



Broad Agency Announcement

Seedling Week

BIOLOGICAL TECHNOLOGIES OFFICE

HR001124S0020

January 31, 2024

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 and 2 CFR § 200.203. Any resultant award negotiations will follow all pertinent law and regulation, and any negotiations and/or awards for procurement contracts will use procedures under FAR 15.4, Contract Pricing, as specified in the BAA.

Overview Information:

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Biological Technologies Office
- **Funding Opportunity Title** – Seedling Week
- **Announcement Type** – Initial Announcement
- **Funding Opportunity Number** – HR001124S0020
- **NAICS Code:** 541714
- **Assistance Listing Number:** Not applicable
- **Dates/Time - All Times are Eastern Time Zone (ET)**
 - Posting Date: January 31, 2024
 - Abstracts Due: February 14, 2024 at 4:00 p.m.
 - Notifications / Invitations for Proposal Submission and Presentation (PSP): no later than February 23, 2024 at 4:00 p.m.
 - Proposal Submission and Presentation Due Date: March 18, 2024 at 4:00 p.m.
 - Seedling Week (live Virtual Oral Presentations): week of March 25, 2024
- **Anticipated individual awards** - Multiple awards are anticipated (up to six awards)
- **Types of instruments that may be awarded** – Procurement contracts and Other Transaction agreements (Fixed-milestone).
- **Concise description of the funding opportunity:** The purpose of DARPA Seedling Week is to rapidly award seedling efforts by streamlining the acquisition process and making “on the spot” awards the same day as Oral Presentations to DARPA. Prior to the Oral Presentations, proposers will be required to submit a Proposal Submission and Presentation (PSP) package one week in advance. This rapid award model will allow DARPA to explore and fund promising new ideas that could possibly inform new “programs” and technology spaces in a historically short time frame.
- **Funding limitation:** DARPA will issue either a Procurement Contract or an Other Transaction agreement (Fixed-milestone) award instrument, with a total award value limited to a maximum of \$500,000 in Government funding per award. Other Transactions are subject to eligibility requirements and potential resource sharing. Any proposed resource share must be directly applicable to the effort. Any costs proposed beyond the \$500,000 in Government funding will be the responsibility of the performer.
- **Agency contact**
 - Points of Contact
The BAA Coordinator for this effort may be reached at:
HR001124S0020@darpa.mil
DARPA/BTO
ATTN: HR001124S0020
675 North Randolph Street
Arlington, VA 22203-2114

Section I: Funding Opportunity Description

BTO's mission is to develop capabilities that leverage the unique properties of biology - adaption, replication, resilience and complexity - to revolutionize how the United States defends the homeland and prepares and protects its Warfighters. Research in BTO creates biotechnological capabilities that provide tactical care and restore function to injured warfighters, increase operational resilience, develop novel functional materials, and detect and protect against threats to maintain force readiness. BTO is interested in submissions related to the following topic areas:

A. Biosecurity and Biosafety:

1. Developing new technologies and approaches that ensure biosafety and biosecurity of biological hardware and data, as well as the safety and security of artificial intelligence (AI) technologies that can accelerate the biological research and development process.

B. Human Performance:

1. Developing and leveraging technologies to advance continuous or near-continuous monitoring of physiology to elucidate mechanisms of human readiness and resilience.
2. Understanding and improving interfaces between the biological and physical world to enable seamless biohybrid systems and devices.
3. Address the need for a more capable fighting force in extreme environments through the clinical use of electrical impulses or targeted therapeutic technologies.

C. Materials, Sensors, Processing:

1. Designing novel materials, sensors, or processes that mimic or are inspired by biological systems.
2. Developing new computational and experimental tools and predictive capabilities for engineering of biological systems, such as cells, tissues, organs, organisms, and complex communities, to both develop new products and functional systems, as well as to gain new insights into underlying mechanisms.
3. Developing hybrid biological/engineered systems that integrate biological organisms, components, biologically-encoded circuitry, biogenic materials, or exploit biological phenomena to surpass capabilities of abiotic equivalents.

D. Biomedical and Biodefense:

1. Understanding causal relationships that underlie acute and chronic disease states to support warfighter health.
2. Developing novel diagnostic, prophylactic, and therapeutic approaches for warfighter injury that can be provided even in austere settings and extreme conditions.

Section II: Evaluation Criteria

A. Abstracts:

1. Individual abstracts will be evaluated against the evaluation criteria described below: If the proposer's abstract is deemed **selectable**, DARPA will issue an invitation to submit a Proposal Submission and Presentation (PSP) package. Details about notifications/invitations to submit the PSP can be found in [Section III](#). Abstract evaluation criteria are listed in ***descending order of importance***.

- a) **Technical Rationale and Approach:** The proposed idea is innovative and addresses one of the technical problems posed in [Section I](#), Funding Opportunity Description. Scientific understanding is accurate, and technical challenges are identified. The proposed idea is supported by clear calculations.
 - b) **Technical Ability:** The proposer has a demonstrated ability to rigorously explore the proposed idea.
 - c) **Level of Effort:** DARPA will evaluate the level of effort to ensure it is congruent with the Technical Rationale and Approach.
2. For the purposes of the abstract evaluation process, DARPA defines a “**selectable**” and “**non-selectable**” abstract as follows:
- a) **Selectable:** A selectable Abstract is one that the Government has evaluated against the evaluation criteria listed in the BAA, and the positive aspects outweigh the negative aspects.
 - b) **Non-Selectable:** An Abstract is considered non-selectable when the Government has evaluated it against the evaluation criteria listed in the BAA, and the positive aspects do not outweigh the negative aspects.

B. Proposal Submission and Presentation (PSP) Package:

1. Proposals will be evaluated using the following criteria listed in ***descending order of importance***: Overall Scientific and Technical Merit; Potential Contribution and Relevance to the DARPA Mission; and Cost Realism.
 - a) **Overall Scientific and Technical Merit:**

The proposed technical approach is innovative, feasible, achievable, and complete. The proposed technical team has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that a final outcome that achieves the goal can be expected as a result of award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

b) **Potential Contribution and Relevance to the DARPA Mission:**

The potential contributions of the proposed effort bolster the national security technology base and support DARPA's mission to make pivotal early technology investments that create or prevent technological surprise. The proposed intellectual property restrictions (if any) will not significantly impact the Government's ability to transition the technology.

c) **Cost Realism:**

The proposed costs are realistic for the technical and management approach and accurately reflect the technical goals and objectives of the solicitation. The proposed costs are consistent with the proposer's Statement of Work and reflect a sufficient understanding of the costs and level of effort needed to successfully accomplish the proposed technical approach. The costs for the prime proposer and proposed subawardees are substantiated by the details provided in the proposal (e.g., the type and number of labor hours proposed per task, the types and quantities of materials, equipment and fabrication costs, travel and any other applicable costs and the basis for the estimates). It is expected that the effort will leverage all available relevant prior research in order to obtain the maximum benefit from the available funding. For efforts with a likelihood of commercial application, appropriate direct cost sharing may be a positive factor in the evaluation. DARPA recognizes that undue emphasis on cost may motivate proposers to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA discourages such cost strategies.

2. **Note:** The submitted PSP package, to include the Oral Presentation, will be evaluated independent of the previously submitted Abstract which resulted in an invitation to submit a PSP.

3. For the purposes of the PSP package and Oral Presentation evaluation process, DARPA defines a "**selectable**" and "**non-selectable**" submission as follows:

a) **Selectable:** A selectable submission is one that the Government has evaluated against the evaluation criteria listed in the BAA, and the positive aspects outweigh the negative aspects.

b) **Non-Selectable:** A submission is considered non-selectable when the Government has evaluated it against the evaluation criteria listed in the BAA, and the positive aspects do not outweigh the negative aspects.

C. Abstract and PSP Package/Oral Presentation Review and Selection Process:

DARPA's policy is to ensure impartial, equitable, and comprehensive proposal evaluations based on the evaluation criteria listed above and to select the source (or sources) whose proposal meets the Government's technical, policy, and programmatic goals. DARPA will conduct a review of each conforming Abstract and PSP. All evaluations will be based solely on the evaluation criteria listed in this section. Using the evaluation criteria, the Government will evaluate each Abstract and PSP in its entirety, documenting the strengths and weaknesses relative to the evaluation criteria. Based on the identified strengths and weaknesses, DARPA will determine whether an Abstract or PSP is selectable. DARPA will

not evaluate Abstracts and PSPs against each other during the scientific review process, but rather evaluate the Abstracts and PSPs on their own merit to determine how well the submission meets the criteria stated in this BAA. DARPA will make an award to a proposer whose Abstract and PSP are determined to be selectable by the Government, consistent with instructions and evaluation criteria specified in the BAA, and based on availability of funding. Given the limited funding available, not all proposals considered selectable may be selected for a potential award.

- D. Unless otherwise specified in this announcement, for additional information on how DARPA reviews and evaluates proposals through the Scientific Review Process, please visit: [Proposer Instructions and General Terms and Conditions](#)

Section III: Submission Information

- A. This announcement allows for multiple award instrument types to be awarded to include [Procurement Contracts](#) and [Other Transactions \(Fixed-milestone\)](#). Some award instrument types have specific cost-sharing requirements. The following websites are incorporated by reference and contain additional information regarding overall proposer instructions, general terms and conditions, and each specific award instrument type.

1. **Proposer Instructions and General Terms and Conditions:** [Proposer Instructions and General Terms and Conditions](#)
2. **Procurement Contracts:** [Procurement Contracts](#)
3. **Other Transaction agreements:** [Other Transactions](#)

B. Abstract Submission Instructions:

1. This announcement contains a **required Abstract phase**. Proposers must use **Attachment A** as the template for abstract submission and **submit through the Broad Agency Announcement Tool (BAAT)** by **February 14, 2024 at 4:00 p.m.** as listed in the Overview Information Section. Proposers will be notified of any non-conforming determinations via electronic mail.
2. As soon as DARPA completes the evaluation of Abstracts, DARPA will notify Abstract submitters with one of the following:
 - a) Notice of non-selection (not invited to submit a PSP package).
 - b) Notice of an invitation to submit a PSP package.
3. DARPA may elect to invite all, some, or none of the Abstract submitters to submit a PSP package. Only Abstract submitters invited by DARPA to submit a PSP package are eligible to provide one.

C. Proposal Submission and Presentation (PSP) package:

1. General Information and Submission Guidelines:

- a) Do not include elaborate brochures; only include information relevant to the submission requirements or evaluation criteria.
- b) Use of a diagram(s) or figure(s) to depict the essence of the proposed solution is permitted.
- c) **Location (On-Site versus Virtual Attendance).** All Oral Presentations will be **virtual**. Rules for the Oral Presentation will be included in the invitation to participate.
- d) **Timing.** For planning purposes, seedling week will occur the week of March 25, 2024. In advance of the seedling week, the complete PSP package is due **March 18, 2024 at 4:00 p.m. ET.**

2. The following information is provided to ensure potential proposers know the anticipated **content and format of the PSP**. If the invitation to submit includes minimal deviations from this content and format, the invitation to submit will take precedence. A **notional** PSP package will consist of:

- a) **Oral Presentation:** Oral Presentations are limited to no more than **20** slides, including any back-up slides, in either a .pptx or .pdf format, and should be planned for **45** minutes total (to include **30** minutes for slide presentations and **15** minutes for questions and answers). The Oral Presentation should include the following information:
 - 1) **Proposed Concept/Idea:** A concise description of the idea and approach in support of the funding opportunity described in Section I.
 - 2) **Technical Overview:** This is the key section of the PSP. The overview should include a scientific analysis of the proposed idea, potential limits, and the research plan for the effort.
 - 3) **Proposer overview:** Provide information regarding the individual(s) dedicated to the program and how their past efforts and qualifications will contribute to achieving BTO Funding Opportunity goals. This must contain enough details to assess the capability of the proposer to accomplish the proposed work. Provide information on non-key personnel.
 - 4) **Cost:** Provide total labor cost, estimated materials, and Other Direct Costs (ODCs).
 - 5) **Milestones (when requesting Other Transaction agreements):** Include a slide for milestones from “Task Description Document” below. This slide must match word for word the Milestone Description table that will be submitted as part of the TDD and not a summary.

b) **Supplementary Documents** (not to be briefed during the Oral Presentation) include:

- 1) Attachment B* - Cost Proposal
- 2) Attachment C* - DARPA Standard Cost Proposal Spreadsheet
- 3) Attachment D* - Model Procurement Contract
- 4) Attachment E* - Model Other Transaction (OT) Fixed-milestone agreement which will include the Task Description Document (TDD) as well as the Milestone Schedule.
- 5) Attachment F* - Controlled Unclassified Information (CUI) Guide

3. PSPs **must be submitted through the Broad Agency Announcement Tool (BAAT) by March 18, 2024 at 4:00 p.m.** as stated in the Overview section. Complete PSPs will include the Oral Presentation slides as well as the listed Supplementary Documents as stated above. ***The attachments and instructions on completing the attachments will be provided in the invitation to submit the PSP package.** Please visit [Proposer Instructions and General Terms and Conditions](#) for specific information regarding submission through the Broad Agency Announcement Tool (BAAT).

D. Seedling Week (live Oral Presentations):

1. **Seedling Week will occur the week of March 25, 2024.** Upon receipt and review of your PSP package the week of March 18, 2024, proposers will be notified if their submission is **complete**. Proposers with complete PSP packages will be contacted to schedule a specific date and time for the week of March 25, 2024. Proposers will be scheduled for a morning oral presentation and a **tentative** afternoon block for award finalization, as described herein.
2. Proposers whose PSP packages are **incomplete** will not be scheduled for the Oral Presentation. Proposers will be notified and provided feedback regarding the missing elements. **Proposers will then have an opportunity to resubmit through the open office wide Biological Technologies Broad Agency Announcement should they desire.**
3. For proposers whose PSP packages are **complete** and have been scheduled for an Oral Presentation, after the morning presentation, DARPA will notify proposers through electronic mail that:
 - a) The proposal has been selected for funding, subject to negotiation and award acceptance;
or
 - b) The proposal has not been selected for funding.
4. For proposals selected for funding, it is DARPA's intention in the afternoon session to execute the "on the spot" awards. Proposers must have an authorized signatory available during this afternoon session.

5. For proposals not selected for funding, the tentative afternoon block will be cancelled. **Proposers have an opportunity to resubmit proposals that are not selected for award through the open office wide Biological Technologies Broad Agency Announcement.**
6. All proposers may request an informal feedback session by submitting a request to the BAA mailbox (HR001124S0020@darpa.mil).

Section IV: Special Considerations

- This announcement, stated attachments, and websites incorporated by reference constitute the entire solicitation. In the event of a discrepancy between the announcement, attachments, or websites, the announcement shall take precedence.
- All responsible sources capable of satisfying the Government's needs, including both U.S. and non U.S. sources, may submit a proposal that shall be considered by DARPA. Historically Black Colleges and Universities, Small Businesses, Small Disadvantaged Businesses and Minority Institutions are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities. Non-U.S. organizations and/or individuals may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances.
- **All proposal submissions must be at the unclassified level. No classified submissions will be accepted.**
- This program is subject to Attachment F: Controlled Unclassified Information (CUI) Guide. All individuals accessing CUI agree to protect CUI in accordance with *DoD Instruction 5200.48 CONTROLLED UNCLASSIFIED INFORMATION (CUI)* and *NIST Special Publication 800-171 Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations*.
- It is anticipated that there will be sufficient industry and academia participation in this BAA. If there are any Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and Government entities with specific expertise or core competencies related to the BTO funding opportunities, they may contact the Agency Point of Contact (POC) listed in the Overview section prior to the Abstract due date to discuss related opportunities.
- As of the date of publication of this solicitation, the Government expects that program goals as described herein may be met by proposed efforts for fundamental research and non-fundamental research. Some proposed research may present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Based on the anticipated type of proposer (e.g., university or

industry) and the nature of the solicited work, the Government expects that some awards will include restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program. For additional information on fundamental research, please visit [Proposer Instructions and General Terms and Conditions](#).

- Proposers should indicate in their proposal whether they believe the scope of the research included in their proposal is fundamental or not. While proposers should clearly explain the intended results of their research, the Government shall have sole discretion to determine whether the proposed research shall be considered fundamental and to select the award instrument type. Appropriate language will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This language can be found at [Proposer Instructions and General Terms and Conditions](#).
- For certain research projects, it may be possible that although the research to be performed by a potential awardee is non-fundamental research, its proposed subawardee's effort may be fundamental research. It is also possible that the research performed by a potential awardee is fundamental research while its proposed subawardee's effort may be non-fundamental research. In all cases, it is the potential awardee's responsibility to explain in its proposal which proposed efforts are fundamental research and why the proposed efforts should be considered fundamental research.
- Proposals could potentially include Human Subjects Research (HSR) and/or Animal Use. Proposers that anticipate involving human subjects or animals in the proposed research must comply with the approval procedures detailed at [Human Subjects and Animal Subjects Research](#), to include providing the information specified therein as required for proposal submission.
- DARPAConnect offers free resources to potential performers to help them navigate DARPA, including "Understanding DARPA Award Vehicles and Solicitations," "Making the Most of Proposers Days," and "Tips for DARPA Proposal Success." Join DARPAConnect at www.DARPAConnect.us to leverage on-demand learning and networking resources.
- DARPA has streamlined our Broad Agency Announcements and is interested in your feedback on this new format. Please send any comments to DARPA solicitations@darpa.mil