BROAD AGENCY ANNOUNCEMENT (BAA) W911QY-25-R-0023
SOURCES SOUGHT NOTICE

REQUEST FOR WHITE PAPERS
BAA TOPIC: Topic 13. Biotechnology,
"Controlling polymicrobial environments as a strategy for defeating harmful organisms while promoting the growth of beneficial organisms"

Introduction

Applications to the Fiscal Year 2026-2027 (FY26-27) "Biotechnology Topic Area" are being solicited by the U.S. Army Combat Capabilities Development Command (DEVCOM) Soldier Center (SC) Soldier Effectiveness Directorate (SED) Biological Science & Technology Branch.

Broad Agency Announcement (BAA) W911QY-25-R-0023 was publicized on SAM.gov on 03 March 2025. This Sources Sought Notice calls for White Paper submissions in reference to the research within the BAA **Topic 13. Biotechnology, "Controlling polymicrobial environments as a strategy for defeating harmful organisms while promoting the growth of beneficial organisms"** section. The BAA W911QY-25-R-0023, issued under the Federal Acquisition Regulation (FAR) provision 6.102(d)(2), provides for the competitive selection of proposals. Proposals submitted in response to this BAA and selected for award are considered the result of full and open competition and in full compliance with the provisions of Public Law 98-369, "The Competition in Contracting Act of 1984," and subsequent amendments. The type of research solicited under this BAA attempts to increase knowledge in science and/or to advance the state of the art as compared to practical application of knowledge. Funding of research and development (R&D) within DEVCOM-SC-SED areas of interest will be determined by funding constraints and priorities set during each budget cycle. Awards related to the submission of White Papers requested by this Notice are subject to funds availability and priorities. DEVCOM-SC-SED may choose not to select any new awards due to unavailability of funds or other factors.

The sequence of steps leading to award is:

(1) Request for White Paper initiated,

(2) All concept papers, proposals, and administrative inquiries should be submitted to:

U.S. Army Natick Soldier Systems Center
DEVCOM SC ATTN: FCDD-SCD-EXA
(Mr. Matthew Whipple or Ms. Jennifer Rourke)
General Greene Avenue
Natick, MA 01760-5020
TEL: (508) 206-3803 (Mr. Whipple) or (508) 206-3853 (Ms. Rourke)
Email: usarmy.natick.devcom-sc.mbx.osi-spod@army.mil

(3) Written or telephonic feedback provided to the Offeror regarding the White Paper's scientific merit and potential contributions to the Army mission as per established criteria presented in this

announcement,

(4) Request of a formal proposal(s) submission initiated by POC, if the White Paper merits a proposal request,

(5) Submission of a timely, formal proposal(s),

(6) Evaluation of the formal proposal from criteria noted in BAA solicitation W911QY-25-R-0023, and

(7) Contract or grant award for selected proposal(s) based on availability of funds or other factors.

This sequence allows earliest determination of the potential for funding and minimizes the labor and additional costs associated with submission of full proposals that have minimal probability of being selected for funding.

BAA W911QY-25-R-0023 allows several potential instrument types (e.g., contract, grant, cooperative agreement) to result from a successful proposal. For this Notice, the intention of the Government is to award a BAA contract.

Note that interested Offerors **must** submit a White Paper electronically to be eligible to submit a formal proposal under this Notice. This Notice requires that White Papers be submitted electronically no later than **31 August 2026, 5:00 P.M. Eastern Daylight Time (EDT)**. See Part V, Deadlines, for additional details.

THOSE SUBMITTING WHITE PAPERS/PROPOSALS ARE CAUTIONED THAT ONLY A GOVERNMENT CONTRACTING OR GRANTS OFFICER CAN OBLIGATE THE GOVERNMENT TO ANY AGREEMENT INVOLVING EXPENDITURE OF GOVERNMENT FUNDS.

This Sources Sought Notice for White Papers consists of five parts as follows:

- Background and Introduction
- Part I: Research Objectives
- Part II: Preparation, Submission, Evaluation Criteria, Review and Selection Process
- Part III: Feedback
- Part IV: Deadlines
- Part V: Inquiries

Technical POC(s):

Steven Arcidiacono (steven.m.arcidiacono.civ@army.mil)
Ids Pantoja Feliciano de Goodfellow (ida.g.pantojafeliciano.civ@army.mil)
15 General Greene Avenue
Natick, MA 01760-5020
TEL: (520) 714-3235 (Mr. Arcidiacono) or (520) 713-8083 (Dr. Pantoja Feliciano)

BACKGROUND AND INTRODUCTION

Urinary Tract Infections (UTIs) are a significant issue affecting female Warfighter performance and operational readiness in austere environments (deployed or training scenarios that lack shower and laundering facilities). Incident rates are >30%, with 12% having recurrent infections. Current mitigation strategies, including training to maintain good hygiene practices and sufficient hydration levels are insufficient for preventing UTIs. The current solution is for early detection and treatment with antibiotics. A proposed alternative preventative approach is to use hygiene wipes impregnated with bacteriophage (phage) that target UTI causing *E. coli*, the cause of 80% of cases. Unlike antibiotics that have wide spectrum activity, phage has targeted activity and will not harm beneficial organisms needed for good urogenital health.

Project seeks to design and test wipe formulation suitable for phage hygiene products, specifically wipes, that maintain activity under extreme thermal conditions. Once a formula is identified and passes all necessary testing, prototype wipe packages will be assembled for testing. Soldier Center has identified a phage cocktail having suitable activity and stability in lab-based solutions and is testing potential formulation components used for topical skin application for maintenance of titer and stability. Various components include phage storage buffer solutions, preservatives, potentiators, emollients, humectants and other additives utilized cosmetic products.

I. RESEARCH OBJECTIVES

DEVCOM Soldier Center (SC) is requesting design, development and testing a phage friendly formulation for prototype cosmetic phage hygiene wipes. Phage formulation properties will include maintenance of thermal stability and possess suitable properties for manufacture of prototype cosmetic products (Table 1). Components must not inhibit or otherwise reduce phage titer during storage, including at elevated temperature (45ºC) for 4 weeks.

Table 1. Formulation component information.

Inclusion Criteria	Exclusion Criteria
SM based solution with pH 7-7.5	Excluded preservatives: compounds requiring low pH (<7) to be effective
Phage compatible preservatives effective at pH 7-8	Preservatives, other components that reduce phage titer/activity, or don't maintain thermal stability
Divalent cations: Mg^{2+}, Ca^{2+}	
Phage titer: 1E8 PFU/ml	
Polyvinyl alcohol (up to 1%)	
Moisturizers (humectants/emollients)	

Tasks include:

Formula development & optimization

- Up to three (3) formulation iterations will be developed for evaluation.
- Iteration 1: SC will provide details of formulation components identified for consideration for assessment, including buffers, stabilizers, preservatives, other additives to maintain thermal stability for use in sprays (Table 2).

Iterations 2 and 3: Based on phage prototyping expertise, these iterations will be developed by swapping out certain ingredients and/or changing concentrations of iteration 1 components.

Table 2. Components for iteration 1 identified by SC as starting point for development and optimization. Examples of alternatives are included for potential consideration for formulation optimization and the concentrations typically used in cosmetic topical application products (not an all-inclusive list).

Component type	**Components SC tested**	**Concentration**	**Alternative examples (concentration)**
Phage buffer (SM)	NaCl	100 mM	
	Mg^{2+}: $MgSO_4$,	8 mM	$MgCl_2$ (20 mM to 100 mM) Ca^{2+}: $CaCl_2$ (1 to 10 mM)
	Tris-HCl, pH 7 to 7.5	$\leq$2%	Sodium phosphate buffer (10 mM to 50 mM)
Stabilizers	Polyvinyl alcohol (96, 10 kDa)	0.1% to 1%	
Preservatives	Phenoxyethanol	0.6% to 1%	
Preservative enhancer	Ethylhexylglycerin	0.3% to 1%	
Moisturizer (humectant/emollient)	Monopropylene glycol	0.5% to 5%	Caprylyl Glycol (0.5% to 2%)
			1,2 Hexanediol (0.5% to 3%)

Formulation Testing: Formulation components will be combined and assessed for: 1) thermal stability (3-cycle freeze/thaw testing and accelerated heat stability testing; 2) preservative challenge test; and 3) Human Repeated Insult Path Test (HRIPT).

- After thermal testing, formulas will be returned on ice to Soldier Center for phage titer determination.

Prototype production: Once formulation is finalized, prototype wipes will be made containing phage + formulation, and formulation only (no phage).

- Optimized formulation for phage that maintains thermal stability and suitable for prototype cosmetic sprays. Components include phage cocktail (≥1E8 PFU/ml), phage buffer (pH 7 to 7.5), stabilizer(s), preservative(s)/enhancer, moisturizer(s) (humectants/emollients).
- Number of units: 50 soft packs of 15 wipes per pack with phage in optimized formulation, 50 soft packs of 15 wipes containing formulation only. Prototypes to be delivered to SC overnight on ice.
- Wipes requirements
    - made of natural/cellulosic material compatible with phage viability
    - dimensions: 17 x 17 cm
- Packaging
    - packaged in phage friendly material.
    - multi-count (15 wipes/pack) resealable pouch
    - pouch dimensions: 9 x 14 cm

Regulatory process: Establish that the product meets Modernization of Cosmetic Regulation Act Compliance (MoCRA) specifications:

- Preservative Challenge Testing: ensures the product remains free from of bacterial, yeast and mold contamination during storage
- Ingredients Toxicity Study safety assessment determining toxicity of individual ingredients in the formula from published studies and assessment in safety in cosmetic products

II. PREPARATION, SUBMISSION, EVALUATION CRITERIA, REVIEW AND SELECTION PROCESS

Preparation & Submission:

The process of execution begins with White Paper evaluation and a down-selection process. From among the white papers submitted, the Government will notify the Offeror if their White Paper is selected and a full proposal formally request. The full proposals undergo a full scientific review and programmatic review prior to being funded.

The white paper should include a technical solution with a twelve (12) month base award and two (2) twelve (12) month option periods. The white paper must include the anticipated period of performance, a technical description of the proposed concepts, the technical objectives, and a planned approach to accomplish the stated objectives as well as a rough order of magnitude (ROM) cost per year. The ROM cost should consist of the total cost-plus profit/fee/overhead. It is anticipated that only one contract will be awarded for this effort.

Requests for offers of conference or symposium support, consultant services, engineering and/or marketing services, and/or training support will not be considered under this announcement. **Only concepts for research/exploratory development will be considered.** All concept papers, proposals and administrative inquiries should be submitted to U.S. Army Natick Soldier Systems Center, usarmy.natick.devcom-sc.mbx.osi-spod@army.mil

White Papers shall not exceed five (5) 8 ½ x 11-inch pages of computerized text at 12 pitch (including charts, graphs, photographs, etc.) and shall include the following:

(1) A brief technical explanation of the proposed effort that addresses the major research thrust, the research goals and deliverables, a proposed approach to achieve these goals and deliverables, and military relevancy.

(2) A brief management description outlining key personnel and experience.

(3) Any past performance the contractor has with similar research efforts.

(4) An estimated cost/price and performance schedule for the work.

Evaluation Criteria

White Papers will be evaluated by technical/scientific personnel who are knowledgeable within the particular topical area/specific interest area to determine if the paper presented is consistent with the intent of the BAA and of interest to the Government. White Papers will be evaluated using the following criteria:

a) Scientific/technical merit,
b) Management approach,
c) Importance to agency programs, and
d) Proposed cost/price

Based on these criteria, the highest rated concept papers will show considerable potential to develop into highly qualified proposals that could likely lead to an award. Concept papers will be evaluated by the Government within ninety (90) days of receipt.

Review and Selection Process:

Upon completion of White Paper evaluations, Offerors will be notified whether their White Paper was favorably received. Favorable review of a White Paper does not constitute selection of the proposed effort for contract award and will not establish a binding commitment for the Government to fund the effort in whole or in part. Upon notification, the Government will issue a request for proposal letter to the qualified Offeror(s), who best meets the program objectives. If proposals are solicited, proposals are due no later than thirty (30) days of the request for proposal letter. The requirements for proposal preparation and submission can be found at https://sam.gov/opp/e85e373d22ef47018b0336fc6a258002/view.

This announcement is an expression of interest only and does not commit the Government to reimburse any proposal preparation cost for responding. The cost of proposal preparation in response to this announcement is not considered an allowable expense to the normal bid and proposal indirect costs as specified in FAR 31.205-18, Independent Research and Development and Bid and Proposal Costs. Any request for White Paper or submission of a full proposal does not guarantee award. The Government reserves the right to cancel this requirement at any time and shall not be liable for any cost of proposal preparation or submission. This announcement constitutes the Government's solicitation for this effort. There will be no other solicitation issued in regard to this requirement. Offerors should be alert for any BAA amendments that may be published.

III. FEEDBACK

Written or telephonic feedback will be provided to the Offeror regarding the White Paper's scientific merit and potential contributions to the Army mission. If the Government decides to request a full proposal, a written request for proposal will be sent to the Offeror. The request may also include feedback intended to improve the proposal.

IV.DEADLINES

White Paper submissions, no more than five (5) pages in length, are encouraged to be submitted as early as possible but must be received, via email, to U.S. Army Natick Soldier Systems Center, usarmy.natick.devcom-sc.mbx.osi-spod@army.mil, no later than **31 August 2026, at 5:00 P.M. EDT**. No extensions will be granted. Only unclassified White Papers will be accepted. The White Papers will be reviewed to determine that the proposed effort is within the scope and interest of this solicitation. A proposal will only be solicited from White Papers deemed the best to meet program objectives.

V. INQUIRIES

Communication with the primary technical POCs Steven Arcidiacono, steven.m.arcidiacono.civ@army.mil and Robert Stote, robert.e.stote.civ@army.mil, is essential in tailoring responses to the specific needs of DEVCOM-SC-SED-BSTT. This preliminary communication is especially important because once the formal proposal is submitted as instructed in the specific Scientific and Technical Area of Interest listed in Section VI of the BAA, **no** further communication between the proposed contractor and the Government technical POC is allowed.