in human subjects protections consistent with the requirements of the regulations cited above.

### Appendix 3

#### SAMPLE COMMITMENT LETTER FOR CO-FUNDING

[DATE]

**Mr. Harutyun Karapetyan**

Chairman and Executive Director

National Foundation of Science and Advanced Technologies (NFSAT)

26, Azatutyan Ave.,

Yerevan, Armenia

**Mr. Ara Avetisyan**

Vice-Minister

Ministry of Education and Science of RA

5, Vardanants Str.,

Yerevan, Armenia

Dear Mr. Karapetyan and Mr. Avetisyan:

This letter represents a commitment by *[co-funding organization]* to provide *[\$X]* to *[name of RC]* for the project entitled *[Proposal Title]* submitted to the NFSAT-MES RA joint Basic Research in Armenian Universities (BRAU) Program.

Sincerely,

\_\_\_\_\_  
[Rector]

\_\_\_\_\_  
[Chief Accountant]

[Organization Seal]

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### **Proposal Guidelines for Basic Research in Armenian Universities (BRAU) Program**

The BRAU program staff have prepared these guidelines to assist potential applicants in preparing their proposals. Competitive proposals may include many of the following elements.

#### **Project Summary**

- A. Describe specific plans for the research and educational activities of the RC, including a concise set of goals, plans for establishing internal and external links, and the expected results.
- B. Highlight the unique features of the proposed RC.
- C. Describe the scientific and educational issues that the center will seek to address, as well as your innovative approach to these issues.
- D. Describe the proposed management structure for the RC, including key personnel and their responsibilities. Include an organizational diagram if needed.
- E. Explain how the scientific and educational goals will be integrated under the management structure of the RC.
- F. Explain how the Project Director will supervise the activities of key personnel.
- G. Illustrate how the proposed RC will benefit the students directly involved, the host university, and the scientific community as a whole.
- H. Explain how the proposed RC will establish local, regional and international links and integrate with the international scientific community.
- I. Indicate other sources of financial support.

#### **Research Plan**

- A. State the specific aims of the three-year research plan by presenting a focused and concise set of hypotheses.
- B. Make sure that the hypotheses are testable, attainable within the stated time frame, and described in enough detail to allow outside assessment of their scientific merit.
- C. Explain how the results will be obtained:
  - State the projected sequence or timetable.
  - Describe the equipment that will be used.
  - Describe the method in which data will be collected, analyzed, and interpreted.
  - Describe any innovative methodology and why it will be used in preference to more conventional strategies. If employing a complex technology for the first time, take extra care to demonstrate familiarity with the experimental details.
  - Discuss potential difficulties and limitations and how these will be overcome or mitigated. In addition, address precautions that will be exercised with respect to any procedures, situations, or materials that may be hazardous to personnel or human subjects.
- D. Discuss the expected results, and alternative approaches that will be used if unexpected results are found.
- E. Be as specific as possible- a small, focused project will have a much greater probability of success in meeting its research and education objectives than a diffuse, multifaceted project.

#### **Management Plan**

- A. Describe the proposed management structure of the RC. Include an organizational diagram of the management structure of the RC, if necessary.
- B. Explain the roles and responsibilities of the management and key personnel.
- C. Describe how the key personnel will communicate with each other, who will be responsible for making decisions, and what the decision-making process will be.
- D. Explain how funds and equipment will be allocated and shared between the project personnel.

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**Education Plan/Young Investigators Support**

- E. Describe how the RC will solicit and select young investigators (undergraduate, graduate, and postgraduate students) to participate in the research activities.
- F. Discuss how the RC will ensure that students are involved in the overall research goals and the external linkages.
- G. List the responsibilities of the young investigators.
- H. Describe the interaction that will take place between the students and the Project Managers and Director.
- I. Indicate how research results will be integrated into the educational curriculum.
- J. Describe any competitive opportunities that will be provided for young investigators.
- K. Explain how the RC will address the long-term educational needs of the host university.

**Linkages Plan**

- A. Address both domestic and international linkages in this section, such as:
  - Other universities within Armenia;
  - Academy of Sciences institutes;
  - Industry;
  - Local, regional or governmental bodies;
  - International institutions.
- B. Giving as much detail as possible, explain how existing ties will be strengthened, and describe plans for new linkages with specific institutions. Examples of specific linkages include:
  - Joint Research/Education Programs
  - Exchange visits
  - Conferences and workshops
  - Research Contract/Cooperation Agreements
  - Foreign collaborative publications.

**Integration Statement**

- A. Explain how the management structure (described in the management plan) will enable communication and integration between the Research, Education, and External Linkages components.
- B. Discuss techniques to specifically involve young investigators in the three components of the RC.
- C. Describe how funds and equipment will be allocated and shared between the three project components.

**Projected Milestones and Sustainability Plan**

- A. Indicate realistic qualitative and quantitative milestones the center hopes to achieve during the three years it is supported by the BRAU grant. Examples of specific milestones include:
  - Publications
  - New collaborations
  - Conferences hosted by the RC
  - Acquisition of additional funding
  - Research accomplishments
  - Patents.
- B. Describe what aspects of the project will be used to evaluate its successes.
- C. Discuss how the milestones will affect the RC's future research plans, sustainability, and ability to attract additional collaborations and funding sources.
- D. Explain how the RC will become self-sustaining and continue its activities after the BRAU grant is over (i.e. funding from the host university, government funding, competitive grants, etc.).

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### **Instrumentation Plan**

- A. Submit a plan to acquire instrumentation for the RC, including any financial or in-kind contributions to be provided by the host institution.
- B. Include a description of planned usage for each major piece of equipment (equipment valued at US\$20,000 or more), including:
  - A list of potential users of the equipment, possibly including multiple users from various organizations.
  - A method to prioritize and allocate access time between users.
  - A method to monitor the equipment's usage.
- C. Define who will maintain the equipment and what expertise will be required for this responsibility.
- D. Describe the plan for providing a secure location for the equipment.

### **Detailed Budget** (Form B and Budget Narrative)

- A. Provide a three-year budget (in US dollars) that includes the following categories: individual financial support, equipment, stipends and fellowships, travel, subscriptions, and institutional support.
- B. The recommended budget is no more than US\$220,000 for year 1 and no more than US\$40,000 for years 2 and 3.
- C. Provide an accurate price quote for the items requested. Include more than one quotation, or a statement indicating that the equipment for the required purpose is available from only one source.
- D. If possible, provide vendor contact information for equipment purchases.
- E. Describe the advantages of using the particular items requested by explaining their characteristics (manufacturer, basic design, effectiveness, accuracy, cost, accessibility, etc.) relative to other similar items available.
- F. At least US\$10,000 for each year's budget should specifically support young investigators. Note within your budget which activities will contribute to this aim.

### **Summary Information on Each Project Participant Mentioned in Items 1 and 4**

- A. Provide full CVs for the Program Director and the three Program Managers, describing both scientific experience and research management experience.
- B. Provide information on each additional participant (no more than 1/3 page per person) including any experience that will be beneficial to accomplishing the project goals.
- C. Each CV should include the person's name, title, educational background, current and previous institutional affiliations with dates, and area of expertise.
- D. List 3-10 publications for each project member.