I. OVERVIEW OF THE FUNDING OPPORTUNITY

Broad Agency Announcement for Extramural Research (Program Specific) for the Department of Defense

Defense Health Program

Congressionally Directed Medical Research Programs

Joint Warfighter Medical Research Program

Military Medical Research and Development Award

Announcement Type: Initial

Funding Opportunity Number: HT9425-23-S-JWMRP-MMRDA

Assistance Listing Number: 12.420 Military Medical Research and Development

SUBMISSION AND REVIEW DATES AND TIMES

- **Pre-Application Submission Deadline:** 5:00 p.m. Eastern time (ET), June 15, 2023

- **Invitation to Submit an Application:** July 20, 2023

- **Application Submission Deadline:** 11:59 p.m. ET, September 7, 2023

- **End of Application Verification Period:** 5:00 p.m. ET, September 12, 2023

- **Peer Review:** November 2023

- **Programmatic Review:** January 2024

This Broad Agency Announcement must be read in conjunction with the General Submission Instructions, which are available for downloading from the Grants.gov funding opportunity announcement by selecting the "Package" tab, clicking "Preview," and then selecting "Download Instructions."

<h1 style="text-align:center">TABLE OF CONTENTS</h1>

II. DETAILED INFORMATION ABOUT THE FUNDING OPPORTUNITY

Application submission by extramural organizations through Grants.gov requires use of the Workspace interface, which separates the application package into individual forms. Applicants must create a Workspace in Grants.gov, complete the required forms, and submit their application Workspace package.

This funding opportunity announcement is a Broad Agency Announcement (BAA) through the Fiscal Year 2023 (FY23) Joint Warfighter Medical Research Program (JWMRP) for the Military Medical Research and Development Award (MMRDA). For the remainder of the announcement, this BAA will be referenced as MMRDA. Specific submission information and additional administrative requirements can be found in the document titled "General Submission Instructions," available in Grants.gov along with this BAA.

This BAA for JWMRP is intended to solicit extramural research and development ideas using the authority provided by United States Code, Title 10, Section 4001 (10 USC 4001). This BAA is issued under the provisions of the Competition in Contracting Act (CICA) of 1984 (Public Law 98-369), as implemented in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 and in Department of Defense Grant and Agreement Regulations (DoDGARs) 22.315. In accordance with FAR 35.016, projects funded under this BAA must be for *applied research* not related to the development of a specific system or hardware procurement. Research and development funded through this BAA is intended and expected to benefit and inform both military and civilian medical practice and knowledge.

This BAA is intended for extramural applicants only. **For definitions and additional information, see Section II.C.1, Eligible Applicants.** Intramural applicants applying through intramural organizations should use the parallel funding opportunity announcement that is available through the electronic Biomedical Research Application Portal (eBRAP) at https://eBRAP.org/ under funding opportunity number HT9425-23-JWMRP-MMRDA. The North American Industry Classification System code for contracts under this announcement is 541715 with a small business size standard of 1,000 employees.

II.A. Program Description

Applications to the FY23 JWMRP MMRDA are being solicited by the U.S. Army Medical Research Acquisition Activity (USAMRAA) using delegated authority provided by 10 USC 4001. The execution management agent for this BAA is the Congressionally Directed Medical Research Programs (CDMRP) at the U.S. Army Medical Research and Development Command (USAMRDC).

The JWMRP was initiated by Congress in 2012 to augment and accelerate high-priority Department of Defense (DOD) and Service medical requirements and to continue prior year initiatives that are close to achieving their objectives and yielding a benefit to military medicine. The ultimate goal of the program is to expedite the delivery of highly impactful medical solutions to Service Members and Military Health System (MHS) beneficiaries, thus, the Service

advanced product development communities are critical partners in executing the JWMRP. Appropriations for the JWMRP from FY12 through FY22 totaled $570 million (M). The FY23 appropriation is $25M.

Congressional direction stipulates that the funds from the JWMRP shall not be used for new projects or for basic research. To be eligible for JWMRP funding, applicants must have already received DOD core or DOD Congressional Special Interest prior year funding (including DOD Small Business Innovation Research [SBIR]/Small Business Technology Transfer [STTR] awards) for the same project proposed for continuation under this MMRDA. The funding shall be awarded at DOD discretion following a review of medical research and development gaps as well as unfinanced medical requirements of the Services. The projects funded through this appropriation are expected to benefit both civilian and military communities, with particular focus on initiatives that impact our forward deployed Forces and rehabilitation efforts for injured military.

The proposed research must be relevant to active-duty Service Members, Veterans, military beneficiaries, and/or the American public.

II.A.1. FY23 JWMRP Focus Areas

The JWMRP Programmatic Panel identified the following Focus Areas as the highest priorities for FY23 JWMRP funding to meet critical research and development gaps and Service medical requirements. **To be considered for funding, applications to the FY23 JWMRP must address at least one of the Focus Areas listed under the categories below**.

Endemic and Emerging Disease Threats

Note: **Malaria and COVID proposals are excluded from this solicitation;** *for this funding opportunity, the JWMRP is soliciting proposals in the late preclinical or early clinical stage of development, preferentially with initial preclinical efficacy and toxicity data.*

- Preventative and therapeutic measures for endemic and emerging infectious diseases

- Preventative and therapeutic measures for combat-associated wound infections in austere, prolonged field care, and large-scale combat environments

- Capabilities to support conducting real-time research during the response to an emerging infectious disease outbreak with a focus on (1) identification and characterization of emerging biothreats, and (2) development of pan-pathogen response tools to improve response and recovery times

Operational Medicine and Readiness

- Research aimed toward injury prevention, rapid return-to-duty capabilities, and rehabilitation solutions to maintain Service Member readiness (musculoskeletal and neurosensory)

- Portable neuromodulation devices that effectively treat behavioral health conditions, including sleep disorders, and alleviate their common comorbidities (e.g., insomnia, pain)

- Criteria and injury prediction models for ballistic/blast and/or accelerative events from loading regimes seen with current and likely future weapons systems, with the goal of informing the development of more effective personal protective equipment

- Innovative strategies and technologies that may include medical devices, pharmaceuticals, rehabilitation strategies, and regenerative medicine-based approaches, to prevent, assess, diagnose, treat, restore, maintain, and/or rehabilitate sensory system (vision, hearing, and balance) function due to combat-related sensory injuries

Environmental Medicine

- Countermeasures to prevent injury/illness and enhance Service Member performance in extreme cold (Arctic) conditions

- Solutions to enhance the provision of combat casualty care (including tactical combat casualty care, en route care, and damage control surgery) in extreme cold weather environments

Combat Casualty Care

- Modernized combat casualty care capabilities that can deliver life-saving care at the point of injury, enable prolonged casualty care, provide advanced resuscitative and damage control surgical care, and long-distance en route care consistent with the demands of an all-domain battlespace against a near-peer competitor:

  o Novel solutions for hemorrhage control and resuscitation, including devices for non-compressible torso hemorrhage, drugs that extend the physiologic resuscitation window during hemorrhagic shock, and next-generation blood products and blood substitutes

  o Novel wound solutions for combat wounds, including severe burn and complex wound management

  o Intelligent imaging technologies that provide increased diagnostic capability in the forward operating environment, particularly those that can identify life-threatening hemorrhage or traumatic brain injury or facilitate early return to duty for less severe injuries

  o Tools that enhance medical decision-making capabilities and reduce cognitive burden on medical providers and Warfighters (e.g., artificial intelligence-based clinical decision support, augmented reality systems, procedural telementoring capabilities)

  o Autonomous care and evacuation capabilities that augment the individual medic/ Warfighter or system to increase the capability and capacity for casualty response

  o Solutions that improve the combat casualty care system's ability to manage large numbers of casualties including improved triage, medical regulating, medical documentation, and evacuation capabilities

  o Prophylactic medical countermeasures for ionizing radiation/nuclear injury

- Validated training platforms for the acquisition and retention of knowledge, skills, and abilities aligned to wartime medical specialties of the operational force

II.A.2. Award Background

JWMRP awards were first offered in FY12. Since the inception of the JWMRP, a total of 179 individual projects have received funding.

II.B. Award Information

The MMRDA mechanism is **intended to fund the logical continuation of previously funded, prior year research or development efforts relevant to the above FY23 JWMRP Focus Areas** with the highest potential to augment and accelerate medical product development and health care solutions for military Service Members, Veterans, their families, other MHS beneficiaries, and/or the American public. The USAMRDC will implement this research program through the awarding of assistance agreements (grants and cooperative agreements), research contracts, or Other Transaction Agreements (OTAs). All invited applicants must submit full applications in accordance with the procedures outlined in this funding opportunity announcement. Collaboration with DOD organizations is encouraged when this alliance would contribute to the success of the research effort, and any funds designated for DOD laboratories or activities should be identified in the application through submission of a "Suggested Collaborating DOD Military Facility Budget Format," Attachment 15.

The MMRDA mechanism supports a wide range of research projects, spanning late-stage preclinical studies, late-state technology development efforts, technology demonstration, and translational research.

A **Clinical Research/Trial Option** is available to specifically support clinical research/ observational studies, all phases of clinical trials/interventional studies, and correlative studies in support of the development of promising pharmaceutical or biologic candidates, medical devices, and technologies. *Note:* Applications proposing research that constitutes clinical research or a clinical trial will be required to submit additional application materials under the application category designated for this type of research.

Research Involving Human Data, Human Anatomical Substances, Human Subjects, or Human Cadavers: All DOD-funded research involving new and ongoing research with human data, human anatomical substances, human subjects, or human cadavers must be reviewed and approved by the USAMRDC Office of Human and Animal Research Oversight (OHARO), Office of Human Research Oversight (OHRO), prior to research implementation. This administrative review requirement is in addition to the local Institutional Review Board (IRB) or Ethics Committee (EC) review. Local IRB/EC approval at the time of application submission is *not* required; however, local IRB/EC approval is necessary prior to OHRO review. Allow up to 3 months to complete the OHRO regulatory review and approval process following submission of *all required and complete* documents to the OHRO. Refer to the General Application Instructions, Appendix 1, and the OHARO web page https://mrdc.health.mil/index.cfm/ collaborate/research_protections/hrpo for additional information.

As of January 20, 2020, U.S. institutions engaged in non-exempt cooperative research *must* rely on a single IRB to review and approve the portion of the research conducted at domestic sites in accordance with Code of Federal Regulations, Title 45, Part 46.114(b) (45 CFR 46.114[b]). If the proposed, non-exempt research involves more than one U.S.-based institution, a written plan for single IRB review arrangements must be provided at the time of application submission or award negotiation. The lead institution responsible for developing the master protocol and master consent form should be identified and should be the single point of contact for regulatory submissions and requirements.

A clinical trial is defined as a research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include a placebo or another control) to evaluate the effects of the interventions on biomedical or behavioral health-related outcomes.

Studies that do not seek to measure safety, effectiveness, and/or efficacy outcome(s) of an intervention are not considered clinical trials.

Clinical research encompasses research with patient samples, data, and interaction with patients that may or may not be considered a clinical trial. *For the purposes of this funding opportunity, research that meets the definition of a clinical trial is distinct from clinical research.* Clinical research is observational in nature and includes: (1) Research that does not seek to evaluate the effects of interventions. Research conducted with human subjects (or on material of human origin such as data, tissues, specimens, and cognitive phenomena) for which an investigator (or colleague) directly interacts with human subjects but does not seek to assess the effects of an intervention, qualifies as clinical research. Patient-oriented research may include but is not limited to: (a) mechanisms of human disease, (b) diagnostic or detection studies (e.g., biomarker or imaging), (c) health disparity studies, and (d) development of new technologies.
(2) Epidemiologic and behavioral studies that do not seek to study the safety, effectiveness, and/or efficacy outcomes of an intervention. (3) Outcomes research and health services research that do not fit under the definition of clinical trial. Excluded from the definition of clinical research are in vitro studies that utilize human tissues that cannot be linked to a living individual.
Note: Studies that meet the requirements for exemption under §46.104(d)(4) of the Common Rule are not considered clinical research as defined by CDMRP. Exemption category 4 refers to secondary research for which consent is not required.

Submission Options: Applications must be submitted under one of the two following options. It is important to choose the option that is most appropriate for the proposed research and to submit all of the documents required for the option selected. Please contact the CDMRP Help Desk (at help@eBRAP.org or 301-682-5507) if there is any question as to which option should be selected.

- **Military Medical Research and Development Award (MMRDA)**, for applications proposing research that does *not* constitute clinical research or a clinical trial.

- **Military Medical Research and Development Award – Clinical Research/Trial Option (MMRDA–CRTO)**, for applications proposing research that constitute clinical research or a clinical trial

The anticipated total costs budgeted for the entire period of performance for an FY23 JWMRP MMRDA should not exceed $**2,300,000**, or **3,500,000** for the MMRDA–CRTO. Refer to Section II.D.6, Funding Restrictions, for detailed funding information.

Awards will be made no later than September 30, 2024. For additional information refer to Section II.F.1, Federal Award Notices.

The CDMRP expects to allot approximately $11.6M to fund approximately two MMRDA applications and two MMRDA–CRTO applications. Funding of applications received is contingent upon the availability of federal funds for this program as well as the number of applications received, the quality and merit of the applications as evaluated by scientific and programmatic review, and the requirements of the government. Funds to be obligated on any award resulting from this funding opportunity will be available for use for a limited time period based on the fiscal year of the funds. It is anticipated that awards made from this FY23 funding opportunity will be funded with FY23 funds, which will expire for use on September 30, 2029.

Applications received in response to both the FY23 JWMRP MMRDA BAA and intramural funding opportunity announcement will be evaluated and considered for funding together. No advantage is conferred by submitting an application via one funding opportunity versus the other. The government reserves the right to fund any combination of extramural and/or intramural applications.

The USAMRDC executes its extramural research program primarily through the awarding of contracts and assistance agreements (grants and cooperative agreements). The type of instrument used to reflect the business relationship between the organization and the government is at the discretion of the government, in accordance with the Federal Grant and Cooperative Agreement Act of 1977, as amended, 31 USC 6301-6308, which provides the legal criteria to select a procurement contract or an assistance agreement. The USAMRDC will also consider the use of Other Transactions (OTs) as a vehicle for award, in accordance with the conditions in 10 USC 4021 and 10 USC 4022.

An assistance agreement (grant or cooperative agreement) is appropriate when the federal government transfers a "thing of value" to a "state, local government," or "other recipient" to carry out a public purpose of support or stimulation authorized by a law of the United States, instead of acquiring property or service for the direct benefit and use of the U.S. government. An assistance agreement can take the form of a grant or cooperative agreement. If "no substantial involvement" on the part of the funding agency is anticipated, a *grant* award will be made (31 USC 6304). Conversely, if substantial involvement on the part of the funding agency is anticipated, a *cooperative agreement* will be made (31 USC 6305) and the award will identify the specific substantial involvement. Substantial involvement may include collaboration, participation, or intervention in the research to be performed under the award.

A contract is required when the principal purpose of the instrument is to acquire property or services for the direct benefit or use of the U.S. government.

An "Other Transaction" will also be considered as a vehicle for award under this BAA, in accordance with 10 USC 4021 and 10 USC 4022. The OT authorities were created to give DOD the flexibility necessary to adopt and incorporate business practices that reflect commercial industry standards and best practices into its award instruments. When leveraged appropriately, OTs provide the government with access to state-of-the-art technology solutions from traditional and non-traditional defense contractors (NDCs), through a multitude of potential teaming arrangements tailored to the particular project and the needs of the participants. OTs can help to foster new relationships and practices involving traditional and NDCs, especially those that may not be interested in entering into FAR-based contracts with the government; broaden the industrial base available to government; support dual-use projects; encourage flexible, quicker, and cheaper project design and execution; leverage commercial industry investment in technology development and partner with industry to ensure DOD requirements are incorporated into future technologies and products; and collaborate in innovative arrangements. OTs are ***not*** FAR-based procurement contracts, grants, cooperative agreements, or cooperative research and development agreements.

The award type, along with the start date, will be determined during the negotiation process.

Please see Appendix 2, Section E, of the General Submission Instructions for more information.

Use of DOD or Department of Veterans Affairs (VA) Resources: If the proposed research involves access to active-duty military and/or VA patient populations and/or DOD or VA resources or databases, the application must describe the access at the time of submission and include a plan for maintaining access as needed throughout the proposed research. Refer to Section II.D.2.b.ii, Full Application Submission Components, for detailed information. Refer to the General Submission Instructions, Appendix 1, for additional information.

Research Involving Animals: All DOD-funded research involving new and ongoing research with animals must be reviewed and approved by the USAMRDC OHARO Animal Care and Use Review Office (ACURO), in addition to the local Institutional Animal Care and Use Committee (IACUC) of record. IACUC approval at the time of submission is ***not*** required. ***Allow at least 3 to 4 months for ACURO regulatory review and approval processes for animal studies.*** Refer to the General Application Instructions, Appendix 1, for additional information.

II.C. Eligibility Information

II.C.1. Eligible Applicants

II.C.1.a. Organization: All organizations, including foreign organizations, foreign public entities, and international organizations, are eligible to apply.

Organizations eligible to apply include national, international, for-profit, non-profit, public, and private organizations. Refer to the General Submission Instructions, Appendix 3, for general eligibility information.

Note: In accordance with FAR 35.017, Federally Funded Research and Development Centers (FFRDCs) are not eligible to directly receive awards under this BAA. However, teaming

arrangements between FFRDCs and eligible organizations are allowed as long as they are permitted under the sponsoring agreement between the federal government and the specific FFRDC.

Government Agencies Within the United States: Local, state, and federal government agencies are eligible to the extent that applications do not overlap with their fully funded internal programs. Such agencies are required to explain how their applications do not overlap with their internal programs.

Applications for this BAA may only be submitted by extramural organizations. Applicants from an intramural organization should apply through eBRAP under funding opportunity number HT9425-23-JWMRP-MMRDA. These terms are defined below.

Extramural Organization: An eligible non-DOD organization. Examples of extramural organizations include academic institutions, biotechnology companies, foundations, federal government organization other than the DOD, and research institutes.

Intramural DOD Organization: A DOD laboratory, DOD military treatment facility, and/or DOD activity embedded within a civilian medical center. *Intramural Submission: Application submitted by a DOD organization for an intramural investigator working within a DOD laboratory or military treatment facility or in a DOD activity embedded within a civilian medical center.*

Submissions from intramural DOD organizations to this BAA will be withdrawn. Applications from intramural Principal Investigators (PIs) may be submitted extramurally through a research foundation. *It is permissible, however, for an intramural investigator to be named as a collaborator on an application submitted through an extramural organization. In this case, the application must include a letter from the collaborator's Commander or Commanding Officer at the intramural organization that authorizes the collaborator's involvement.* For more information, refer to the General Submission Instructions, Section III.

The USAMRAA makes awards to eligible organizations, not to individuals.

II.C.1.b. Principal Investigator

Independent investigators at all academic levels (or equivalent) are eligible to be named by the organization as the PI in the application.

There are no limitations on the number of applications for which an investigator may be named as a PI.

An eligible PI, regardless of ethnicity, nationality, or citizenship status, must be employed by, or affiliated with, an eligible organization.

The CDMRP encourages all PIs to participate in a digital identifier initiative through Open Researcher and Contributor ID, Inc. (ORCID). Registration for a unique ORCID identifier can be done online at https://orcid.org/.

II.C.2. Cost Sharing

Cost sharing/matching is not an eligibility requirement.

II.C.3. Other

Organizations must be able to access **.gov** and **.mil** websites in order to fulfill the financial and technical deliverable requirements of the award and submit invoices for payment.

Use of the System for Award Management (SAM): To protect the public interest, the federal government ensures the integrity of federal programs by striving to conduct business only with responsible organizations. The USAMRDC uses the "Exclusions" within the Performance Information functional area of the SAM and the "Responsibility and Qualifications" within the Entity Information functional area of the SAM to verify that an organization is eligible to receive federal awards. More information about SAM is available at https://sam.gov/SAM/. Refer to the General Submission Instructions, Appendix 3, for additional information.

Conflicts of Interest (COIs): All awards must be free of COIs that could bias the research results. Prior to award of a contract, applicants will be required to disclose all potential or actual COIs along with a plan to manage them. An award may not be made if it is determined by the USAMRAA Grants/Contracting/Agreements Officer that COIs cannot be adequately managed. Refer to the General Submission Instructions, Appendix 3, for additional information.

Review of Risk: The following areas may be reviewed in evaluating the risk posed by an applicant: financial stability; quality of management systems and operational controls; history of performance; reports and findings from audits; ability to effectively implement statutory, regulatory, or other requirements imposed on non-federal entities; degree of institutional support; integrity; adequacy of facilities; and conformance with safety and environmental.

For general information on required qualifications for award recipients, refer to the General Submission Instructions, Appendix 3.

Subcontracting Plan: If the resultant award is a contract that exceeds $750,000 and the offeror is other than a small business, the contractor will be required to submit a subcontracting plan for small business and small disadvantaged business concerns, in accordance with FAR 19.7, Defense Federal Acquisition Regulation Supplement (DFARS) 219.7. A mutually agreeable plan will be developed during the award negotiation process and incorporated as part of the resultant contract.

In addition to other information provided herein, by submitting an application and accepting an award, the organization is: (1) certifying that the applicants' credentials have been examined and (2) verifying that the applicants are qualified to conduct the proposed study and to use humans as research subjects, if proposed. Applicants include all individuals, regardless of ethnicity, nationality, or citizenship status, who are employed by, or affiliated with, an eligible organization.

Refer to Section II.H.1, Administrative Actions, for a list of administrative actions that may be taken if a pre-application or application does not meet the administrative, eligibility, or ethical requirements defined in this BAA.

II.D. Application and Submission Information

Submission of applications that are essentially identical or that propose research that is not a logical continuation of a previously funded research or development effort will result in administrative withdrawal of the application(s).

Inclusion of classified research data within the application and/or proposing research of which the anticipated outcomes may be classified or deemed sensitive to national security concerns may result in application withdrawal. Refer to the General Application Instructions Appendix 2, Section E.

II.D.1. eBRAP and Grants.gov

eBRAP (https://ebrap.org) is a secure web-based system that allows PIs to submit their pre-applications, view and verify extramural full applications submitted to Grants.gov (https://grants.gov), receive communications from the CDMRP, and submit documentation during award negotiations and throughout the period of performance. eBRAP also allows intramural organizations to submit full applications following pre-application submission.

Grants.gov is a federal system required to be utilized by agencies to receive and process extramural grant applications. Full applications may only be submitted to Grants.gov after submission of a pre-application through eBRAP.

Contact information for the eBRAP Help Desk and the Grants.gov Contact Center can be found in Section II.G, Federal Awarding Agency Contacts.

Extramural Submission:

- Pre-application content and forms must be accessed and submitted at eBRAP.org.

- Full application packages must be accessed and submitted at Grants.gov.

Intramural DOD Submission:

- Pre-application content and forms and full application packages for funding opportunity number **HT9425-23-JWMRP-MMRDA** must be accessed and submitted at eBRAP.org.

Note: Applications from an intramural DOD organization or from an extramural federal government organization may be submitted to Grants.gov through a research foundation.

II.D.2. Content and Form of the Application Submission

Submission is a two-step process requiring both ***pre-application*** (eBRAP.org) and ***full application*** (Grants.gov) as indicated below. The submission process should be started early to

avoid missing deadlines. There are no grace periods. Refer to Table 1, Full Application Guidelines for full application submission guidelines.

Pre-Application Submission: All pre-applications must be submitted through eBRAP (https://eBRAP.org/).

Full Application Submission: Full applications must be submitted through Grants.gov (https://www.grants.gov).

Submitting Extramural Organizations: Full applications from extramural organizations must be submitted through Grants.gov Workspace. Applications submitted by extramural organizations (e.g., research foundations) on behalf of intramural DOD or other federal organizations or investigators will be considered extramural submissions. Applications from extramural organizations, including non-DOD federal organizations, received through eBRAP will be withdrawn. See definitions in Section II.C.1, Eligible Applicants.

eBRAP allows an organization's representatives and PIs to view and modify the full application submissions associated with them. eBRAP will validate full application files against the specific BAA requirements, and discrepancies will be noted in an email to the PI and in the "Full Application Files" tab in eBRAP. It is the applicant's responsibility to review all application components for accuracy as well as ensure proper ordering as specified in this BAA.

The application title, eBRAP log number, and all information for the PI, Business Official(s), performing organization, and contracting organization must be consistent throughout the entire pre-application and full application submission process. Inconsistencies may delay application processing and limit or negate the ability to view, modify, and verify the application in eBRAP. If any changes need to be made, the applicant should contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507 prior to the application submission deadline.

II.D.2.a. Step 1: Pre-Application Submission Content

During the pre-application process, eBRAP assigns each submission a unique log number. This unique eBRAP log number is required during the full application submission process.

To begin the pre-application process, first select whether the submitting organization is extramural or intramural, then confirm your selection or cancel. ***Note: Applications for this BAA may only be submitted by extramural organizations.*** Submissions from intramural DOD organizations to this BAA will be withdrawn.

If an error has been made in the selection of extramural versus intramural and the pre-application submission deadline has passed, the PI or Business Official must contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507 to request a change in designation.

All pre-application components must be submitted by the PI through eBRAP (https://eBRAP.org/). Because the invitation to submit an application is based on the contents of the pre-application, investigators should not change the title or research objectives after the pre-application is submitted.

The applicant organization and associated PI identified in the pre-application should be the same as those intended for the subsequent application submission. If any changes are necessary after submission of the pre-application, the applicant must contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507.

A change in PI or organization after submission of the pre-application may be allowed after review of a submitted written appeal (contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507) and at the discretion of the USAMRAA Grants/Contracting/Agreements Officer.

PIs with an ORCID identifier should enter that information in the appropriate field in the "My Profile" tab in the "Account Information" section of eBRAP.

The pre-application consists of the following components, which are organized in eBRAP by separate tabs (refer to the General Submission Instructions, Section II.B, for additional information on pre-application submission):

- **Tab 1 –Application Information**

  Submission of application information includes assignment of primary and secondary research classification codes, which may be found at https://ebrap.org/eBRAP/public/Program.htm. Applicants are strongly encouraged to review and confirm the codes prior to making their selection.

- **Tab 2 –Application Contacts**

  Enter contact information for the PI. Enter the organization's Business Official responsible for sponsored program administration (the "person to be contacted on matters involving this application" in Block 5 of the Grants.gov SF424 Research & Related Form). The Business Official must be either selected from the eBRAP list or invited in order for the pre-application to be submitted.

  Select the performing organization (site at which the PI will perform the proposed work) and the contracting organization (organization submitting on behalf of the PI, which corresponds to Block 5 on the Grants.gov SF424 Research & Related Form), and click on "Add Organizations to this Pre-application." The organization(s) must be either selected from the eBRAP drop-down list or invited in order for the pre-application to be submitted.

  It is recommended that PIs identify an Alternate Submitter in the event that assistance with pre-application submission is needed.

- **Tab 3 – Collaborators and Key Personnel**

  Enter the name, organization, and role of all collaborators and key personnel associated with the application.

  FY23 JWMRP Programmatic Panel members should not be involved in any pre-application or application. For questions related to panel members and pre-applications or applications,

refer to [Section II.H.2.c, Withdrawal](#), or contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507.

- **Tab 4 – Conflicts of Interest**

  List all individuals other than collaborators and key personnel who may have a COI in the review of the application (including those with whom the PI has a personal or professional relationship).

- **Tab 5 – Required Pre-Application Files**

  Note: No figures, charts, graphs, or other additional material will be accepted during the pre-application process.

  Provide responses to the questions in the **FY23 JWMRP Pre-Application Template**. The template and the Clinical Trial and Technology/Knowledge Readiness Level Definitions are posted in eBRAP for applicants' use.

  The submitted completed FY23 JWMRP Pre-Application Template should not exceed five (5) pages. The maximum period of performance for applications submitted to the FY23 JWMRP is 3 years with a budget not to exceed $2,300,000 total costs for the MMRDA or $3,500,000 total costs for the MMRDA–CRTO.

  Pre-applications should be submitted under one of the following submission options in eBRAP:

  - *MMRDA – Military Medical Research and Development Award; or*

  - *MMRDA–CRTO – Military Medical Research and Development Award – Clinical Research/Trial Option*

  Note: Upload the completed FY23 JWMRP Pre-Application Template as an individual PDF file. eBRAP will not allow the file to be uploaded if the number of pages exceeds the limit specified above.

- **Tab 6 – Submit Pre-Application**

  This tab must be completed for the pre-application to be accepted and processed.

Pre-Application Screening

- **Pre-Application Screening Criteria**

  To determine the technical merits of the pre-application and the relevance to the mission of the Defense Health Program (DHP) and the JWMRP, pre-applications will be screened based on the following criteria:

- ○ Whether the pre-application describes the continuation of a prior year effort that is ongoing/active at the time of pre-application submission or that completed no more than 2 years prior to the pre-application submission deadline.

- ○ Whether the pre-application describes the continuation of a prior year effort that has already achieved a Technology Readiness Level (TRL)/Knowledge Readiness Level (KRL) of 5 or greater.

- ○ Whether the PI for the proposed follow-on effort is the same as the PI of the prior year effort described in the pre-application.

- ○ How well the pre-application describes a follow-on effort that is a logical continuation of a previously funded, prior year research or product development effort, while avoiding interdependency of aims.

- ○ How well the proposed research or development effort addresses one or more of the FY23 JWMRP Focus Areas.

- ○ Relative potential of the proposed effort to augment and/or accelerate clinical, technical, or materiel/knowledge product development with a clear benefit to military medicine

- ○ How well the pre-application adequately describes the products or deliverables expected from the proposed follow-on effort and any associated challenges.

- ○ How well the regulatory strategy, commercialization strategy, and the estimated TRL/KRL demonstrates the transition potential of the anticipated product/outcome.

- **Notification of Pre-Application Screening Results**

   Following the pre-application screening, PIs will be notified as to whether or not they are invited to submit applications; however, they will not receive feedback (e.g., a critique of strengths and weaknesses) on their pre-application. The estimated timeframe for notification of invitation to submit an application is indicated in Section I, Overview of the Funding Opportunity. Invitations to submit a full application are based on the Pre-Application Screening Criteria listed above.

II.D.2.b. Step 2: Full Application Submission Content

Applications will not be accepted unless notification of invitation has been received.

The CDMRP cannot make allowances/exceptions to its policies for submission problems encountered by the applicant organization using system-to-system interfaces with Grants.gov.

Each application submission must include the completed full application package for this BAA. The full application package is submitted by the Authorized Organizational Representative through Grants.gov (https://www.grants.gov/). See Table 1 below for more specific guidelines.

II.D.2.b.i. Full Application Guidelines

Extramural organizations must submit full applications through Grants.gov. Applicants must create a Grants.gov Workspace for submission, which allows the application components to be completed online and routed through the applicant organization for review prior to submission. Applicants may choose to download and save individual PDF forms rather than filling out webforms in Workspace. A compatible version of Adobe Reader **must** be used to view, complete, and submit an application package consisting of PDF forms. If more than one person is entering text into an application package, the *same version* of Adobe Reader software should be used by each person. Check the version number of the Adobe software on each user's computer to make sure the versions match. Using different versions of Adobe Reader may cause submission and/or save errors – even if each version is individually compatible with Grants.gov. Refer to the General Submission Instructions, Section III, and the "Apply For Grants" page of Grants.gov (https://www.grants.gov/web/grants/applicants/apply-for-grants.html) for further information about the Grants.gov Workspace submission process. Submissions of extramural applications through eBRAP may be withdrawn.

Do not password protect any files of the application package, including the Project Narrative.

Table 1. Full Application Submission Guidelines

Application Package Location
Download application package components for HT9425-23-S-JWMRP-MMRDA from Grants.gov (https://www.grants.gov) and create a Grants.gov Workspace. Workspace allows online completion of the application components and routing of the application package through the applicant organization for review prior to submission.
Full Application Package Components
SF424 Research & Related Application for Federal Assistance Form: Refer to the General Submission Instructions, Section III.A.1, for detailed information.
Descriptions of each required file can be found under Full Application Submission Components: • Attachments • Research & Related Personal Data • Research & Related Senior/Key Person Profile (Expanded) • Research & Related Budget • Project/Performance Site Location(s) Form • Research & Related Subaward Budget Attachment(s) Form
Application Package Submission
Create a Grants.gov Workspace. Add participants (investigators and Business Officials) to Workspace, complete all required forms, and check for errors before submission. **Submit a Grants.gov Workspace Package.**

An application may be submitted through Workspace by clicking the "Sign and Submit" button on the "Manage Workspace" page, under the "Forms" tab. Grants.gov recommends submission of the application package **at least 24-48 hours prior to the close date** to allow time to correct any potential technical issues that may disrupt the application submission.

Note: If either the Project Narrative or the budget fails eBRAP validation or if the Project Narrative or the budget needs to be modified, an updated Grants.gov application package must be submitted via Grants.gov as a "Changed/Corrected Application" with the previous Grants.gov Tracking ID *prior to* the application submission deadline. *Do not password protect any files of the application package, including the Project Narrative.*

Application Verification Period

The full application package submitted to Grants.gov may be viewed and modified in eBRAP until the end of the application verification period. During the application verification period, the full application package may be modified *with the exception of the Project Narrative and Research & Related Budget Form*.

Further Information

Tracking a Grants.gov Workspace Package.
After successfully submitting a Workspace package, a Grants.gov Tracking Number is automatically assigned to the package. The number will be listed on the "Confirmation" page that is generated after submission.

Refer to the General Submission Instructions, Section III, for further information regarding Grants.gov requirements.

The full application package must be submitted using the unique eBRAP log number to avoid delays in application processing.

II.D.2.b.ii. Full Application Submission Components

- **SF424 Research & Related Application for Federal Assistance Form:** Refer to the General Submission Instructions, Section III.A.1, for detailed information.

- **Attachments:**

  Each attachment to the full application components must be uploaded as an individual file in the format specified and in accordance with the formatting guidelines listed in the General Submission Instructions, Appendix 4.

  For all attachments, ensure that the file names are consistent with the guidance. Attachments will be rejected if the file names are longer than 50 characters or have incorrect file names that contain characters other than the following: A-Z, a-z, 0-9, underscore, hyphen, space, and period. In addition, there are file size limits that may apply in some circumstances. Individual attachments may not exceed 20 megabytes (MB), and the file size for the entire full application package may not exceed 200 MB.

○ **Attachment 1: Project Narrative (20-page limit): Upload as "ProjectNarrative.pdf".** The page limit of the Project Narrative applies to text and non-text elements (e.g., figures, tables, graphs, photographs, diagrams, chemical structures, drawings) used to describe the project. Inclusion of URLs (uniform resource locators) that provide additional information to expand the Project Narrative and could confer an unfair competitive advantage is prohibited and may result in administrative withdrawal of the application.

Describe the proposed project in detail using the outline below.

Background/Rationale:

– Describe the previously funded research or product development effort identified in the notification of invitation, including a description of the accomplishments and outcomes from that award. Explain how this proposed effort is a logical continuation of the previous research or product development effort.

– Explain how the research has the potential to augment and/or accelerate medical product development in at least one of the FY23 JWMRP Focus Areas.

– Present the scientific rationale behind the proposed research or product development effort, including relevant literature citations, preliminary data, and/or preclinical data that led to the development of the proposed research, to support feasibility. Any preliminary data provided should be from the laboratory of the PI or member(s) of the collaborating team.

– Describe previous experience among members of the project team most pertinent to the proposed research.

– Clearly demonstrate that there is sufficient scientific evidence to support moving into the proposed stage of research.

– As applicable to the proposed research, provide a summary of relevant studies, clinical studies or clinical trials, and distinguish how the proposed study differs from other relevant or recently completed research or clinical trials. If applicable, include a discussion of any current clinical use of the intervention under investigation and/or details of its study in clinical trials for other indications.

– **Hypotheses/Objectives:** State the hypotheses to be tested and/or the objective(s) to be reached.

– **Specific Aims:** Concisely explain the project's specific aims. These aims should agree with the primary aims and associated tasks described in the Statement of Work (SOW). If this application is part of a larger study, present only tasks that this award would fund. Avoid interdependency of specific aims when possible (i.e., dependency on successful outcomes of other ongoing related research efforts).

- **Research Strategy and Feasibility:**

  - Describe the experimental design, methods, and analyses, including appropriate controls, choice of animal model (if applicable), and the endpoints/outcome measures to be used, in sufficient detail for evaluation of feasibility and effectiveness in supporting completion of the project aims.

  - Applications that include research on animal models are also required to submit Attachment 7, Animal Research Plan.

  - Applications that include human subjects, human biological samples, or correlated data are also required to submit Attachment 9, Human Subjects/Sample Acquisition and Safety Procedures.

  - Describe potential problem areas and discuss alternative methods/approaches that may be employed to overcome them, including interdependency of aims (i.e., dependency on successful outcomes of other ongoing related research efforts).

  For applications submitted under the Clinical Research/Trials Option:

  - Provide detailed plans for initiating and conducting the clinical trial during the course of this award. Describe the type of clinical trial to be performed (e.g., treatment, prevention, diagnostic), the phase of trial and/or class of device (as appropriate), and the study model (e.g., single group, parallel, crossover).

  - Identify and describe the hypothesis/intervention to be studied and the projected outcomes.

  - Define the study variables and how they will be measured. Include a description of appropriate controls and the endpoints to be tested.

  - Provide a brief description of the study population, criteria for inclusion/exclusion, and the methods that will be used for recruitment/accrual of human subjects, samples, and/or correlated data.

  - Describe measures that will be taken to reduce bias, such as blinding of subjects, clinicians, data analysts, and/or others during the study.

  - Discuss risk/benefit considerations, including a clear and detailed description of potential ethical issues raised by the proposed study, and a detailed plan for how the ethical issues will be addressed.

  - Document the availability and accessibility of the drug/compound, device, or other materials needed for the duration of the proposed study and describe how quality control will be addressed.

  - Describe the potential for subject loss to follow-up, and how such loss will be handled/mitigated.

– **Data and Statistical Analysis Plan:**

  ▪ Describe how data will be collected and analyzed in a manner that is consistent with the study objectives. If applicable, include a complete power analysis to demonstrate that the sample size is appropriate to meet the objectives of the study. Specify the approximate number of human subjects/samples that will be accrued, if applicable. If multiple study sites are involved for human subject recruitment, state the approximate number to be enrolled at each site.

  ▪ Describe how data will be reported and how it will be assured that the documentation will support a regulatory filing with the U.S. Food and Drug Administration (FDA), if applicable.

– **Study Personnel:** Identify the key members of the study team and describe their roles on the project, including sufficient clinical and/or statistical expertise. For studies involving human subjects, an independent research monitor (external to the study), study coordinator(s), and statistician should be included as applicable.

○ **Attachment 2: Supporting Documentation: Combine and upload as a single file named "Support.pdf".** Start each document on a new page. If documents are scanned to PDF, the lowest resolution (100 to 150 dpi) should be used. The Supporting Documentation attachment should not include additional information such as figures, tables, graphs, photographs, diagrams, chemical structures, or drawings. These items should be included in the Project Narrative.

There are no page limits for any of these components unless otherwise noted. Include only those components described below; inclusion of items not requested or viewed as an extension of the Project Narrative will result in the removal of those items or may result in administrative withdrawal of the application.

– **References Cited:** List the references cited (including URLs, if available) in the Project Narrative using a standard reference format that includes the full citation (i.e., author[s], year published, title of reference, source of reference, volume, chapter, page numbers, and publisher, as appropriate).

– **List of Abbreviations, Acronyms, and Symbols:** Provide a list of abbreviations, acronyms, and symbols.

– **Facilities, Existing Equipment, and Other Resources:** Describe the facilities and equipment available for performance of the proposed project and any additional facilities or equipment proposed for acquisition at no cost to the award. Indicate whether or not government-furnished facilities or equipment are proposed for use. If so, reference should be made to the original or present government award under which the facilities or equipment items are now accountable. There is no form for this information.

– **Publications and/or Patents:** Include a list of relevant publication URLs and/or patent abstracts. If articles are not publicly available, then copies of up to five

published manuscripts may be included in Attachment 2. Extra items will not be reviewed.

– **Letters of Organizational Support:** Provide a letter (or letters, if applicable) signed by the Department Chair or appropriate organization official, confirming the laboratory space, equipment, and other resources available for the project. Letters of support not requested in the BAA, such as those from members of Congress, do not impact application review or funding decisions.

– **Letters of Collaboration (if applicable):** Provide a signed letter from each collaborating individual or organization that will demonstrate that the PI has the support or resources necessary for the proposed work. If an investigator at an intramural organization is named as a collaborator on an application submitted through an extramural organization, the application must include a letter from the collaborator's Commander or Commanding Officer at the intramural organization that authorizes the collaborator's involvement.

– **Intellectual Property:** Information can be found in 2 CFR 200.315, "Intangible Property."

  ▪ **Background and Proprietary Information**: Provide a list of all background intellectual property to be used in the project or provide a statement that none will be used.

  ▪ **Intellectual and Material Property Plan (if applicable):** Provide a plan for resolving intellectual and material property issues among participating organizations.

– **Data and Research Resources Sharing Plan:** Describe how data and resources generated during the performance of the project will be shared with the research community. Refer to the General Submission Instructions, Appendix 2, Section L, for more information about the CDMRP expectations for making data and research resources publicly available.

– **Traumatic Brain Injury (TBI) Data Reporting (if applicable):** For projects involving TBI, PIs may be required to report data to the Federal Interagency Traumatic Brain Injury Research (FITBIR) informatics system (https://fitbir.nih.gov/). While there is no direct charge to users of the FITBIR informatics system, a project estimation tool (https://fitbir.nih.gov/jsp/contribute/fitbir-costs.jsp) is available to help estimate costs and manpower needs that may be associated with data submission.

– **Quad Chart:** Provide a Quad Chart for the proposed project. The format for the quad chart is available on the eBRAP "Funding Opportunities & Forms" web page at (https://ebrap.org/eBRAP/public/Program.htm).

– **Use of DOD Resources (if applicable):** Provide a letter of support signed by the lowest-ranking person with approval authority confirming access to active-duty military populations and/or DOD resources or databases.

– **Use of VA Resources (if applicable):** Provide a letter of support from the VA Facility Director(s) or individual designated by the VA Facility Director(s), such as the Associate Chief of Staff for Research and Development (ACOS/R&D) or Clinical Service Chief, confirming access to VA patients, resources, and/or VA research space. For VA PIs, if the VA non-profit corporation is not identified as the applicant institution for administering the funds, include a letter from the VA ACOS/R&D confirming this arrangement and identifying the institution that will administer the funds associated with the proposed research.

○ **Attachment 3: Abstracts (one-page limit each): Upload as "Abstracts.pdf".**

Technical Abstract (one-page limit): The technical abstract is used by all reviewers. Abstracts of all funded research projects will be posted publicly. ***Do not include proprietary or confidential information.*** Use only characters available on a standard QWERTY keyboard. Spell out all Greek letters, other non-English letters, and symbols. Graphics are not allowed.

Technical abstracts should be written using the outline below. The technical abstract should provide an appropriate description of the project's key aspects; therefore, clarity and completeness within the space limits of the technical abstract are highly important.

– **Background:** State how the proposed research addresses at least one of the [FY23 JWMRP Focus Areas](). Present the scientific rationale behind the proposed work. Include the current TRL/KRL of the product or knowledge outcome (must be 5 or greater), and the estimated target TRL/KRL upon completion of the proposed research.

– **Hypothesis/Objective:** State the hypothesis to be tested or the objective to be reached.

– **Specific Aims:** State the specific aims of the study.

– **Study Design:** Briefly describe the study design including appropriate controls.

– **Impact:** Highlight the likely contributions of the initiative to augment and/or accelerate a product development effort. Briefly explain how the proposed project will have an immediate or potential long-term benefit that may lead to a major impact on the health and well-being of Service Members, Veterans, their families, and/or the American public.

Lay Abstract (one-page limit): The lay abstract is used by all reviewers. Abstracts of all funded research projects will be posted publicly. ***Do not include proprietary or confidential information***. ***Do not duplicate the technical abstract***. Use only characters

available on a standard QWERTY keyboard. Spell out all Greek letters, other non-English letters, and symbols. Graphics are not allowed.

Lay abstracts should be written using the outline below. Minimize use of acronyms and abbreviations, where appropriate.

– Describe the rationale, scientific objective, and aims for the proposed project in a manner that will be readily understood by readers without a background in science or medicine.

– State the FY23 JWMRP Focus Area(s) that the project addresses.

– What are the military benefits of the proposed project and the potential impact on the health and welfare of military Service Members, Veterans, their families, and/or the American public?

– Describe the ultimate applicability of the research.

▪ What types of patients will it help, and how will it help them?

▪ What are the potential clinical applications, benefits, and risks?

▪ What is the projected time it may take to achieve a patient-related outcome?

▪ If the research will not result in immediate clinical applicability, describe the interim outcomes.

– What are the likely contributions of the study to augment and/or accelerate a product development effort?

○ **Attachment 4: Statement of Work (six-page limit): Upload as "SOW.pdf".** The suggested SOW format and examples specific to different types of research projects are available on the eBRAP "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm). Recommended strategies for assembling the SOW can be found at https://ebrap.org/eBRAP/public/Program.htm.

Refer to the **"*Suggested SOW Strategy Generic Research*"** document for the MMRDA mechanism or the "*Suggested SOW Strategy Clinical Research*" for the MMRDA–CRTO mechanism. The SOW must be in PDF format prior to attaching.

○ **Attachment 5: Impact Statement (two-page limit): Upload as "Impact.pdf".** Explain why the proposed research or product development effort is important and relevant to the role of the JWMRP in addressing high-priority DOD medical requirements and capability gaps and accelerating the development of products that will impact the Warfighter within the context of the FY23 JWMRP Focus Area(s) being addressed.

– *Describe the potential impact on civilian and military populations:* Provide information about the incidence and/or prevalence of the disease or condition in the

general population, as well as in military Service Members, Veterans, and/or their beneficiaries. Explain how the knowledge, technologies, or products gained from the research could be implemented in a dual-use capacity to benefit the civilian population and address the health care needs of military Service Members, Veterans, and/or their beneficiaries, as appropriate. Describe how the research will result in faster and/or better delivery of health care solutions for the Warfighter.

– *Describe the short-term impact:* Detail the anticipated short-term outcome(s)/ product(s) (knowledge and/or materiel) that will be directly attributed to the results of the proposed research or product development effort and describe how they will impact the relevant populations. Describe how the study will augment and/or accelerate product development, as applicable.

– *Describe the long-term impact:* Explain the anticipated long-term gains from this research and describe how they may impact the health and readiness of Warfighters. Compare to the information known/products currently available, as applicable.

○ **Attachment 6: Transition Plan (three-page limit): Upload as "Transition.pdf".** Describe/discuss the methods and strategies proposed to move the product/knowledge/ intervention to the next phase of development (clinical trials, commercialization, and/or delivery to the civilian or military market) after successful completion of the award. Demonstrate how the proposed product or knowledge outcome is currently at a minimum TRL or KRL of 5, and estimate the target TRL/KRL upon completion of the proposed research ([Appendix II](#)). Applicants are encouraged to work with their organization's Technology Transfer Office (or equivalent) to develop the transition plan. PIs are encouraged to explore developing relationships with industry and/or other funding agencies to facilitate moving the product into the next phase of development. The plan for post-award transition of the anticipated research outcomes should include the components listed below, as appropriate and applicable to the research proposed.

– Details of the funding strategy to transition to the next level of development and/or commercialization (e.g., specific industry partners, specific funding opportunities to be applied for). Include a description of collaborations and other resources that will be used to provide continuity of development.

– For knowledge products, a description of collaborations and other resources that will be used to provide continuity of development, including proposed development or modification of clinical practice guidelines (CPGs) and recommendations, provider training materials, patient brochures, and other clinical support tools, scientific journal publications, models, simulations, and applications. (A "knowledge product" is a non-materiel product that addresses an identified need, topic area, or capability gap, is based on current evidence and research, aims to transition into medical practice, training, tools, or to support materiel solutions [systems to develop, acquire, provide, and sustain medical solutions and capabilities], and educates or impacts behavior throughout the continuum of care, including primary prevention of negative outcomes.)

– A brief schedule and milestones for transitioning the anticipated research outcomes to the next phase of development (i.e., next-phase clinical trials, commercialization/transition to industry, delivery to the military or civilian market, incorporation into clinical practice, and/or approval by a Regulatory Agency).

– Ownership rights/access to the intellectual property necessary for the development and/or commercialization of products or technologies supported with this award and the government's ability to access such products or technologies in the future.

– If prior federally funded SBIR/STTR data supports the proposed follow-on development effort, describe the connection between the prior SBIR/STTR and the current project and explain all active SBIR/STTR data rights.

– If applicable, state and identify the proprietary information that will be provided to the government and indicate whether the applicant will require a waiver of the federal purpose license.

– If applicable, a risk analysis for cost, schedule, manufacturability, and sustainability.

○ **Attachment 7: Animal Research Plan (if applicable; three-page limit): Upload as "AnimalResPlan.pdf".** If the proposed study involves animals, the applicant is required to submit a summary describing the animal research that will be conducted. ***Proposed studies should not rely on samples, reagents, or tools that are contingent upon completion of other ongoing efforts outside the scope of this proposal.*** Applicants should not submit a verbatim replica of the protocol(s) to be submitted to the IACUC as the Animal Research Plan. In accordance with the ARRIVE 2.0 (*Animal Research: Reporting In Vivo Experiments*) guidelines (https://arriveguidelines.org/arrive-guidelines), the Animal Research Plan should address the following points for each proposed animal study:

– Briefly describe the research objective(s) of the animal study. Explain how and why the animal species, strain, and model(s) being used can address the scientific objectives and, where appropriate, the study's relevance to human biology.

– Summarize the procedures to be conducted. Describe how the study will be controlled.

– Describe the randomization and blinding procedures for the study and other measures to be taken to minimize the effects of subjective bias during animal treatment and assessment of results. If randomization and/or blinding will not be utilized, provide justification.

– Provide a sample size estimate for each study arm and the method by which it was derived, including power analysis calculations.

– Describe how data will be handled, including rules for stopping data collection, criteria for inclusion and exclusion of data, how outliers will be defined and handled, statistical methods for data analysis, and identification of the primary endpoints(s).

- Describe how data will be reported and how it will be assured that the documentation will support a regulatory filing with the FDA, if applicable.

○ **Attachment 8: Intervention (if applicable;** *required for clinical trial applications submitted under the Clinical Research/Trials Option*) **(no page limit): Upload as "Intervention.pdf".** The Intervention attachment should include the components listed below.

- **Description of the Intervention:** Identify the intervention to be tested and describe the particular outcomes. Describe how the intervention addresses the clinical needs and how it compares with currently available interventions and/or standards of care. As applicable, the description of the intervention should include the following components: complete name and composition, storage and handling information, source, dose, schedule, administration route, washout period, duration of the intervention, and concomitant medications allowed. Description of devices should include general concept of design, detailed operational instructions, any potential risks to users, and intended benefits. Other types of interventions should be fully described. Indicate who holds the intellectual property rights to the intervention, if applicable, and how the PI has obtained access to those rights for conduct of the clinical trial.

  Summarize key preclinical pharmacological findings, dosage studies, and other clinical studies (if applicable) that examine the safety and stability (as appropriate) of the intervention. Describe measures to ensure consistency of dosing (e.g., active ingredients for nutritional supplements, rehabilitation interventions).

- **Study Procedures:** Describe the interaction with the human subject, including the study intervention that he/she will experience. Provide sufficient detail in chronological order for a person uninvolved in the study to understand what the human subject will experience. Provide a schedule (e.g., flowchart or diagram) of study evaluations and follow-up procedures. Clearly delineate research procedures from routine clinical procedures. Discuss how compliance with current Good Laboratory Practice (GLP) guidelines, Good Manufacturing Practice (GMP), and other regulatory considerations will be established, monitored, and maintained, as applicable.

- **Clinical Monitoring Plan:** Describe how the study will be conducted by and monitored for current ICH E6 (International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use) Good Clinical Practice (GCP) compliance, by an independent clinical trial monitor (or clinical research associate). The monitoring plan should describe the types of monitoring visits to be conducted, the intervals (based on level of risk), how corrective actions will be reported to the Sponsor and PI, and how they will be corrected and prevented by the clinical trial site/PI.

○ **Attachment 9: Human Subjects/Sample Acquisition and Safety Procedures (if applicable***; required for all applications submitted under the Clinical Research/Trials*

Option) **(no page limit): Upload as "HumSubProc.pdf".** If the proposed study involves human subjects, human biological samples, or correlated data the applicant is required to submit a summary describing the human research that will be conducted. *Proposed studies should not rely on samples, reagents, or tools that are contingent upon completion of other ongoing efforts outside the scope of this proposal.*

– **Study Population:** Describe the target population (to whom the study findings will be generalized) and the nature, approximate number, and pertinent demographic characteristics of the accessible population at the study site(s) (population from whom the sample will be recruited/drawn). Provide a table of anticipated enrollment counts at each study site. Demonstrate that the research team has access to the proposed study population at each site and describe the efforts that will be made to achieve accrual goals. Furthermore, discuss past efforts in recruiting human subjects from the target population for previous clinical trials (if applicable). Address any potential barriers to accrual and plans for addressing unanticipated delays, including a mitigation plan for slow or low enrollment or poor retention. Identify ongoing clinical trials that may compete for the same patient population and how they may impact enrollment progress. Provide justification related to the scientific goals of the proposed study for limiting inclusion of any group by age, race, ethnicity, or sex/gender. *For clinical trials proposing to include military personnel, refer to the General Submission Instructions, Appendix 1, for more information.*

– **Inclusion/Exclusion Criteria:** List the inclusion and exclusion criteria for the proposed clinical trial. Inclusion/exclusion criteria should take into consideration the specific risk profile of the studies to be conducted and the standard of care for that patient population. Provide detailed justification for exclusions.

– **Women and Minorities in the Study:** Consistent with the Belmont Report, "Ethical Principles and Guidelines for the Protection of Human Subjects," and congressional legislation, special attention is given to inclusion of women and/or minorities in studies funded or supported by the USAMRDC. This policy is intended to promote equity both in assuming the burdens and in receiving the benefits of human subjects research. Describe the strategy for the inclusion of women and minorities appropriate to the objectives of the study, including a description of the composition of the proposed study population in terms of sex/gender, racial, and ethnic group, and an accompanying rationale for the selection of subjects. Studies utilizing human biospecimens or datasets that cannot be linked to a specific individual, gender, ethnicity, or race (typically classified as exempt from IRB review) are exempt from this requirement. Provide an anticipated enrollment table(s) with the proposed enrollment distributed on the basis of sex/gender, race, and ethnicity. The Public Health Service (PHS) Inclusion Enrollment Report is a three-page fillable PDF form, which can be downloaded from eBRAP at https://ebrap.org/eBRAP/public/Program.htm. Include an appropriate justification if women and/or minorities will be excluded from the clinical trial.

- **Description of the Recruitment Process:** Explain methods for identification of potential human subjects (e.g., medical record review, obtaining sampling lists, health care provider identification).

  - Describe the recruitment process in detail. Address who will identify potential human subjects, who will recruit them, and what methods will be used to recruit them.

  - If human subjects will be compensated for participation in the study, include a detailed description of and justification for the compensation plan.

  - Describe the recruitment and advertisement materials. The recruitment materials should not be coercive or offer undue inducements and should accurately reflect the study.

- **Description of the Informed Consent Process:** Specifically describe the plan for obtaining informed consent from human subjects.

  - *For the proposed study, provide a draft, in English, of the Informed Consent Form.*

  - Identify who is responsible for explaining the study, answering questions, and obtaining informed consent. Include a plan for ensuring that human subjects' questions will be addressed during the consent process and throughout the trial.

  - Include information regarding the timing and location of the consent process.

  - Address issues relevant to the mental capacity of the potential human subject (e.g., altered capacity due to administration of any mind-altering substances such as tranquilizers, conscious sedation or anesthesia, brain injury, stress/life situations, or human subject age), if applicable.

  - Address how privacy and time for decision-making will be provided and whether the potential human subject will be allowed to discuss the study with anyone before making a decision.

  - Consider the need for obtaining ongoing consent or for re-assessing capacity over the course of a long-term study and describe any relevant procedures to assure continued consent.

  - Describe the plan for the consent of the individual's Legally Authorized Representative (LAR) to be obtained prior to the human subject's participation in the study. State law defines who may act as the LAR. The local IRB of record should be consulted for guidance regarding who can serve as LAR for research at the study site. *Note:* In compliance with 10 USC 980 (https://www.gpo.gov/fdsys/pkg/USCODE-2011-title10/pdf/USCODE-2011-title10-subtitleA-partII-chap49-sec980.pdf), the application must describe a clear intent to benefit for human subjects who cannot give their own consent to participate in the proposed

clinical trial. If applicable, refer to the General Submission Instructions, Appendix 1, for more information.

- *Assent:* If minors or other populations that cannot provide informed consent are included in the proposed clinical trial, a plan to obtain assent (agreement) from those with capacity to provide it, or a justification for a waiver of assent, should be provided. PIs should consult with their local IRB to identify the conditions necessary for obtaining assent.

- **Screening Procedures:** List and describe any evaluations (e.g., laboratory procedures, history, or physical examination) that are required to determine eligibility/suitability for study participation and the diagnostic criteria for entry. *Note:* Some screening procedures may require a separate consent or a two-stage consent process.

- **Risks/Benefits Assessment:**

  - **Foreseeable risks:** Clearly identify all study risks, including potential safety concerns and adverse events. Study risks include any risks that the human subject is exposed to as a result of participation in the clinical trial. Consider psychological, legal, social, and economic risks as well as physical risks. Consider how the proposed clinical trial might affect the daily lives of the individual human subjects participating in the study. If the risks are unknown, this should be stated. If applicable, any potential risk to the study personnel should be identified.

  - **Risk management and emergency response:**

    - ❖ Appropriate to the study's level of risk, describe how safety monitoring and reporting to the IRB and Regulatory Agency (if applicable) will be managed and conducted.

    - ❖ Describe all safety measures to minimize and/or eliminate risks to human subjects and study personnel or to manage unpreventable risks. Include safeguards and planned responses such as dose reduction or stopping criteria based on toxicity grading scales or other predetermined alert values.

    - ❖ Discuss the overall plan for provision of emergency care or treatment for an adverse event for study-related injuries, including who will be responsible for the cost of such care.

    - ❖ Address any special precautions that should be taken by the human subjects before, during, and after the study (e.g., medication washout periods, dietary restrictions, hydration, fasting, pregnancy prevention).

    - ❖ Describe any special care (e.g., wound dressing assistance, transportation due to side effects of study intervention impairing ability to drive) or equipment

(e.g., thermometers, telemedicine equipment) needed for human subjects enrolled in the study.

- **Potential benefits:** Describe known and potential benefits of the study to the human subjects who will participate in the study. Articulate the importance of the knowledge to be gained as a result of the proposed research. Discuss why the potential risks to human subjects are reasonable in relation to the anticipated benefits to the human subjects and others that may be expected to result.

- **Attachment 10: Regulatory Strategy (if applicable;** *relevant for all product development efforts and required for all applications submitted under the Clinical Research/Trials Option)* **(no page limit). If submitting multiple documents, start each document on a new page. Combine and upload as a single file named "Regulatory.pdf".** Answer the following questions and provide supporting documentation as applicable.

  – State the product/intervention name.

  For products/interventions that do not require regulation by a Regulatory Agency:

  – For investigator-sponsored regulatory exemptions (e.g., IND, IDE) provide evidence of institutional support. Provide evidence that the clinical trial does not require regulation by a Regulatory Agency. If the clinical trial will be conducted at international sites, provide equivalent information relevant to the host country(ies) regulatory requirements. No further information for this attachment is required.

  For products/interventions that require regulation by a Regulatory Agency:

  – State whether the product is FDA-approved, -licensed, or -cleared, and marketed in the United States.

  – If the product is marketed in the United States, state the product label indication. State whether the proposed research involves a change to the approved label indication for the route of administration, dosage level, and/or subject population. Indicate whether the proposed research involves a change that increases the risks associated with using the product. State whether the product is being promoted for an off-label use (where promotion involves the sale of a marketed product).

  – If the product is not currently FDA-approved, -licensed, or -cleared, state the planned indication/use. Indicate whether the product would be classified as a drug, device, biologic, or combination product. Indicate whether the FDA has confirmed the proposed classification. Identify the regulatory sponsor. Include a signed sponsor commitment letter acknowledging the regulatory sponsor's understanding of all sponsor responsibilities and commitment to oversee execution of the study.

  – If the proposed research or trial requires an Investigational New Drug (IND) application or an Investigational Device Exemption (IDE) application, the application must be submitted to the FDA by/before September 30, 2024. The IND or IDE

should be specific for the investigational product (i.e., not a derivative or alternate version of the product) and indication to be tested in the proposed clinical trial. Provide the date of submission, the application number, and a copy of the FDA letter acknowledging the submission. If there are any existing cross-references in place, provide the application number(s) and associated sponsor(s). Provide an explanation of the status of the application (e.g., past the critical 30-day period, pending response to questions raised by the FDA, on clinical hold, on partial clinical hold). If the IND or IDE application has been placed on clinical hold or partial hold, explain the conditions that must be met for release of the hold. Provide a summary of any previous meetings with the FDA on development of this product. A copy of the Agency meeting minutes should be included if available. Provide copies of communications from the FDA relevant to the most recent status of the IND or IDE application. The government reserve the right to withdraw funding if an IND or IDE is necessary but has not been submitted to the FDA by/before *September 30, 2024*.

– If available, provide a copy of the communication from the FDA indicating the IND or IDE application is active/safe to proceed. The government reserves the right to withdraw funding if this documentation has not been obtained by *March 31, 2025*.

– If an active IND or IDE for the investigational product is in effect, but an amendment is needed to include the proposed trial, describe the type and nature of the amendment(s) and the timeline for submission. Indicate whether the amendment increases the risk of the intervention.

– If the clinical trial will be conducted at international sites, provide equivalent information and supporting documentation relevant to the product indication/label and regulatory approval and/or filings in the host country(ies).

– Provide the current status for manufacturing development (e.g., manufacturer's name, GMP-compliant lots available, status of stability testing), non-clinical development (e.g., test facility name, status of pivotal GLP toxicology studies to support phase 1 testing), and clinical development (e.g., clinical site name, safety profile, status of any completed or ongoing clinical trials) to demonstrate readiness for the next level of development and/or commercialization.

– Describe the overall regulatory strategy and product development plan that will support the planned product indication/label. Include a description of the numbers and types of studies proposed to reach approval, licensure, or clearance, the types of Regulatory Agency meetings that will be held/planned, and the submission filing strategy. Include considerations for compliance with current GMP, GLP, and GCP guidelines.

○ **Attachment 11: Data Management (if applicable; *required for all applications submitted under the Clinical Research/Trials Option*), (no page limit): Upload as "Data_Manage.pdf".** The Data Management attachment should include the components listed below.

- **Data Management:** Describe the data to be gathered and all methods used for collection, including the following:

  - **Data:** The types of data, software, or other materials to be produced.

  - **Acquisition and processing:** How the data will be acquired, including the time and location of data acquisition, if scientifically pertinent. If use of existing data resources is proposed, describe the origin of the dataset. Provide an account of the standards to be used for data and metadata format and content. Explain how the data will be processed.

  - **Identifiers:** Describe the unique identifiers or specific code system to be used to identify human subjects, if applicable.

  - **Confidentiality:**

    - ❖ Explain measures taken to protect the privacy of human subjects and maintain confidentiality of study data. Strategies to protect the privacy and confidentiality of study records, particularly those containing identifying information, should be addressed.

    - ❖ Address who will have access to study records, data, and specimens, including an acknowledgment that representatives of the DOD are eligible to review study records.

    - ❖ Address the requirements for reporting sensitive information to state or local authorities.

  - **Data capture, verification, and disposition:** Describe how data will be captured and verified, including the quality assurance and quality control measures taken during collection, analysis, and processing. Describe where data (both electronic and hard copy) will be stored; who will keep the data; how the data will be stored, if applicable; the file formats and the naming conventions that will be used; the process for locking the database at study completion; and the length of time that data will be stored, along with a justification for the time frame of preservation, which may include considerations related to the balance between the relative value of data preservation and other factors such as the associated cost and administrative burden of data storage. Describe the proposed database, how it will be developed and validated, and its capability to safeguard and maintain the integrity of the data. Describe the database lock process. For studies requiring Regulatory Agency oversite, compliance with 21 CFR 11 and appropriate data standards (such as those established by the Clinical Data Interchange Standards Consortium) is required.

  - **Data reporting:** Describe how data will be reported and how it will be assured that the documentation will support a regulatory filing with the FDA, if applicable.

- **Sharing study results:** In cases where the human subject could possibly benefit medically or otherwise from the information, explain whether the results of screening and/or study participation will be shared with human subjects or their primary care provider, including results from any screening or diagnostic tests performed as part of the study. In cases of national security or controlled unclassified information concerns, include a statement that the data cannot be made available to the public (e.g., "This data cannot be cleared for public release in accordance with the requirements in DoD Directive 5230.09.").

- **Laboratory Evaluations:**

  - **Specimens to be collected, schedule, and amount:** All specimens that will be collected for study purposes must be clearly stated. The collection schedule and amount of material collected must also be clearly described.

  - **Evaluations to be made:** Describe all evaluations that will be made for study purposes. Explain how the results of laboratory evaluations will be used to meet the objectives of the study (or to monitor safety of human subjects).

  - **Storage:** Describe specimen storage, including location of storage, how long specimens will be stored, any special conditions required, labeling, and specimen disposition. Outline the plan to store specimens for future use, including considerations for informed consent and providing human subjects with an opportunity to decline participation in the study.

  - **Labs performing evaluations and special precautions:** Identify the laboratory performing each evaluation, the applicable quality standard, and any special precautions that should be taken in handling the samples. Special precautions that should be taken by the human subject before, during, or after the laboratory procedure should be clearly defined. If transport of samples is required, describe provisions for ensuring proper storage during transport.

○ **Attachment 12: Study Personnel and Organization (if applicable; *required for all applications submitted under the Clinical Research/Trials Option*) (no page limit): Start each document on a new page. Combine into one document and upload as "Personnel.pdf".** The Study Personnel and Organization attachment should include the components listed below.

  - **Organizational Chart:** Provide an organizational chart that identifies key members of the study team and provides an outline of the governing structure for multi-institutional studies. Identify collaborating organizations, centers, and/or departments and name each person's position on the project. Include any separate laboratory or testing centers. Identify the data and clinical coordinating center(s) and note any involvement from Contract Research Organizations, as appropriate. Identify and provide justification for the inclusion of international sites, as appropriate. If applicable, identify the Regulatory Agency sponsor and any external consultants or other experts who will assist with Regulatory Agency sponsor applications. While

there is no specified format for this information, a table(s) or diagram is recommended. *Note:* This item may be made available for programmatic review.

- **Study Personnel Description:** Briefly describe the composition of the study team, including roles of the individuals listed in the organizational chart on the project. Study coordinator(s) should be included. Describe how the levels of effort for each individual are appropriate to successfully support the proposed research. Describe relevant background and qualifications that demonstrate appropriate expertise to accomplish the proposed work, including previous interactions with the relevant Regulatory Agency, if applicable.

- **Study Management Plan:** Provide a plan for ensuring the standardization of procedures among staff and across sites (if applicable). If the proposed clinical trial involves more than one institution, clearly describe the multi-institutional structure governing the research protocol(s) across all participating institutions. Provide a regulatory submission plan for the master protocol and master consent form by the lead institution. If the research involves more than one institution, a single IRB is required for all institutions located in the United States. If applicable, describe how communication and data transfer between/among the collaborating institutions will occur, as well as how data, specimens, and/or imaging products obtained during the study will be handled and shared.

- ○ **Attachment 13: Questionnaires and Other Research Data Collection Instruments (if applicable; no page limit): Upload as "Data_Collection.pdf".** The Questionnaires and Other Research Data Collection Instruments attachment should include a copy of the most recent version of questionnaires, data collection forms, rating scales, interview guides, or other instruments. For each instrument, describe how the information collected is related to the objectives of the study. Describe how and when the instrument(s) will be administered. Describe how the instrument(s) will be adapted to the subject population, if applicable.

- ○ **Attachment 14: Representations, if applicable (extramural submissions only): Upload as "RequiredReps.pdf".** All extramural applicants must complete and submit the Required Representations template available on eBRAP (https://ebrap.org/eBRAP/public/Program.htm). For more information, see the General Submission Instructions, Appendix 5, Section B, Representations.

- ○ **Attachment 15: Suggested Collaborating DOD Military Facility Budget Format, if applicable: Upload as "MFBudget.pdf".** If a military facility (MHS facility, research laboratory, medical treatment facility, dental treatment facility, or a DOD activity embedded with a civilian medical center) will be a collaborator in performance of the project, complete a separate budget, using "Suggested Collaborating DOD Military Facility Budget Format", available for download on the eBRAP "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm), including a budget justification, for each military facility as instructed. The costs per year should be included on the Grants.gov Research & Related Budget Form under subaward costs. Refer to the General Submission Instructions, Section III.A.8, for detailed information.

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 USC 1681[a] et seq.), the DOD is collecting certain demographic and career information to be able to assess the success rates of women who are proposed for key roles in applications in science, technology, engineering, and/or mathematics (STEM) disciplines. To enable this assessment, each application must include the following forms completed as indicated.

Research & Related Personal Data: Refer to the General Submission Instructions, Section III.A.3, for detailed information.

Research & Related Senior/Key Person Profile (Expanded): Refer to the General Submission Instructions, Section III.A.4, for detailed information.

○ PI Biographical Sketch (six-page limit): Upload as "Biosketch_LastName.pdf". The suggested biographical sketch format is available on the "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm) in eBRAP. The National Institutes of Health Biographical Sketch may also be used. All biographical sketches should be submitted in uneditable PDF format.

○ PI Previous/Current/Pending Support (no page limit): Upload as "Support_LastName.pdf".

– For extramural submissions, refer to the General Submission Instructions, Section III.A.4, for detailed information.

○ Key Personnel Biographical Sketches (six-page limit each): Upload as "Biosketch_LastName.pdf".

○ Key Personnel Previous/Current/Pending Support (no page limit): Upload as "Support_LastName.pdf".

– For extramural submissions, refer to the General Submission Instructions, Section III.A.4, for detailed information.

Research & Related Budget: Refer to the General Submission Instructions, Section III.A.5, for detailed information.

Budget Justification (no page limit): Upload as "BudgetJustification.pdf". The budget justification for the entire period of performance must be uploaded to the Research & Related Budget after completion of the budget for Period 1.

Project/Performance Site Location(s) Form: Refer to the General Submission Instructions, Section III.A.6, for detailed information.

Research & Related Subaward Budget Attachment(s) Form (if applicable): Refer to the General Submission Instructions, Section III.A.7, for detailed information.

○ **Extramural Subaward:** Complete the Research & Related Subaward Budget Form through Grants.gov. (Refer to the General Submission Instructions, Section III.A.7, for

detailed information.) Verify subaward budget(s) and budget justification forms are present in eBRAP during the application verification period. If these components are missing, upload them to eBRAP before the end of the application verification period.

Note: Applications from **federal agencies** must include a **Federal Financial Plan** in their budget justifications. Applications from organizations that include **collaborations with DOD military facilities** must comply with special requirements. Refer to the General Submission Instructions, Section III.A.5, Research & Related Budget, for detailed information.

- ○ **Intramural DOD Collaborator(s):** Complete a separate DOD military budget, using Suggested Collaborating DOD Military Facility Budget Format (available for download on the eBRAP "Funding Opportunities & Forms" web page [https://ebrap.org/eBRAP/public/Program.htm]), and upload to Grants.gov attachment form as Attachment 15, Suggested Collaborating DOD Military Facility Budget Format. (Refer to the General Submission Instructions, Section III.A.8, for detailed information.)

II.D.3. Unique Entity Identifier (UEI) and System for Award Management (SAM)

The applicant organization must be registered as an entity in SAM (https://www.sam.gov/SAM/) and receive confirmation of an "Active" status before submitting an application through Grants.gov. *As of April 2022, all federal awards including, but not limited to, contracts, grants, and cooperative agreements will use the UEI generated through SAM.gov.* Refer to the General Submission Instructions, Section III, for further information regarding Grants.gov requirements.

II.D.4. Submission Dates and Times

All submission dates and times are indicated in Section I, Overview of the Funding Opportunity. Pre-application and application submissions are required. The pre-application and application submission process should be started early to avoid missing deadlines. There are no grace periods. Failure to meet either of these deadlines will result in submission rejection.

Applicant Verification of Full Application Submission in eBRAP

eBRAP allows an organization's representatives and PIs to view and modify the full application submissions associated with them. Following retrieval and processing of the full application, eBRAP will notify the organizational representatives and PI by email to log into eBRAP to review, modify, and verify the full application submission. eBRAP will validate full application files against the MMRDA requirements, and discrepancies will be noted in an email to the PI and in the "Full Application Files" tab in eBRAP. eBRAP does not confirm the accuracy of file content. Application viewing, modification, and verification in eBRAP are strongly recommended, but not required. It is the applicant's responsibility to review all application components and ensure proper ordering as specified in this MMRDA BAA. *If either the Project Narrative or the budget fails eBRAP validation or needs to be modified, an updated full application package must be submitted prior to the application submission deadline. The Project Narrative and Research & Related Budget Form cannot be changed after the application submission deadline.* Other application components may be changed until the end

of the application verification period. Verify that subaward budget(s) and budget justification forms are present in eBRAP during the application verification period. If these components are missing, upload them to eBRAP before the end of the application verification period. After the end of the application verification period, the full application cannot be modified.

The full application package submitted to Grants.gov may be viewed and modified in eBRAP until the end of the application verification period. During the application verification period, the full application package, *with the exception of the Project Narrative and Budget Form*, may be modified.

Verify that subaward budget(s) with budget justification are present in eBRAP during the application verification period. If these components are missing, upload them to eBRAP before the end of the application verification period.

II.D.5. Intergovernmental Review

This BAA is not subject to Executive Order (EO) 12372, "Intergovernmental Review of Federal Programs." The EO provides for state and local government coordination and review of proposed federal financial assistance and direct federal development. The EO allows each state to designate an entity to perform this function. This coordination and review is not required under this BAA.

II.D.6. Funding Restrictions

The maximum period of performance is **3** years.

The application's total costs budgeted for the entire period of performance should not exceed **$2,300,000 for the MMRDA or $3,500,000 for the MMRDA–CRTO**. If indirect cost rates have been negotiated, indirect costs are to be budgeted in accordance with the organization's negotiated rate.

All direct and indirect costs of any subaward or contract must be included in the total direct costs of the primary award.

The applicant may request the entire maximum funding amount for a project that may have a period of performance less than the maximum **3** years.

For this award mechanism, direct costs must be requested for:

- Travel between/among collaborating organizations (as applicable)

- Travel costs for one investigator to disseminate project results at two separate DOD-sponsored meetings (e.g., the MHS Research Symposium)

- Travel costs for one investigator to travel to one scientific/technical meeting per year, after the first year of the period of performance, to present project information or disseminate project results from the FY23 JWMRP MMRDA

Awards made to extramural organizations will consist of assistance agreements (grants and cooperative agreements), contracts, or OTAs. For extramural awards with an intragovernmental component, direct transfer of funds from an extramural award recipient to a DOD or other federal agency is not allowed except under very limited circumstances. Funding to intramural DOD and other federal agencies will be managed through a direct funds transfer.

Refer to the General Submission Instructions, Section III.A.5, for budget regulations and instructions for the Research & Related Budget. ***For federal agencies or organizations collaborating with federal agencies, budget restrictions apply as are noted in the General Submission Instructions, Section III.A.5.***

II.D.7. Other Submission Requirements

Refer to the General Submission Instructions, Appendix 4, for detailed formatting guidelines.

II.E. Application Review Information

II.E.1. Criteria

II.E.1.a. Peer Review

To determine technical merit, all applications will be evaluated according to the following **scored criteria**, which are of equal importance:

- **Research Strategy and Feasibility**

  o How well the application presents the scientific rationale behind the proposed research or product development effort, including relevant literature citations, preliminary data, and/or preclinical data, to support feasibility.

  o How well the application states the hypotheses to be tested and/or the objective(s) to be reached.

  o How well the application describes the experimental design, methods, and analyses, including appropriate controls, choice of animal model (if applicable), and the endpoints/ outcome measures to be used, in sufficient detail for evaluation of feasibility and effectiveness in supporting completion of the project aims.

  o Whether the SOW indicates a feasible plan and timeline to conduct the research and how well it provides clearly defined milestones to be accomplished.

  o How well the application describes potential problem areas and discusses alternative methods/approaches that may be employed to overcome them, including interdependency of aims (i.e., dependency on successful outcomes of other ongoing related research efforts).

For applications submitted under the Clinical Research/Trials Option:

- o   As applicable, how well the application describes the type of clinical trial to be performed, the phase of trial and/or class of device, and the study model.

- o   How well the application identifies and describes the hypothesis/intervention to be studied and the projected outcomes.

- o   To what degree the intervention addresses high-priority clinical needs and represents an advancement over currently available interventions and/or standards of care.

- o   To what degree the application includes preclinical and/or clinical evidence to support the safety and stability (as appropriate) of the intervention.

- o   How well the application documents access to the intellectual property rights to the intervention for the duration of the proposed clinical trial (if applicable).

- o   How well the application provides a brief description of the study population, criteria for inclusion/exclusion, and the methods that will be used for recruitment/accrual of human subjects, samples, and/or correlated data.

- o   Whether the strategy for the inclusion of women and minorities and distribution of proposed enrollment are appropriate for the proposed research.

- o   How well the application describes the plan for obtaining informed consent from human subjects.

- o   Whether the application demonstrates that the research team has access to the proposed study population at each site, and describes the efforts that will be made to achieve accrual goals.

- o   How well the application addresses any potential barriers to accrual and plans for addressing unanticipated delays, including a mitigation plan for slow or low enrollment and/or subject loss to follow-up.

- o   How well the application describes measures that will be taken to reduce bias, such as blinding of subjects, clinicians, data analysts, and/or others during the study.

- o   How well research procedures are delineated from routine clinical procedures.

- o   How well the application discusses risk/benefit considerations, including a clear and detailed description of potential ethical issues raised by the proposed study, and a detailed plan for how the ethical issues will be addressed.

- o   How well the application explains measures taken to protect the privacy of human subjects and maintains confidentiality of study data.

- **Data and Statistical Analysis Plan**

  o   To what degree the data analysis plan is consistent with study objectives.

  o   To what degree the statistical plan, including power analysis for sample size projections, is appropriate to meet the objectives of the study.

  o   To what degree the application describes how the data will be reported and how it will be assured that the documentation will support a regulatory filing with the FDA, if applicable.

- **Impact**

  o   The degree to which the proposed effort is relevant to the role of the JWMRP in addressing high-priority DOD medical requirements and capability gaps and accelerating the development of products that will impact the Warfighter within the context of the FY23 JWMRP Focus Area(s) being addressed.

  o   To what degree the knowledge, technologies, or products gained from the research could benefit the civilian population and also address the health care needs of military Service Members, Veterans, and/or their beneficiaries.

  o   To what degree the research will result in faster and/or better delivery of high-priority health care solutions for the Warfighter.

  o   To what degree the anticipated short-term outcomes(s)/products(s) (knowledge and/or materiel) of the proposed effort will impact the relevant populations, and augment and/or accelerate product development as applicable.

  o   How significantly the long-term gains from this research may impact the health and readiness of Warfighters.

- **Transition Plan and Regulatory Strategy**

  o   Whether the transition plan and regulatory strategy are appropriate and well described.

  o   Whether the proposed research meets a current TRL or KRL of 5 or higher, and whether the proposed target TRL or KRL is realistic and appropriate.

  o   Whether the funding strategy to transition to the next level of development and/or commercialization (e.g., specific industry partners, specific funding opportunities to be applied for) is reasonable and achievable.

  o   For knowledge products, whether the proposed collaborations and other resources that will be used to provide continuity of development, including proposed development or modification of CPGs and recommendations, provider training materials, patient brochures, clinical support tools, scientific journal publications, models, simulations, and applications are established and/or achievable.

- o Whether the schedule and milestones for transitioning the anticipated research outcomes to the next phase of development (i.e., next-phase clinical trials, commercialization/ transition to industry, delivery to the military or civilian market, incorporation into clinical practice, and/or approval by the FDA) are achievable.

- o How well the application identifies intellectual property ownership rights and/or demonstrates the appropriate access to the intellectual property necessary for the development and/or commercialization of products or technologies supported by this funding opportunity announcement and identifies the government's ability to access such products or technologies in the future.

- o How well the application describes any active SBIR/STTR data rights (if applicable).

- o How well the application describes an appropriate Intellectual and Material Property Plan for resolving intellectual and material property issues among participating organizations (if applicable).

- o If applicable, whether the risk analysis for cost, schedule, manufacturability, and sustainability is realistic and reasonable.

- o The extent to which the regulatory strategy to support the product label indication or product label change, if applicable, is appropriate and well described.

- o Whether the application explains why the product/intervention is exempt from FDA oversight, or, for products that require FDA regulation, whether the plans/timeline for IND or IDE application submission to the FDA are appropriate, or the IND or IDE submission has already taken place.

- o If clinical studies will be conducted outside of the United States, whether there is documentation of pre-IND communication between the applicant and the FDA regarding phase 1 studies.

- o Whether the identified status for manufacturing development, non-clinical development, and clinical development demonstrates readiness for the next level of development and/or commercialization.

- o Whether the numbers and types of studies proposed to reach approval, licensure, or clearance, the types of FDA meetings that will be held/planned, and the submission filing strategy are appropriate.

- o Whether plans to comply with GMP, GLP, and GCP guidelines are appropriate.

- **Personnel**

- o To what degree the study personnel's background and expertise are appropriate with respect to its ability to perform the proposed work, including whether there is evidence of sufficient clinical and/or statistical expertise (as applicable).

- To what degree the levels of effort by the PI and other key personnel are appropriate for successful conduct of the proposed work.

- How the PI's record of accomplishment demonstrates their ability to accomplish the proposed work.

In addition, the following **unscored criteria** will also contribute to the overall evaluation of the application:

- **Environment**

  - How the scientific environment is appropriate for the proposed research and/or product development effort.

  - How the research and/or product development requirements are supported by the availability of, and accessibility to, facilities and resources (including collaborative arrangements).

  - How the quality and extent of institutional support are appropriate for the proposed effort.

- **Budget**

  - Whether the **total** costs exceed the allowable total costs as published in the funding opportunity announcement.

  - Whether the budget is appropriate for the proposed research.

- **Application Presentation**

  - To what extent the writing, clarity, and presentation of the application components influence the review.

II.E.1.b. Programmatic Review

To make funding recommendations and select the application(s) that, individually or collectively, will best achieve the program objectives, the following criteria are used by programmatic reviewers:

- Ratings and evaluations of the peer reviewers

- Relevance to the mission of the DHP and FY23 JWMRP, as evidenced by the following:

  - Military relevance, including alignment with and balance within and across the identified DOD and Services medical research priorities and portfolios

  - Relative potential of the research to augment and/or accelerate clinical, technical, or materiel/knowledge product development efforts that directly benefit military medicine

  - Relative transition potential of the anticipated product/outcome

- Relative impact of the research on Service Members, Veterans, and their families

II.E.2. Application Review and Selection Process

All applications are evaluated by scientists, clinicians, and consumers in a two-tier review process. The first tier is **peer review**, the evaluation of applications against established criteria to determine technical merit, where each application is assessed for its own merit, independent of other applications. The second tier is **programmatic review**, a comparison-based process in which applications with high scientific and technical merit are further evaluated for programmatic relevance. Final recommendations for funding are made to the Commanding General, USAMRDC. ***The highest-scoring applications from the first tier of review are not automatically recommended for funding. Funding recommendations depend on various factors as described in [Section II.E.1.b, Programmatic Review](.)***. Additional information about the two-tier process used by the CDMRP can be found at https://cdmrp.health.mil/about/2tierRevProcess. An information paper describing the funding recommendations and review process for the MMRDA and the MMRDA–CRTO will be provided to the PI and posted on the CDMRP website.

All CDMRP review processes are conducted confidentially to maintain the integrity of the merit-based selection process. Panel members sign a statement declaring that application and evaluation information will not be disclosed outside the panel. Violations of confidentiality can result in the dissolving of a panel(s) and other corrective actions. In addition, personnel at the applicant or collaborating organizations are prohibited from contacting persons involved in the review and approval process to gain protected evaluation information or to influence the evaluation process. Violations of these prohibitions will result in the administrative withdrawal of the organization's application. Violations by panel members or applicants that compromise the confidentiality of the review and approval process may also result in suspension or debarment from federal awards. Furthermore, the unauthorized disclosure of confidential information of one party to another third party is a crime in accordance with 18 USC 1905.

II.E.3. Integrity and Performance Information

Prior to making an assistance agreement award where the federal share is expected to exceed the simplified acquisition threshold, as defined in 2 CFR 200.1, over the period of performance, the federal awarding agency is required to review and consider any information about the applicant that is available in SAM.

An applicant organization may review SAM and submit comments to SAM on any information about the organization that a federal awarding agency previously entered and is currently available in SAM.

The federal awarding agency will consider any comments by the applicant, in addition to other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under federal awards when determining a recipient's qualification prior to award, according to the qualification standards of the DoDGARs, Section 22.415.

II.E.4. Anticipated Announcement and Federal Award Dates

All application review dates and times are indicated in [Section I, Overview of the Funding Opportunity](#).

Each PI and organization will receive email notification of posting of the funding recommendation in eBRAP. Each PI will receive a peer review summary statement on the strengths and weaknesses of the application.

II.F. Federal Award Administration Information

II.F.1. Federal Award Notices

Awards supported with FY23 funds are anticipated to be made no later than September 30, 2024. Refer to the General Submission Instructions, Appendix 2, for additional award administration information.

After email notification of application review results through eBRAP, and if selected for funding, a representative from USAMRAA will contact the Business Official authorized to negotiate on behalf of the PI's organization.

Pre-Award Costs (*Assistance Agreements Only*)**:** An institution of higher education, hospital, non-profit, or for-profit organization may, at its own risk and without the government's prior approval, incur obligations and expenditures to cover costs up to 90 days before the beginning date of the initial budget period of a new award. Refer to the General Submission Instructions, Section III.A.5.

Only an appointed USAMRAA Grants/Contracting/Agreements Officer may obligate the government to the expenditure of funds. No commitment on the part of the government should be inferred from discussions with any other individual. **The award document signed by the Grants/Contracting/Agreements Officer is the official authorizing document.**

Federal Government Organizations: Funding made to federal government organizations (to include intramural DOD organizations) will be executed through the Military Interdepartmental Purchase Request (MIPR) or Funding Authorization Document (FAD) process. Transfer of funds is contingent upon appropriate safety and administrative approvals. Intramural applicants and collaborators are reminded to coordinate receipt and commitment of funds through their respective Resource Manager/Task Area Manager/Comptroller or equivalent Business Official.

II.F.1.a. PI Changes and Award Transfers

Unless otherwise restricted, changes in PI will be allowed at the discretion of the USAMRAA Grants/Contracting/Agreements Officer, provided the intent of the award mechanism is met.

Organizational transfer of an award is discouraged and will be evaluated on a case-by-case basis and only allowed at the discretion of the USAMRAA Grants Officer. An organizational transfer of an award will not be allowed in the last year of the (original) period of performance or any

extension thereof. The organizational transfer of an award supporting a clinical trial is strongly discouraged and in most cases will not be allowed.

Refer to the General Submission Instructions, Appendix 2, Section B, for general information on changes to PIs and organizational transfers.

II.F.2. Administrative and National Policy Requirements

Applicable requirements in the DoDGARs found in 32 CFR, Chapter I, Subchapter C, and 2 CFR, Chapter XI, apply to grants and cooperative agreements resulting from this BAA.

Applicable requirements in the FAR, found in 48 CFR, Chapter 1; and DFARS, found in 48 CFR, Chapter 2, apply to contracts resulting from this BAA. Refer to additional FAR and DFARS clauses as outlined in Appendix III.

Refer to the General Submission Instructions, Appendix 2, for general information regarding administrative requirements.

Refer to the General Submission Instructions, Appendix 5, for general information regarding national policy requirements.

Refer to full text of the latest DoD R&D General Terms and Conditions and the USAMRAA General Research Terms and Conditions: Addendum to the DoD R&D General Terms and Conditions for further information.

Certification Regarding Disclosure of Funding Sources. The proposing entity must comply with Section 223(a) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, which requires that the PI and all key personnel:

- Certify that the current and pending support provided on the application is current, accurate, and complete;

- Agree to update such disclosure at the request of the agency prior to the award of support and at any subsequent time the agency determines appropriate during the term of the award; and

- Have been made aware of the requirements under Section 223(a)(1) of this Act.

False, fictitious, or fraudulent statements or claims may result in criminal, civil, or administrative penalties (18 USC 1001).

II.F.3. Reporting

Refer to the General Submission Instructions, Appendix 2, Section A, for general information on reporting requirements. *If there are technical reporting requirement delinquencies for any existing USAMRAA-sponsored awards at the applicant organization, no new awards will be issued to the applicant organization until all delinquent reports have been submitted.*

Annual progress reports with quad charts, as well as a final progress report with quad chart will be required. The Award Terms and Conditions will specify if additional and/or more frequent reporting is required.

Award Expiration Transition Plan: An Award Expiration Transition Plan must be submitted with the final progress report. Use the one-page template "Award Expiration Transition Plan," available on the eBRAP "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm) under the "Progress Report Formats" section. The Award Expiration Transition Plan must outline if and how the research supported by this award will progress and must include source(s) of funding, either known or pending.

PHS Inclusion Enrollment Reporting Requirement: Enrollment reporting on the basis of sex/gender, race, and ethnicity will be required with each annual and final progress report. The PHS Inclusion Enrollment Report is available on the "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm) in eBRAP.

Awards resulting from the MMRDA funding announcement opportunity may incorporate additional reporting requirements related to recipient integrity and performance matters. These recipients that have federal contracts, grants, and cooperative agreements with a cumulative total value greater than $10M are required to provide information to SAM about certain civil, criminal, and administrative proceedings that reached final disposition within the most recent 5-year period and that were connected with performance of a federal award. Recipients are required to disclose, semiannually, information about criminal, civil, and administrative proceedings as specified in the applicable Representations (see General Submission Instructions, Appendix 5, Section B).

If the award made under this funding opportunity announcement is a contract or OTA, additional reporting requirements may apply.

II.G. Federal Awarding Agency Contacts

II.G.1. CDMRP Help Desk

Questions related to content or submission requirements in the MMRDA as well as questions related to the pre-application or intramural application submission through eBRAP should be directed to the CDMRP Help Desk, which is available Monday through Friday from 8:00 a.m. to 5:00 p.m. ET. Response times may vary depending upon the volume of inquiries.

>   Phone: 301-682-5507

>   Email: help@eBRAP.org

II.G.2. Grants.gov Contact Center

Questions related to extramural application submission through Grants.gov portal should be directed to the Grants.gov Contact Center, which is available 24 hours a day, 7 days a week

(closed on U.S. federal holidays). Note that the CDMRP Help Desk is unable to provide technical assistance with Grants.gov submission.

      Phone: 800-518-4726; International 1-606-545-5035

      Email: support@grants.gov

Sign up on Grants.gov for "send me change notification emails" by following the link on the "Synopsis" page for the MMRDA or by responding to the prompt provided by Grants.gov when first downloading the Grants.gov application package. If the Grants.gov application package is updated or changed, the original version of the application package may not be accepted by Grants.gov.

II.H. Other Information

II.H.1. Administrative Actions

After receipt of pre-applications or applications, the following administrative actions may occur:

II.H.1.a. Rejection

The following will result in administrative rejection of the pre-application:

- Completed FY23 JWMRP Pre-Application is missing.

- FY23 JWMRP Pre-Application Template exceeds page limit.

The following will result in administrative rejection of the application:

- Submission of an application for which a letter of invitation was not received.

- Project Narrative exceeds page limit.

- Project Narrative is missing.

- Budget is missing.

For applications involving animal research:

- Attachment 7, Animal Research Plan is missing.

For applications submitted under the Clinical Research/Trials Option:

- Attachment 9, Human Subjects/Sample Acquisition and Safety Procedures is missing.

- Attachment 10, Regulatory Strategy is missing.

- Attachment 11, Data Management is missing.

II.H.1.b. Modification

- Pages exceeding the specific limits will be removed prior to review for all documents other than the FY23 JWMRP Pre-Application and Application Project Narrative.

- Documents not requested will be removed.

II.H.1.c. Withdrawal

The following may result in administrative withdrawal of the pre-application or application:

- An FY23 JWMRP Programmatic Panel member is named as being involved in the research proposed or is found to have assisted in the pre-application or application processes including, but not limited to, concept design, application development, budget preparation, and the development of any supporting documentation. *A list of the FY23 JWMRP Programmatic Panel members can be found at https://cdmrp.health.mil/jwmrp/panels/panels23.*

- The application fails to conform to this BAA description.

- Inclusion of URLs, with the exception of links in References Cited and Publication and/or Patent Abstract sections.

- Page size is larger than 8.5 inches x 11.0 inches (approximately 21.59 cm x 27.94 cm).

- To preserve the integrity of its peer and programmatic review processes, the CDMRP discourages inclusion of any employee of its review contractors having any role in the preparation, research or other duties for submitted applications. For FY23, the identities of the peer review contractor and the programmatic review contractor may be found at the CDMRP website (https://cdmrp.health.mil/about/2tierRevProcess). Applications that include names of personnel from either of these companies may be administratively withdrawn.

- Personnel from applicant or collaborating organizations are found to have contacted persons involved in the review or approval process to gain protected evaluation information or to influence the evaluation process.

- Pre-applications or applications submitted by an intramural DOD organization as the contracting organization.

- Application including classified research data and/or proposing research of which the anticipated outcomes may be classified or deemed sensitive to national security concerns will be considered for application withdrawal.

- The application does not address at least one of the FY23 JWMRP Focus Areas.

- The invited application proposes a different research project than that described in the pre-application.

- The invited application proposes research that is not a logical continuation of the previously funded research or development effort identified in the notification of invitation.

II.H.1.d. Withhold

Applications that appear to involve research misconduct will be administratively withheld from further consideration pending organizational investigation. The organization will be required to provide the findings of the investigation to the USAMRAA Grants/Contracting/Agreements Officer for a determination of the final disposition of the application.

II.H.2. Application Submission Checklist

Application Components	Action	Completed
SF424 Research & Related Application for Federal Assistance	Complete form as instructed	
Attachments	Project Narrative: Upload as Attachment 1 with file name "ProjectNarrative.pdf"	
	Supporting Documentation: Upload as Attachment 2 with file name "Support.pdf"	
	Abstracts: Upload as Attachment 3 with file name "Abstracts.pdf"	
	Statement of Work: Upload as Attachment 4 with file name "SOW.pdf"	
	Impact Statement: Upload as Attachment 5 with file name "Impact.pdf"	
	Transition Plan: Upload as Attachment 6 with file name "Transition.pdf"	
	Animal Research Plan: Upload as Attachment 7 with file name "AnimalResPlan.pdf" if applicable	
	Intervention: Upload as Attachment 8 with file name "Intervention.pdf" if applicable	
	Human Subjects/Sample Acquisition and Safety Procedures: Upload as Attachment 9 with file name "HumSubProc.pdf" if applicable	
	Regulatory Strategy: Upload as Attachment 10 with file name "Regulatory.pdf" if applicable	
	Data Management: Upload as Attachment 11 with file name "Data_Manage.pdf" if applicable	
	Study Personnel and Organization: Upload as Attachment 12 with file name "Personnel.pdf" if applicable	
	Questionnaires and Other Research Data Collection Instruments: Upload as Attachment 13 with file name "Data_Collection.pdf" if applicable	
	Representations (extramural submissions only): Upload as Attachment 14 with file name "RequiredReps.pdf"	

Application Components	Action	Completed
	Suggested Collaborating DOD Military Facility Budget Format: Upload as Attachment 15 with file name "MFBudget.pdf" if applicable	
Research & Related Personal Data	Complete form as instructed	
Research & Related Senior/Key Person Profile (Expanded)	Attach PI Biographical Sketch (Biosketch_LastName.pdf) to the appropriate field	
	Attach PI Previous/Current/Pending Support (Support_LastName.pdf) to the appropriate field	
	Attach Biographical Sketch (Biosketch_LastName.pdf) for each senior/key person to the appropriate field	
	Attach Previous/Current/Pending (Support_LastName.pdf) for each senior/key person to the appropriate field	
Research & Related Budget	Complete as instructed. Attach Budget Justification (BudgetJustification.pdf) to the appropriate field	
Project/Performance Site Location(s) Form	Complete form as instructed	
Research & Related Subaward Budget Attachment(s) Form, if applicable	Complete form as instructed	

APPENDIX I: ACRONYM LIST

ACOS/R&D	Associate Chief of Staff for Research and Development
ACURO	Animal Care and Use Review Office
ARRIVE	Animal Research: Reporting In Vivo Experiments
BAA	Broad Agency Announcement
CDMRP	Congressionally Directed Medical Research Programs
CFR	Code of Federal Regulations
CICA	Competition in Contracting Act
COI	Conflict of Interest
CPG	Clinical Practice Guideline
DFARS	Defense Federal Acquisition Regulation Supplement
DHP	Defense Health Program
DOD	Department of Defense
DoDGARs	Department of Defense Grant and Agreement Regulations
eBRAP	Electronic Biomedical Research Application Portal
EC	Ethics Committee
EO	Executive Order
ET	Eastern Time
FAD	Funding Authorization Document
FAR	Federal Acquisition Regulation
FDA	U.S. Food and Drug Administration
FFRDC	Federally Funded Research and Development Center
FITBIR	Federal Interagency Traumatic Brain Injury Research
FY	Fiscal Year
GCP	Good Clinical Practice
GLP	Good Laboratory Practice
GMP	Good Manufacturing Practice
HRPO	Human Research Protection Office
IACUC	Institutional Animal Care and Use Committee
ICH E6	International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use
IDE	Investigational Device Exemption
IND	Investigational New Drug
IRB	Institutional Review Board
JWMRP	Joint Warfighter Medical Research Program
KRL	Knowledge Readiness Level

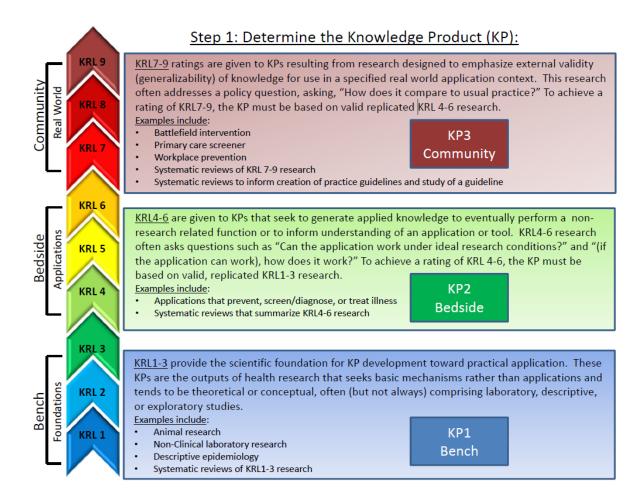|	
LAR	Legally Authorized Representative
M	Million
MB	Megabyte
MHS	Military Health System
MIPR	Military Interdepartmental Purchase Request
MMRDA	Military Medical Research and Development Award
MMRDA–CRTO	Military Medical Research and Development Award – Clinical Research/Trials Option
NDC	Non-Traditional Defense Contractor
ORCID	Open Researcher and Contributor ID, Inc.
OHARO	Office of Human and Animal Research Oversight
OHRO	Office of Human Research Oversight
OT	Other Transaction
OTA	Other Transaction Agreement
PHS	Public Health Service
PI	Principal Investigator
PII	Personally Identifiable Information
SAM	System for Award Management
SOW	Statement of Work
SBIR	Small Business Innovation Research
STEM	Science, Technology, Engineering, and/or Mathematics
STTR	Small Business Technology Transfer
TBI	Traumatic Brain Injury
TRA	Technology Readiness Assessment
TRL	Technology Readiness Level
UEI	Unique Entity Identifier
URL	Uniform Resource Locator
USAMRAA	U.S. Army Medical Research Acquisition Activity
USAMRDC	U.S. Army Medical Research and Development Command
USC	United States Code
VA	Department of Veterans Affairs

APPENDIX II: TECHNOLOGY READINESS LEVELS AND KNOWLEDGE READINESS LEVELS

Technology Readiness Levels: TRLs are used to categorize the product maturity of materiel solutions. The DOD's Technology Readiness Assessment (TRA) Deskbook, is a reference for systematic assessment of technical maturity of relevant materiel solutions. For biomedical applications, Biomedical TRL definitions and descriptions have been developed that account for regulatory context for technology maturity and *intended context of use*. Information on Biomedical TRLs can be found in Appendix E of the DOD TRA Deskbook (July 2009, https://apps.dtic.mil/docs/citations/ADA524200).

Knowledge Readiness Levels: The scientific maturity of knowledge products resulting from biomedical research is not assessed in the same manner as that of materiel solutions. At the request of the USAMRDC, the Rand Corporation developed and released a framework to assess the relative scientific maturity of knowledge products. This process is described in a 2019 Rand Corporation Report (https://www.rand.org/pubs/research_reports/RR2127.html). The figures below represent a quick reference guide for assessing KRLs for knowledge products.

Step 1: Determine the Knowledge Product (KP):

KRL7-9 ratings are given to KPs resulting from research designed to emphasize external validity (generalizability) of knowledge for use in a specified real world application context. This research often addresses a policy question, asking, "How does it compare to usual practice?" To achieve a rating of KRL7-9, the KP must be based on valid replicated KRL 4-6 research.
Examples include:
- Battlefield intervention
- Primary care screener
- Workplace prevention
- Systematic reviews of KRL 7-9 research
- Systematic reviews to inform creation of practice guidelines and study of a guideline

KP3 Community

KRL4-6 are given to KPs that seek to generate applied knowledge to eventually perform a non-research related function or to inform understanding of an application or tool. KRL4-6 research often asks questions such as "Can the application work under ideal research conditions?" and "(if the application can work), how does it work?" To achieve a rating of KRL 4-6, the KP must be based on valid, replicated KRL1-3 research.
Examples include:
- Applications that prevent, screen/diagnose, or treat illness
- Systematic reviews that summarize KRL4-6 research

KP2 Bedside

KRL1-3 provide the scientific foundation for KP development toward practical application. These KPs are the outputs of health research that seeks basic mechanisms rather than applications and tends to be theoretical or conceptual, often (but not always) comprising laboratory, descriptive, or exploratory studies.
Examples include:
- Animal research
- Non-Clinical laboratory research
- Descriptive epidemiology
- Systematic reviews of KRL1-3 research

KP1 Bench

Step 2: Determine the Knowledge Readiness Level (KRL)

KRL 9

KRL9 research replicates or reviews well-designed KRL7 and KRL8 studies (e.g., cost analyses to achieve desired effect; comparative effectiveness studies to aid context specific policy development or intervention decisions; systematic review to estimate effect size with average participants in a real world context, assess **"Does the application work?"** in a context, or determine for which participants or time period the application works in an identified context.)

KRL 8

KRL8 research expands on or replicates KRL7 studies to directly assess "Does the application work in the context of interest?" It uses valid designs with emphasis on external validity (generalizability) for an intended context. (e.g., multi-site to obtain average effects; generalizable analyses of real world, (e.g., administrative) data; usual or standard care (not placebo or contact time) controls; and average (not ideal) participants.)

KRL 7

KRL7 research comprises early studies adapting applications supported by KRL4-6 research for use in a military health context. (e.g., adaptation from a longer screener, feasibility and standardization for post-deployment use of a brief screener; initial multi-modal tests of combined KRL4-6 supported interventions to achieve improved outcomes in primary care; adaptation and initial study in military mental health settings of KRL4-6 support therapy for PTSD; adaptation and initial study of KRL4-6 supported protective gear for preventing TBI during deployment.)

KRL 6

KRL6 research replicates well-designed KRL5 studies. It adds nuance to answers from completed studies (e.g., not just "Can it work" and "How," but also "For whom," "Under what conditions," or "With what frequency?") It validates hypotheses that may suggest important application contexts (e.g., battlefield, primary care, emergency rooms, post-deployment screening). It includes systematic reviews of KRL4-5 studies to address "Can it work?" and "How?" questions.

KRL 5

KRL5 research tests *a priori* (pre-specified) hypotheses using rigorous scientific designs (e.g., RCTs for intervention efficacy) to directly assess "Can it work" and "If so, how?" It expands on or replicates a KRL4 finding and/or improves on the design of one or more KRL4 studies.

KRL 4

KRL4 research generates initial knowledge regarding a human health-related application or use. KRL4 findings require subsequent replication (e.g., descriptive human epidemiology or preliminary human studies, human studies that test a clinical hypotheses, pilot tests of an intervention, screening or diagnostic tool, and development of instrumentation needed to test an intended application (e.g., outcome measure).

KRL 3

KRL3 research validates hypotheses and hints at future applications, research that replicates or systematically reviews well-designed KRL1-2 studies or theory, descriptive studies, particularly involving animal research (e.g., tool for prediction, prognosis, screening, diagnosis, treatment, prevention)

KRL 2

KRL2 research expands on or replicates a KRL1 finding, including systematic review of KRL1 studies to formulate a theoretical model (e.g., animal studies that test a hypothesis or are the first true experiment on a nascent theory and human studies not based on animal study findings that are descriptive or hypothesis generating.

KRL 1

KRL1 research generates initial or very early scientific knowledge without regard to or indication of a specific health use. Its purpose is inferential, with the intention to generalize. Its findings require replication. (e.g., descriptive animal studies, or those that are hypothesis generating rather than hypothesis testing.)

Community / Real World (KRL 7–9)
Bedside / Applications (KRL 4–6)
Bench / Foundations (KRL 1–3)

APPENDIX III: FAR & DFARS CLAUSES APPLICABLE TO CONTRACTS REQUIREMENTS

FAR/DFARS Provisions/Clauses: For purposes of illustration, the following provisions and clauses may be applicable to procurement contracts resulting from this Broad Agency Announcement. Additional clauses apply based upon contract type. USAMRAA reserves the right to include all relevant and current FAR or DFARS clauses in the final contract award.

# Provision	Clause
52.204-7	System for Award Management
52.204-13	System for Award Management Maintenance
52.204-16	Commercial and Government Entity Code Reporting
52.204-21	Basic Safeguarding of Covered Contractor Information Systems
52.204-24	Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment
52.204-25	Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment
52.204-26	Covered Telecommunications Equipment or Services-Representation
52.209-9	Updates of Publicly Available Information Regarding Responsibility Matters
52.215-20	Requirements for Certified Cost and Pricing Data and Data Other than Certified Cost and Pricing Data
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass Through Charges - Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards
52.217-4	Evaluation of Options Exercised at time of Contract Award
52.217-5	Evaluation of Options
52.217-9	Option to Extend the Term of the Contract
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Applies if Exceeds $10M)
52.222-50	Combating Trafficking in Persons
52.222-56	Certification Regarding Trafficking in Persons Compliance Plan
52.223-6	Drug Free Work Place
52.226-2	Historically Black College or University and Minority Institution Representation
52.230-7	Proposal Disclosure - Cost Accounting Practice Changes
52.232-15	Progress Payments Not Included
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-3	Alterations in Solicitation
52.252-5	Authorized Deviations in Provisions
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7004	Alternate A, System for Award Management
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls
252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting

# Provision	Clause
252.204-7018	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services
252.215-7003	Requirements for Submission of Data Other than Certified Cost or Pricing Data - Canadian Commercial Corporation
252.204-7000	Disclosure of Information
252.204-7019	Notice of NIST SP 800-171 DoD Assessment Requirements
252.204-7020	NIST SP 800-171 DoD Assessment Requirements
252.219-7000	Advancing Small Business Growth
252.225-7048	Export Controlled Items
252.225-7055	Representation Regarding Business Operations with the Maduro Regime
252.225-7057	Preaward Disclosure of Employment of Individuals Who Work in the People's Republic of China
252.225-7058	Postaward Disclosure of Employment of Individuals Who Work in the People's Republic of China
252.225-7060	Prohibition on Certain Procurements from the Xinjiang Uyghur Autonomous Region