



April 15, 2003
NSBRI CFC-03-01

National Space Biomedical Research Institute
One Baylor Plaza, NA-425
Houston, TX 77030

NSBRI Call for Candidates
Soliciting Applications for Team
Leadership

A Research Announcement for the
National Space Biomedical Research Institute

Applications Due: July 15, 2003

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NSBRI Call for Candidates Soliciting Applications for Team Leadership

Summary and Supplemental Information

The NSBRI is a private, non-profit organization competitively selected by NASA. The Institute uses an integrated research team approach to advance biomedical research with the goal of ensuring safe and productive long-term human exploration of space.

The NSBRI is responsible for the development of countermeasures against the deleterious effects of long-duration space flight and applied space biomedical research directed toward this specific goal. Its mission is to lead a national effort in integrated, critical path space biomedical research that supports NASA's Bioastronautics Strategy by focusing on the enabling of long-term human presence in, development of, and exploration of space. This is accomplished by:

- designing and testing effective countermeasures to address the biological and environmental impediments to long-term human space flight;
- defining the molecular, cellular, organ-level, and integrated responses and mechanistic relationships that ultimately determine these impediments, where such activity is essential for the development of novel countermeasures;
- establishing biomedical support technologies to maximize human performance in space, reducing biomedical hazards to an acceptable level, and delivering quality medical care;
- transferring and disseminating the biomedical advances in knowledge and technology to the general benefit of mankind; and
- ensuring open involvement of a diverse scientific community, industry, and the public at large in the Institute's activities and fostering a robust partnership with NASA, particularly through NASA's Lyndon B. Johnson Space Center.

Each of the NSBRI research teams consists of a set of coordinated and complementary projects focused on a common theme. Team management and coordination is the responsibility of the **Team Leader**. A single Team Leader, assisted by an Associate Team Leader, heads each research team. This Call for Candidates solicitation is for applications for Team Leadership positions.

The following items apply only to this Call for Candidates (CFC):

Solicitation Identifier:	NSBRI CFC-03-01
Submission Format:	Electronic applications utilizing the NSBRI's Electronic Proposal Submission System
Notices of Intent Due:	N/A
Applications Due:	July 15, 2003

Information about the NSBRI and its existing research teams is available from:

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Bobby R. Alford, M.D.
Chairman of the Board and CEO
National Space Biomedical Research Institute

National Space Biomedical Research Institute Call for Candidates

NOTE: Team Leadership positions for Institute research teams will be competed in parallel with NRA 03-OBPR-04. All applicants for this CFC must submit a proposal as a Principal Investigator to Appendix C of NRA 03-OBPR-04. The Institute's Policy on Team Leadership is contained in Appendix B of this document.

I. Introduction

Team Leaders play a pivotal role in guiding the Institute's research program and in the ultimate success of the Institute. Their expertise and "hands-on" approach to research management add value across projects and across teams. The Team Leader is guided by the Critical Path Roadmap, which is the cornerstone for developing the team's integrated strategic research plan, the key to accomplishing the Institute's mission. The Team Leader's stature and reputation as a strong scientist encourages other scientists to apply to become team members. The Team Leader's communication skills and insight enable the appropriate synergistic discussions among the various research projects, with the objective of assuring a team research program that has higher value than the sum of the values of its separate projects. **The NSBRI invites applications to lead an existing team in one of 10 research areas:**

1. *Bone Loss* – Addressing bone loss and weakening during space flight and the inherent fracture risks.
2. *Cardiovascular Alterations* – Addressing the in-flight occurrence of cardiac dysrhythmias and post-flight impairment of the cardiovascular response to orthostatic and exercise stress.
3. *Human Performance Factors, Sleep and Chronobiology* – Investigating maintenance of high cognitive performance and vigilance despite environmental stress and sleep disturbances.
4. *Immunology, Infection and Hematology* – Addressing immune system impairment and altered susceptibility to infection, increased allergic responsiveness, decreased blood volume, and post-flight anemia.
5. *Muscle Alterations and Atrophy* – Focusing on the loss of skeletal muscle mass, strength, and endurance that accompanies space flight.
6. *Neurobehavioral and Psychosocial Factors* – Investigating methods and tools that can be utilized to enable crews to cope with stress, isolation, and compatibility.
7. *Neurovestibular Adaptation* – Addressing the problems of space motion sickness and disorientation during flight and the post-flight problems of balance and gaze disorders.
8. *Nutrition, Physical Fitness, and Rehabilitation* – Developing methods to maintain health and fitness before, during, and after space flights.
9. *Smart Medical Systems* – Developing new methods of non-invasive medical monitoring, diagnosis, and therapy for use on space missions.

10. *Technology Development* – Developing instrumentation and other technological products that will enhance the research of the other teams and benefit people on Earth.

Applicants are requested to carefully review the NSBRI Policy on Team Leadership (Appendix B) prior to submitting an application.

II. Application Requirements

This is an open solicitation. The NSBRI is soliciting applications for team leadership positions on a competitive basis. **Applicants must prepare and submit in response to NRA 03-OBPR-04, as Principal Investigator, a proposal that achieves a merit score in the competitive range as a prerequisite for being considered for a Team Leadership position.** Current Team Leaders may reapply for the next term. All applications for Team Leadership positions will be considered new applications. A separate application process from NRA 03-OBPR-04, outlined in this Call for Candidates, will be used to select Team Leadership. **Do not make any reference to your interest in Team Leadership in your NSBRI research proposal application to NRA 03-OBPR-04.**

III. Application Procedures

Applications for Team Leadership positions must be submitted through NSBRI's Internet-based Electronic Proposal Submission System (EPSS).

A Notice of Intent to apply is not necessary for Team Leadership applications. To prepare the application for Team Leadership, go to the Web site <http://myportal.nsbri.org> and register to obtain a personal account on the system if you do not already have one. After entering contact information, applicants will receive a username and password for entry into EPSS. After this, the above Web address will serve as the entry point for application development and modification. All information entered will remain private until electronic submission is completed.

An application overview screen will guide applicants through the process of completing the required information. There are four main sections applicants will be required to complete prior to electronic submission. The four application questions are:

1. What is your motivation to apply for and commitment to serve in an NSBRI Team Leadership position?
2. What is your vision for the team for the next 5 years?
3. What previous scientific experience qualifies you for a Team Leadership position?
4. What previous management experience qualifies you for a Team Leadership position?

Each section has a character limit of 2,500 characters.

All investigators can allow an administrative support person to act on their behalf, to assist in the entry of application information; however, electronic submission can only be performed by the applicant.

Electronic applications must be submitted before 5:00 p.m. EST, Tuesday, July 15, 2003. After submission using EPSS, the applicant **must** sign and mail the printed application cover

page that is generated by the system to the following address within **one week** of the submission deadline:

NSBRI, *Attn: NSBRI CFC-03-01*
One Baylor Plaza, NA-425
Houston, TX 77030-3498
713-798-7412

Please direct any questions concerning this application procedure to the NSBRI by calling 713-798-7412, by faxing your questions to 713-798-7413, or by sending your inquiry to contact_us@www.nsbri.org. The technical requirements to operate EPSS are Internet Explorer 4.0+ or Netscape 4.03+ for Windows, Macintosh, or Unix. EPSS is best viewed using Internet Explorer 6.0.

IV. Evaluation

Only applications electronically submitted by EPSS will be evaluated. The four sections of the application will be reviewed using the criteria set forth in the NSBRI Policy on Team Leadership (Appendix B). Each section will carry equal weight in the evaluation process.

V. Selection Process

To be considered for an NSBRI Team Leadership position, the following criteria must be met:

1. An application for a Team Leadership position must be submitted using EPSS;
2. A separate research proposal in response to Appendix C of NRA 03-OBPR-04 must be submitted;
3. The research proposal must receive a peer review score that places it within the competitive range for scientific/technical merit; and
4. The research proposal must be clearly relevant to the NSBRI research team to which the applicant is applying.

For applications that meet these four criteria, the NSBRI External Advisory Council will carry out the following:

1. Consider the peer review panel comments on the scientific and technical merit of each qualifying proposal;
2. Consider the comments of the Board of Scientific Counselors concerning team relevancy;
3. Evaluate the merits of Team Leadership applicants using the Team Leadership criteria identified in this Call for Candidates Solicitation (Appendix B); and
4. Based on the aforementioned criteria 1-3, make recommendations to the NSBRI Director.

The NSBRI Director will then make nominations for Team Leadership positions, which require approval by the NSBRI Board of Directors. Selection of Team Leader projects will be made by the NSBRI Director in coordination with NASA.

Research proposals from unsuccessful Team Leadership applicants will be considered with the other proposals for potential selection for funding.

NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE
POLICY ON TEAM LEADERSHIP

I. Overview

Each Institute team is led by a single Team Leader who is assisted by an Associate Team Leader. Team Leaders play a pivotal role in guiding the Institute's research program and the ultimate success of the Institute. Their expertise and "hands-on" approach to research management add value across projects and across teams. The Team Leader is guided by the Critical Path Roadmap (CPR), which is the cornerstone for developing the team's integrated strategic research plan, the key to accomplishing the Institute's mission. The Team Leader's stature and reputation as a strong scientist encourages other scientists to apply to become team members. The Team Leader's communication skills and insight enable the appropriate synergistic discussions among the various research projects, with the objective of assuring a team research program that has higher value than the sum of the values of its separate projects.

II. Duties and Responsibilities

Team Leaders are responsible for:

- Preparing and periodically updating the team research strategic plan. This plan should be consistent with the Institute mission, the CPR, and available resources.
- Reporting progress to the Institute's External Advisory Council (EAC), Board of Scientific Counselors (BSC), and NSBRI management.
- Preparing and presenting the initial recommendation to the EAC of new research projects for inclusion in the team's program.
- Representing the team and disseminating knowledge about team activities and progress to NASA; specifically coordinating with NASA-JSC scientists and physicians, the scientific community, and the general public.
- Pursuing involvement with NASA operational activities.
- Maintaining appropriate communication links among the team investigators and to other team leaders.
- Developing, with team investigators, individual project plans that ensure scientific and operational synergy and lead to productive countermeasure development.
- Nurturing opportunities and seeking funding support to collaborate with, and cross-fertilize, research within and between NSBRI teams and with Johnson Space Center, other NASA Centers, and other agencies.
- Acting as the senior NSBRI discipline representative for ongoing development of the CPR.

Associate Team Leaders assist Team Leaders in carrying out the above activities.

III. Qualifications

Team Leaders are NSBRI-funded principal investigators who possess the following qualifications:

- Achieved intermediate or senior rank at a research or educational institution.
- Demonstrated record of securing independent competitive research funding for the last five years, at least.
- Recognized within the biomedical community as an outstanding research contributor to at least one field of study; prior involvement with a NASA flight investigation would be beneficial.
- Manifest broad scientific understanding across the team's research area.
- Demonstrated leadership and program/group management skills, as evidenced by experiences such as a section head, department chair, dean, research center director, or principal investigator on a program project.
- Exhibit good communication, public speaking, and organizational skills.
- Show a willingness and availability to spend the necessary time and energy to fulfill the role of Team Leader.

Associate Team Leaders are principal or co-investigators on NSBRI-funded projects who possess at least the first four of the above qualifications required for a Team Leader. Generally, Team Leaders and Associate Team Leaders are not from the same institution.

IV. Term of Service

Team Leaders are appointed by the Director for a term that is identical with the term of their NSBRI-funded research project (generally four years), subject to satisfactory performance as determined at their annual performance review. The Team Leader appoints an Associate Team Leader for a term that does not exceed the Team Leader's term of service. The Team Leader's term is competitively renewable.

V. Funding and Authority

Team Leaders and Associate Team Leaders are provided with discretionary funds to enable them to carry out their duties and responsibilities. Wide latitude is provided concerning the expenditure of these funds within the guidelines of the involved institutions. Such funds may be used for support personnel, team meetings, special travel, and other expenses generally associated with team communication and operations. However, these funds may not be used to support research.

Team Leaders are ultimately responsible for carrying out the duties and responsibilities listed in Section II. They are expected to work cooperatively with their Associate Team Leader in all matters and should develop a clear understanding of the distribution of their shared responsibilities. Team Leaders report to the Director.

VI. Selection

In the year before a Team Leader's term of service ends, a special "Call for Candidates" Announcement requesting applications for the Team Leader's position will be released in coordination with the annual Institute Research Announcement. Following the

evaluation of the research application by a peer committee, Institute Senior Management (Director and Associate Director) will evaluate, with EAC input, the merits of the applicants for Team Leader. The Director will recommend a selection to the Chairman of the Board who will seek confirmation of the selection from the Board of Directors.

Associate Team Leaders are nominated and selected by the Team Leader, with the advice and consent of the Director in consultation with the Associate Director.

In selection of Team Leaders and Associate Team Leaders, attempts will be made to balance the scientific and managerial expertise of candidates and to develop diversity within the Institute's research leadership.

VII. Training and Support

To assist Team Leaders in performing their duties, the NSBRI provides electronic reporting and managerial tools, along with training as needed. Forums are held at least three times a year for Team Leaders to meet as a group with the Director and Associate Director.

VIII. Performance Evaluation

Once a Team Leader is selected, five groups evaluate the performance and effectiveness of Team Leaders: the EAC, BSC, team principal investigators, NSBRI Senior Management, and NASA. Each group focuses on different aspects of a Team Leader's performance:

- Annually, the BSC will review each team's annual report of productivity and progress in carrying out the team strategy, including evidence that the research projects are functioning synergistically within the research team and evidence that the team is collaborating effectively with other teams and with NASA life scientists.
- Semi-annually, the EAC will review the effectiveness of the Team Leader in communicating the team vision and successes, and in discussing and handling team issues and problems.
- Annually, team principal investigators will evaluate the leadership, communication, and other relevant skills of their Team Leader.
- Annually, Institute Senior Management will evaluate the Team Leader's overall effectiveness and responsiveness.
- At least every four years, and more frequently if necessary, the four research area representatives on the EAC and BSC (two each) will review the team strategic plan and furnish a written critique of the strengths and weaknesses of the plan along with a rating of the overall team strategy embedded in the plan.
- Every five years, just prior to conducting an Institute-wide review, an *ad hoc* review team, appointed by NASA, will evaluate all aspects of the team's performance, including the Team Leader's performance.

Institute Senior Management will produce an annual overall rating of each Team Leader's performance based on the available inputs.

An unsatisfactory Team Leader rating will normally result in a specific warning to the

Team Leader and include a recommended action plan to correct the identified deficiencies in performance. Two unsatisfactory Team Leader ratings in successive years will result in removal of the Team Leader and appointment of an acting Team Leader to serve out the remainder of the Team Leader's term. The Institute supports the need for leadership continuity but only if the evaluative process supports an annual reappointment. Team Leaders are ultimately judged by their team's ability to successfully develop and deliver, in whole or part, countermeasures in areas of high impact for NASA, for the purpose of decreasing the biomedical or human performance risks associated with long-duration human space flight.

Associate Team Leaders are evaluated annually by Team Leaders for their contribution to team goals, achievements, function, productivity, and representation. Unsatisfactory performance may lead to removal of Associate Team Leaders, but such action requires the concurrence of the Director in consultation with the Associate Director.

IX. Conflict of Interest

Team and Associate Team Leaders must adhere to the highest ethical standards as they carry out their leadership duties. They must not make decisions based on institutional affiliation or personal bias. They must conduct all leadership duties with integrity, fairness, and objectivity to ensure the scientific credibility of the Institute.

To avoid a conflict of interest during a selection in which a Team Leader has a competing application, Institute Senior Management selects the Team Leader and project before any other projects are selected. Then the Team Leader develops and presents a selection recommendation concerning the other competing projects to the EAC. The EAC recommends the final selection to Institute Senior Management, taking into account the science merit rating and programmatic relevance rating furnished by the BSC in addition to the Team Leader recommendation. Institute Senior Management makes the final selection decisions following coordination with NASA. If the Team Leader does not have a competing application during a selection cycle, the process is similar but the Team Leader will have input in developing the selection recommendations to the EAC.