

Special Notice (SN) DARPA-SN-25-16: RBC-Factory Proposers Day

DATE: January 7, 2025

LOCATION: Webcast

REGISTRATION DEADLINE: **January 2, 2025, 4:00 p.m. Eastern Time** or until webinar capacity is reached, whichever comes first.

REGISTRATION WEBSITE: <https://events.sa-meetings.com/RBC-FPD/>

TECHNICAL POC: Dr. Christopher Bettinger, DARPA/BTO

Email: RBC-Factory@darpa.mil

The Biological Technologies Office (BTO) of the Defense Advanced Research Projects Agency (DARPA) is hosting a virtual Proposers Day for the potential proposer community in support of a planned Program Solicitation publication for Red Blood Cell Factory (RBC-Factory). Advance registration is required.

Publication of the solicitation is anticipated in December 2024.

Note: all times listed in this announcement, the agenda, and on the registration website are in Eastern Time.

The Proposers Day goals include:

1. Introduce the RBC-Factory program vision and goals to the research community;
2. Explain the mechanics of a DARPA program in general and the objectives and milestones of this program in particular; and
3. Encourage and promote teaming arrangements among organizations that have the relevant expertise, research facilities, and capabilities for executing research and development responsive to the RBC-Factory program goals.

The Proposers Day will include brief overview presentations by government personnel as well as an information session to respond to questions from participants. Potential performers can highlight their technical capabilities through “lightning” talks to help identify opportunities for and develop teaming relationships. There will be an opportunity to meet with the Program Manager, Dr. Christopher Bettinger, in virtual sidebars on January 8, 2025, from 10 a.m. – 5 p.m. These sidebars can be requested as individual/team sessions during the registration process. Sidebar meetings will not provide feedback on ideas but rather will cover whether a particular approach or concept is within scope.

Attendance at this event is not a requirement for submission of a proposal or selection for funding. Information relayed during the Proposers Day will be made available on the BTO section of the DARPA Opportunities page: <http://www.darpa.mil/work-with-us/opportunities>.

To maximize the pool of innovative proposal concepts, DARPA strongly encourages participation by non-traditional performers (e.g., small businesses, academic and research institutions, and first-time Government contractors).

RBC-Factory Program Overview:

DARPA is soliciting innovative proposals in support of the RBC-Factory program. RBC-Factory will create a medical device-based platform to accessorize human red blood cells (RBCs) with additional biologically active components (aka cargoes). Warfighters operate in environments that stress physiology in many ways. Red blood cells with cargoes will allow recipients to maintain performance in these environments. RBC-Factory will generate foundational knowledge and produce a prototype to explore the limits of integrating different cargoes into RBCs. Warfighters often enter these conditions with little or no physiological preparation or protection, thus reducing operational readiness. Increased preparedness prior to deployment and enduring protection while in theater is needed for service members to operate effectively in extreme environments. Modified red blood cells will allow recipients such as warfighters to operate more effectively in dangerous or extreme environments. Biologically active components ('cargoes') are defined herein as small molecules, peptides, proteins, pigments, colloids, and nanomaterials of either human-made or natural origin. RBC-Factory principally seeks novel approaches to modify RBC at scale with demonstrations that are substantiated by prototypes. **Approaches that seek to introduce new genetic material or modify existing genetic material are out of scope for RBC-Factory.**

Opportunities for Teaming:

This Special Notice and Proposers Day include two specific opportunities for prospective proposers to identify team members:

Interested attendees are invited to submit one (1) Adobe PDF slide (landscape) that summarizes their interests and capabilities (**Attachment 1**). These will be presented during "lightning talks" at Proposers Day. Submitted presentations consisting of multiple slides or a single slide with multiple layers will not be granted a time slot. Lightning talk submissions (no more than one per attendee) will be accepted on a first-come, first-served basis, until the maximum possible number of submissions (given time constraints) is reached. Interested attendees must identify their intention to submit the lightning talk during registration. To allow a greater number of institutions to share their information during Proposers Day, which will benefit all participants, lightning talks from the same institution should be consolidated into a single presentation that conveys the organization's interests and capabilities.

All presentations must be emailed to RBC-Factory@darpa.mil no later than 4:00 p.m. ET on January 3, 2025.

Interested parties are also invited to submit a one-page teaming profile describing technical competencies, unique facilities and other capabilities, as they relate to the program, and desired technical/other competencies sought from other potential team partners (**Attachment 2**). The one-page profile should include, at a minimum:

- Contact information (e.g., name, organization, email, phone number, mailing address, website);
- Brief description of the proposer's technical competencies and relevant facilities; and
- Desired technical competencies and facilities from other potential team members, if applicable.

Submitted teaming profiles will be distributed via email to all registered attendees, in an effort to assist with team development and formation. Submitted teaming profiles must be in MS Word or Adobe PDF format. No submissions longer than one (1) page will be accepted. Multiple teaming profiles from independent groups in the same institution are allowed.

All conforming teaming profiles must be emailed to RBC-Factory@darpa.mil **no later than 4:00 p.m. ET on January 3, 2025**. Profiles that do not use the provided template (see **Attachment 2**) and/or exceed the one-page limit will not be accepted. Information contained in teaming profiles shall be publicly releasable – profile submitters consent to distribution amongst event registrants.

After Proposers Day, the teaming profiles will be sent via e-mail to all registrants. Specific content, communications, networking, and team formation are the sole responsibility of participants. Neither DARPA nor the DoD endorses any participating organization, nor does DARPA or DoD exercise any responsibility for improper dissemination of the teaming profiles.

Registration Information:

PLEASE NOTE: Registration closes on January 2, 2025.

Participants must register in advance through the registration website. Registration is free but limited by the webinar capacity of 350 participants, respectively, so early registration is recommended. Interested parties are encouraged to coordinate attendance internally within their organizations prior to registration. In the unlikely occurrence that the registration limit is reached, the number of representatives per organization may be limited. Individuals unable to register because the deadline has occurred, or capacity has been reached will be added to a waitlist. If slots remain open after registration closes or become available due to cancellations, the slots will be filled on a first-come, first-served basis from the waitlist. An online registration form and various other meeting details can be found at the registration website: <https://events.sa-meetings.com/RBC-FPD/>

Potential proposing teams are not required to attend Proposers Day, although participation is strongly encouraged.

All administrative and technical questions should be directed to RBC-Factory@darpa.mil. Please refer to the RBC-Factory Special Notice number (DARPA-SN-25-16) in all correspondence. This announcement is not a request for proposals; any sent to the Special Notice email address will be disregarded.

All registrants for the meeting who are not U.S. Citizens must complete and submit one of the following:

All U.S. Permanent Residents and Foreign Nationals must submit a DARPA Form 60, **except** foreign government personnel who must submit only an Official Visit Request completed by their respective Embassy based in Washington, DC.

All forms must be submitted no later than **January 2, 2025, 4:00 p.m. ET**. Form 60 submission instructions are provided on the registration website and in the registration confirmation email.

Contact your Embassy staff for assistance in submitting the Official Visit Request.

DARPA hosts Proposers Days to promote teaming arrangements between researchers; provide potential performers with information on whether and how they might respond to the Government's research and development solicitations; and to increase efficiency in proposal preparation and evaluation. Therefore, Proposers Days are open only to registered potential proposers.

This SN is issued solely for information and potential new program planning purposes; the SN does not constitute a formal solicitation for proposals or proposal abstracts. Responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. Submission is voluntary and is not required to propose to subsequent Program Solicitations (if any) or research solicitations (if any) on this topic. DARPA will not provide reimbursement for costs incurred in responding to this SN. Respondents are advised that DARPA is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this SN.

NO CLASSIFIED INFORMATION SHOULD BE INCLUDED IN THE SN RESPONSE.