

**QUESTIONS AND ANSWERS REGARDING COOPERATIVE AGREEMENT NOTICE
CAN-01-OBPR-01 FOR THE SOLICITATION OF A BIOSCIENCE AND ENGINEERING
INSTITUTE BY THE OFFICE OF BIOLOGICAL AND PHYSICAL RESEARCH AT
NASA**

Note: The CAN is available at http://research.hq.nasa.gov/code_u/nra/current/CAN-01-OBPR-01/index.html

Q: What is the relationship between the BioScience and Engineering Institute and current NASA-sponsored programs in Biotechnology?

A: This program hopes to extend, expand and at the same time centralize the focus of some of NASA's current thrusts in the biotechnology/bioengineering/bioscience areas. The Institute will serve as a focal point for defining current important areas of research in the BioScience and Engineering area. It is sponsored by the Physical Sciences Division (PSD) of the Office of Biological and Physical Research (OBPR) (Code U) and would thereby align mainly with the goals and missions of PSD.

Q: How would the Institute differ from those with Biological-based themes sponsored by other Government agencies, and by other NASA organizations?

A: NASA offers the microgravity environment to explore BioScience and Engineering phenomena and this tends to set it apart from similarly-themed institutes sponsored by other agencies. This environment can be used to study important fundamental phenomena masked by gravity and also for obtaining improvements in "product" due to lack of gravity (and with this knowledge developing improved product on Earth). Research in the microgravity environment is directly sponsored by the Physical Sciences Division so that intramural research performed by the institute can take advantage of this. At the same time, NASA and PSD are open to unique and groundbreaking ideas in the BioScience and Engineering area in which microgravity is not necessarily a variable. PSD is also interested in BioScience and Engineering areas that can significantly impact NASA's missions and goals, especially those of shorter- and intermediate-term nature that are consistent with goals of PSD and OBPR.

It is NASA's current mission to:

- Explore, use, and enable the development of space for human enterprise
- Advance scientific knowledge and understanding of the Earth, the Solar System, and the Universe and use the environment of space for research
- Research, develop, verify and transfer advanced aeronautics, space, and related technologies

NASA's Contributions to National Priorities are:

- Increased Understanding of Science and Technology
- Sustainable Development of the Environment
- Educational Excellence

- Peaceful Exploration and Discovery
- Economic Growth and Security

The goals of OBPR are:

- Enable exploration (conduct research to enable safe and productive human habitation of space)
- Science (Use the ground and space environment as a laboratory to test the fundamental principles of physics, chemistry, and biology)
- Commerce (Enable and promote commercial research in space)
- Outreach (Use space research opportunities to improve academic achievement and the quality of life)

The proposer is referred to the current NASA strategic plan for further information regarding NASA's missions, goals, and objectives (<http://www.hq.nasa.gov/office/codez/plans/pl2000.pdf>).

It is recognized that an enormous range of biological-based science and engineering topics fall within the general goals of NASA, and even PSD, and this can be viewed as both an opportunity and a hardship for the proposer in terms of their focus for the institute. Sample research topics are listed in section 3.2 of the CAN. NASA is looking for the Institute in its activities to prioritize which areas of BioScience and Engineering have the greatest potential for significant discovery and application, both for NASA and for the world.

Q: Can you please provide a more complete definition of “single university entity?”

A: A single university entity is defined as one academic institution (or several academic institutions in collaboration, with one clear leading institution submitting the proposal and responsible for oversight and coordination of the Institute activities including the activities of proposal partners.). What is discouraged is a “joint venture” type of proposal with many universities collaborating with no clear lead. NASA plans to award the cooperative agreement for the Institute to a single academic institution or consortia.

Q: Does the winning institute solicit for intramural and/or extramural research proposals? Will this institute have its own solicitation in addition to the Office of Biological and Physical Research Physical Sciences Division interdisciplinary NRA?

A: NASA will provide the Institute w/ funds for intramural research for which the institute will solicit for. (The institute has the ability to expand its membership thereby widening the intramural pool of universities and researchers for which to solicit proposals from. Addition of members should be based on such factors as scientific and technical merit, personnel quality, diversity, and educational and outreach possibilities.) Separately from this, the OBPR PSD interdisciplinary NRA will likely have thematic areas dedicated to Biotechnology, Bioscience, and Bioengineering for which the entire science community will be welcome to propose.

Q: Do research themes include ground- and flight-based research?

A: Yes

Q: Does the prioritization responsibility include research priorities for the International Space Station? How are these then integrated with priorities defined from other institutes and the rest of the OBPR program as a whole?

A: The institute shall assume a leadership role in identification and prioritization of BioScience and Engineering research. This may or may not impact research priorities for the International Space Station but Biology/Biotechnology themes are at the top of ISS overall research priorities at this current time. Research prioritization by the Institute may impact priorities for the overall OBPR program.

Q: What levels of institute operations support/overhead and research support are provided for the institute at the funding levels (3M/yr.) specified?

A: We are expecting you to help define this via your approach to Institute management. Please refer to section 6.2 in the CAN entitled "Quality of Core Management Approach." Proposal evaluation will consider the level of scientific and research value for the resources expended.

Q: Can only one proposal per entity be submitted?

A: Yes

Q: Can campuses be the lead institution on one proposal and partner in others?

A: Yes

Q: What factors will be used in the Institute selection process?

A: The selection process is defined in sections 5 and 6 of the CAN.

Q: What should be the nature of the relationship between our university and the NASA center members as we write the proposal? Can we partner with a NASA center, or multiple NASA centers, during the writing of the proposal? Or are the NASA centers only involved after the proposals are submitted?

A: The university should not partner with a NASA center during the Institute proposal process. A NASA center will be involved as defined in section 2 of the CAN entitled "Roles and Responsibilities." Additionally, after institute award, the institute researchers may partner with NASA researchers or teams of researchers as desired during submission of intramural research proposals.

Q: Is this concept associated with, or under purview of, a particular center or centers. How is the NASA center chosen to administer and implement this institute agreement?

A: Current center emphasis, missions, activities and experience will play the primary role in determining which center is chosen to award and administer the institute agreement. (Note: NASA HQs. will provide Program/Project management of the NBEI (responsible for Annual Institute Reviews.))

Q: Does any portion of Institute support have to come as a cash donation?

A: All resources that an institution pledges to provide will be considered and are factors during evaluation of proposals.

All contributions including cash and in-kind will be accepted when such contributions meet the following criteria contained in the NASA Grant & Cooperative Agreement Handbook, NPG 5800.1D, 1260.123:

- (1) Are verifiable from the recipient's records.
- (2) Are not included as contributions for any other federally-assisted project or program.
- (3) Are necessary and reasonable for proper and efficient accomplishment of project or program objectives.
- (4) Are allowable under the applicable cost principles.
- (5) Are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching.
- (6) Are provided for in the approved budget when required by NASA.
- (7) Conform to other provisions of 1260.123, as applicable.

Q: Can the Institute look internationally for technology transfer opportunities for innovative technologies developed as a result of Institute activities?

A: International opportunities for technology transfer can be considered. However, ITAR, NASA-specific, and other export of technology restrictions may be applicable.

Q: How will the institute interact with the external community?

A: The institute should act as a hub for coordinating workshops, outreach, educational opportunities, etc. that are open to the entire BioScience and Engineering community.

Q: Should the Institute disseminate advances in knowledge through publication, lecture presentation, web-based presentations, and the like?

A: Yes

Q: Who will be responsible for Annual Institute Reviews, NASA HQs. or a NASA Center?

A: This function is planned for NASA HQs. at this time. Other roles and responsibilities for the Institute, NASA HQs., and NASA Centers are described in section 2 of the CAN.

Q: What is the range in scope for proposals regarding organization structure?

A: Proposals will be entertained that range in scope:

- from an interdisciplinary team consisting of existing staff and organizational structure
- to a new interdisciplinary organizational unit (e.g., “Center for BioScience and Engineering Studies”) and/or a new department, with the addition of new positions, and including one or more research teams
- with either attacking a major BioScience and Engineering research theme or series of research themes.

Q: What factors will be used to evaluate proposals submitted for the Institute?

A: Please see section 6 of the CAN for more detail. The evaluation of proposals will be based on the following evaluation criteria (all criteria of equal importance):

- Scientific and technical merit of the proposed research program including plans for the integration of research, technology and education
- Quality of core management approach including cost realism, schedule, budget, risk management and relevance to OBPR’s strategic goals
- Quality of Proposed Key Personnel & staffing plan
- Diversity of participation and overall outreach to science and education community