Intramural Program Announcement

and

Application Instructions

for the

Department of Defense

Defense Health Program

Congressionally Directed Medical Research Programs

Joint Program Committee-6/
Combat Casualty Care Research Program

Psychological Health/Traumatic Brain Injury Research Program

Traumatic Brain Injury Data Analysis Award

Funding Opportunity Number: W81XWH-17-PHTBI-TBIDAA

Catalog of Federal Domestic Assistance Number: 12.420 Military Medical Research and Development

SUBMISSION AND REVIEW DATES AND TIMES

- **Pre-Application (Letter of Intent) Submission Deadline:** 5:00 p.m. Eastern time (ET), June 30, 2017
- **Application Submission Deadline:** 11:59 p.m. ET, August 2, 2017
- **End of Application Verification Period:** 5:00 p.m. ET, August 7, 2017
- **Peer Review:** September 2017
- **Programmatic Review:** November 2017

TABLE OF CONTENTS

I. FUNDING OPPORTUNITY DESCRIPTION

NOTE: THIS PROGRAM ANNOUNCEMENT/FUNDING OPPORTUNITY IS INTENDED FOR INTRAMURAL INVESTIGATORS ONLY.

- An ***intramural investigator*** is defined as a Department of Defense (DoD) military or civilian employee working within a DoD laboratory or military treatment facility, or working in a DoD activity embedded within a civilian medical center.
- An ***extramural investigator*** is defined as all those not included in the definition of intramural investigators, above. Submissions from extramural investigators to this Program Announcement/Funding Opportunity will be rejected.

A. Program Description

Applications to the Fiscal Year 2017 (FY17) Psychological Health and Traumatic Brain Injury Research Program (PH/TBIRP) are being solicited for the Defense Health Agency (DHA) J9, Research and Development Directorate. As directed by the Office of the Assistant Secretary of Defense for Health Affairs (OASD[HA]), the DHA manages the Defense Health Program (DHP) Research, Development, Test, and Evaluation (RDT&E) appropriation. The managing agent for this Program Announcement/Funding Opportunity is the Congressionally Directed Medical Research Programs (CDMRP) within the US Army Medical Research and Materiel Command (USAMRMC). The CDMRP provides PH/TBIRP execution management support for DHP core research program areas, including the Joint Program Committee-6/Combat Casualty Care Research Program (JPC-6/CCCRP). This Program Announcement/Funding Opportunity and subsequent awards will be managed and executed by CDMRP with strategic oversight from the JPC-6/CCCRP.

The PH/TBIRP was established by Congress in FY07 in response to the devastating impact of traumatic brain injury (TBI) and psychological health (PH) issues, including post-traumatic stress disorder, on our deployed Service members in Iraq and Afghanistan. The PH/TBIRP mission is to establish, fund, and integrate both individual and multi-agency research efforts that will lead to improved prevention, detection, and treatment of PH issues and TBI. The vision of the PH/TBIRP is to prevent, mitigate, and treat the effects of traumatic stress and TBI on function, wellness, and overall quality of life for Service members as well as their caregivers and families. The DHA J9, Research and Development Directorate leverages PH/TBIRP funding to complement DHP core research and development funding assigned to study PH and TBI.

The JPC-6/CCCRP is one of six major research program areas within the DHP. The JPC-6/ CCCRP is a committee of DoD and non-DoD medical and military technical experts in combat casualty care-related program areas. The JPC-6/CCCRP strives to optimize survival and recovery from combat-related or trauma-induced injury in current and future operational scenarios. This is being accomplished through the development of knowledge and materiel products for the acute and early management of combat-related or trauma-induced injury, including point-of-injury, en route, and forward surgical care. Innovations developed by JPC-6/CCCRP-supported research are applied in-theater and within the clinical facilities of the Military Health System. These solutions not only minimize the morbidity and mortality of combat-related injuries in Service members, they also are often translatable to the civilian healthcare system.

B. Award Information

The JPC-6/CCCRP Neurotrauma Portfolio (NTP) is focused on closing military-relevant gaps across a broad range of research areas to improve the prevention, diagnosis, management, and treatment of TBI and related sequelae from point-of-injury through recovery. Ultimately, the NTP's goal is to decrease morbidity and mortality from neurotrauma, mitigate secondary brain injury across all TBI severities and all echelons of care, and advance materiel and knowledge development to expand and develop new clinical guidelines, care algorithms, therapies, devices, and procedures that advance the decision-making capabilities of medical personnel, enabling earlier intervention and improved outcomes.

The intent of this funding opportunity is to overcome historical challenges associated with human subject recruitment by supporting research leveraging existing data from the Department of Defense Trauma Registry (DoDTR[1]) to rapidly identify actionable insights into the management of TBI. The DoDTR Neurotrauma module includes combat-related TBI data from a collection of data sources such as the Theater Medical Data Store (TMDS) and Blast Exposure and Concussion Incident Report (BECIR). TMDS compiles casualty health history from various electronic military healthcare systems within the operational environment to provide a patient's complete operational electronic health record, and BECIR contains data on Service members exposed to potentially concussive events (injured and uninjured).

Note: Applications proposing clinical trials are not permitted under this award mechanism.

C. FY17 PH/TBIRP TBI-DAA Research Areas

The FY17 PH/TBIRP Traumatic Brain Injury Data Analysis Award (TBI-DAA) seeks applications that leverage existing combat-related data to better understand the relationship between potentially concussive events and management of TBI from point-of-injury to short- and long-term health outcomes. To meet the intent of the award mechanism, applications ***MUST*** propose research in at least one of the following Research Areas:

- Research aimed at identifying and analyzing information, paradigms, and patterns that provide actionable insights to inform or change prehospital care, en route care, and/or clinical practice of TBI.
- Studies in populations with known exposures to potentially concussive events, as documented within the BECIR module and known medical encounters from the TMDS to analyze and understand the relationships between exposure events, health records, outcomes, and clinical guidelines.
- Studies of combat-related TBI to include demographics of patients, mechanism of injury, initial clinical examination findings, and laboratory results during the early management of injuries so that modifiable factors associated with in-theater mortality and poor outcomes can be identified and targeted to further improve care.

[1] An overview of the Joint Trauma System (JTS) and the DoDTR can be found here: http://www.usaisr.amedd.army.mil/10_jts.html

This Program Announcement/Funding Opportunity will only support retrospective analyses of existing data from the Department of Defense Trauma Registry. It may not be used to support animal studies or prospective enrollment of human subjects.

Research Involving Human Subjects Data: All DoD-funded research involving new and ongoing research with human subjects data must be reviewed and approved by the USAMRMC Office of Research Protections (ORP), Human Research Protection Office (HRPO) 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 submission is ***not*** required. The HRPO is mandated to comply with specific laws and requirements governing all research involving human subjects data that is supported by the DoD. These laws and requirements will necessitate information in addition to that supplied to the IRB/EC. ***Allow a minimum of 2 to 3 months for HRPO regulatory review and approval processes***. Refer to Appendix 3, Regulatory Requirements, and the Human Subject Resource Document available on the eBRAP "Funding Opportunities & Forms" web page (https://ebrap.org/eBRAP/public/Program.htm) for additional information.

Rigor of Experimental Design: All projects should adhere to accepted standards for rigorous study design and reporting to maximize the reproducibility and translational potential of preclinical research. Core standards are described in Landis, S.C., et al., A call for transparent reporting to optimize the predictive value of preclinical research, *Nature* 2012, 490:187-191 (www.nature.com/nature/journal/v490/n7419/full/nature11556.html). While these standards were written for preclinical studies, the basic principles of randomization, blinding, sample-size estimation, and data handling derive from well-established best practices in research and should be applied consistently across basic and translational studies.

Military Relevance: Although the research outcomes are expected to benefit both the military and the general public, relevance to the healthcare needs of military Service members and other beneficiaries is a key requirement of this award. Investigators are encouraged to consider the following characteristics as examples of how a project may demonstrate relevance to the mission of the DHP, JPC-6/CCCRP, and the military:

- Explanation of how the project has direct relevance to DoD healthcare personnel, recipients, and other beneficiaries
- Collaboration with DoD investigators
- Involvement of military consultants (Army, Air Force) or specialty leaders (Navy, Marine Corps) to the Surgeons General in a relevant specialty area

Principal Investigators (PIs) are encouraged to integrate and/or align their research projects with DoD and/or Department of Veterans Affairs (VA) research laboratories and programs. Collaboration with DoD or VA investigators is also encouraged. The following websites may be useful in identifying information about ongoing DoD and VA areas of research interest:

Air Force Research Laboratory
http://www.wpafb.af.mil/afrl

Armed Forces Institute of Regenerative Medicine
http://www.afirm.mil

Center for Neuroscience and Regenerative Medicine
http://www.usuhs.mil/cnrm/

Clinical and Rehabilitative Medicine Research Program
https://crmrp.amedd.army.mil

Combat Casualty Care Research Program
https://ccc.amedd.army.mil

Congressionally Directed Medical Research Programs
http://cdmrp.army.mil

Defense Advanced Research Projects Agency
http://www.darpa.mil

Defense Medical Research and Development Program
http://cdmrp.army.mil/dmrdp/default

Defense and Veterans Brain Injury Center
http://dvbic.dcoe.mil/

VA Quality Enhancement Research Initiative
http://www.queri.research.va.gov/

Defense Technical Information Center
http://www.dtic.mil

Military Infectious Diseases Research Program
https://midrp.amedd.army.mil

Military Operational Medicine Research Program
https:/momrp.amedd.army.mil

National Center for Telehealth and Technology
http://t2health.org/

National Museum of Health and Medicine
http://www.medicalmuseum.mil/index.cfm

Naval Health Research Center
http://www.med.navy.mil/sites/nhrc

Navy and Marine Corps Public Health Center
http://www.med.navy.mil/sites/nmcphc

Office of Naval Research
http://www.med.navy.mil

Office of the Under Secretary of Defense for Acquisition, Technology and Logistics
http://www.acq.osd.mil/

US Army Medical Research Acquisition Activity
http://www.usamraa.army.mil/

US Army Medical Research and Materiel Command
https://mrmc.amedd.army.mil

US Army Research Laboratory
http://www.arl.army.mil

US DoD Blast Injury Research Program
https://blastinjuryresearch.amedd.army.mil/

US Naval Research Laboratory
https://www.nrl.navy.mil

US Department of Veterans Affairs, Office of Research and Development
http://www.research.va.gov

Walter Reed Army Institute of Research
http://www.wrair.army.mil

Veterans Health Initiative for TBI
http://www.publichealth.va.gov/vethealthinitiative/traumatic_brain_injury.asp

Use of Military and VA Resources: If the proposed research involves access to military and/or VA resource(s), the PI is responsible for establishing access. Access to military and/or VA patient resource(s) must be confirmed at the time of application submission. A letter of support, signed by the lowest-ranking person with approval authority, should be included for studies involving military and/or VA-controlled study materials and military and/or VA databases. Use

Attachment 2 to provide this documentation (see Attachment 2, Supporting Documentation). If access cannot be confirmed at the time of application submission, the Government reserves the right to withhold or revoke funding until the PI has demonstrated support for and access to the relevant resources.

The JPC-6/CCCRP and CDMRP intend that information, data, and research resources generated under awards funded by this Program Announcement/Funding Opportunity will be made available to the research community (which includes both scientific and consumer advocacy communities) and to the public at large. For additional guidance, refer to Appendix 2, Administrative Information.

D. Eligibility Information

This Program Announcement/Funding Opportunity is intended for intramural investigators only.

- Independent intramural investigators at all academic levels (or equivalent) are eligible to submit applications.
- Cost sharing/matching is not an eligibility requirement.
- ***Submissions from extramural (non-DoD) investigators will be rejected.*** It is permissible, however, for an extramural investigator to be named as a collaborator in a submission from an intramural investigator. In such cases, the intramural organization will receive all funds and is responsible for executing all necessary existing contractual or assistance funding awards to collaborating partners through their agency's procedures.
- It is expected that the majority of work funded through this Program Announcement/ Funding Opportunity will be performed within a DoD laboratory or military treatment facility. Regardless of the location, any work that is to be performed by associated non-DoD organizations must be limited to work performed under existing service contracts or under Cooperative Agreements or Material Transfer Agreements. The Government reserves the right to administratively withdraw any application that does not meet these eligibility criteria. ***Applications that require research to be performed by a non-DoD organization under a new service contract will not be considered for funding.***

E. Funding

- The maximum period of performance is 18 months.
- The anticipated total costs (direct and indirect) budgeted for the entire period of performance will not exceed **$850,000**. Indirect costs are to be budgeted in accordance with the organization's negotiated rate. No budget will be approved by the Government exceeding **$850,000** total costs or using an indirect cost rate exceeding the organization's negotiated rate.
- All direct and indirect costs of any subaward or subcontract must be included in the total direct costs of the primary award.

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

- Travel costs for the PI(s) to disseminate project results at one DoD-related meeting to be determined at the discretion of the Government during the award performance period. Costs associated with travel to this meeting should be included in the budget. For planning purposes, it should be assumed that the 2-day meeting will be held in the National Capital Area. These travel costs are in addition to those allowed for annual scientific/technical meetings. Annual travel costs to the Military Health System Research Symposium should also be included as part of the budget.

May be requested for (not all-inclusive):

- Salary
- Equipment
- Research supplies
- Support for multidisciplinary collaborations
- Travel between collaborating organizations
- Travel costs for one investigator to travel to one scientific/technical meeting, in addition to the required meetings described above

Submissions selected for funding will be processed for award by USAMRMC. Awards are made to organizations, not individuals. Awards to intramural 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 managers. ***It is permissible, however, for an extramural investigator to be named as a collaborator in an application submitted by an intramural investigator.*** In such cases, the intramural organization will receive all funds and is responsible for executing all necessary contractual or assistance funding awards to collaborating partners through their agency's procedures. Any work that is to be performed by associated non-DoD organizations must be limited to work performed under existing service contracts or under Cooperative Agreements or Material Transfer Agreements.

The JPC-6/CCCRP expects to allot approximately $2.5 million (M) of the FY17 PH/TBI and $5.5M of the FY18 DHP RDT&E appropriations to fund approximately nine (9) FY17 JPC-6/CCCRP PH/TBIRP Traumatic Brain Injury Data Analysis Award applications, depending on the quality and number of applications received. Funding of applications received in response to this Program Announcement/Funding Opportunity is contingent upon the availability of Federal funds for this program. As of the release date of this Program Announcement/Funding Opportunity, the FY18 Defense Appropriations Bill has not been passed and there is no guarantee that any funds will be made available to support this program. The funding estimated for this Program Announcement/Funding Opportunity is approximate and subject to realignment.

II. SUBMISSION INFORMATION

Submission is a two-step process requiring both (1) pre-application submission and (2) application submission through the electronic Biomedical Research Application Portal (eBRAP) (https://eBRAP.org/).

All submission dates and times are indicated on the title page of this Program Announcement/ Funding Opportunity. Pre-application and application submissions are required. Failure to meet either of these deadlines will result in application rejection.

Start the submission process early. eBRAP has a number of required steps that must be completed before submissions will be accepted. Be sure to allow adequate time for completion of all pre-application and application steps by their respective deadlines.

eBRAP is a multifunctional web-based system that allows PIs to submit their pre-applications electronically through a secure connection, to view and edit the content of their pre-applications and full applications, to receive communications from the CDMRP, and to submit documentation during award negotiations and period of performance. It is the applicant's responsibility to review all application components for accuracy as well as ensure proper ordering as specified in this Program Announcement/Funding Opportunity.

A. Pre-Application Submission Content

The pre-application process should be started early to avoid missing deadlines. There are no grace periods. **During the pre-application process, each submission is assigned a unique log number by eBRAP.**

All pre-application components must be submitted by the indicated deadline by the PI through eBRAP (https://eBRAP.org/). Material submitted after the deadline, unless specifically requested by the Government, will not be forwarded for processing.

PIs, collaborators, mentors, and organizations 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 PI must contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507 prior to the application deadline.

The pre-application consists of the following components, which are organized in eBRAP by separate tabs:

- **Tab 1 – Application Information**
  - Enter the application information as described in eBRAP before continuing the pre-application.
- **Tab 2 – Application Contacts**
  - Enter contact information for the PI. Enter the organization's Resource Manager/ Comptroller or equivalent Business Official and Authorized Business Official or equivalent responsible for sponsored program administration. The Business

Official must either be 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), and click on "*Add Organizations to this Pre-application.*" The organization(s) must either be selected from the eBRAP drop-down list or invited in order for the pre-application to be submitted.

- **Tab 3 – Collaborators and Key Personnel**
  - Enter the name, organization, and role of all collaborators and key personnel associated with the application.
  - It is recommended that PIs identify an Alternate Submitter in the event that assistance with pre-application submission is needed.
  - FY17 PH/TBIRP Traumatic Brain Injury Data Analysis Award Programmatic Panel members should not be involved in any pre-application or application including, but not limited to, concept design, application development, budget preparation, and the development of any supporting documentation. A list of the FY17 PH/TBIRP Traumatic Brain Injury Data Analysis Award Programmatic Panel members can be found at http://cdmrp.army.mil/phtbi/panels/panels17_daa. For questions related to Panel members and pre-applications or applications, refer to Section IV.C, Withdrawal, or contact the CDMRP Help Desk at help@eBRAP.org or 301-682-5507.
  - 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 application preparation, research, or other duties for submitted applications. The identities of the peer review contractor and the programmatic review contractor may be found at the CDMRP website (http://cdmrp.army.mil/about/2tierRevProcess). Applications that include names of personnel from either of these companies will be administratively withdrawn unless plans to manage Conflicts of Interest (COIs) are provided and deemed appropriate by the Government.

- **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 – Pre-Application Files**

  Note: Upload documents as individual PDF files unless otherwise noted. eBRAP will not allow a file to be uploaded if the number of pages exceeds the limit specified below.

  Letter of Intent (LOI) (one-page limit): Provide a brief description of the research to be conducted. Identify the FY17 PH/TBIRP TBI-DAA Research Area(s) under which

the application will be submitted. Include anticipated project start/end dates, as well as the study objectives/specific aims. LOIs are used for program planning purposes only (e.g., reviewer recruitment) and will not be reviewed during either the peer or programmatic review sessions.

- **Tab 6 – Submit Pre-Application**
  - This tab must be completed for the pre-application to be accepted and processed.

B. Full Application Submission Content

Applications will not be accepted unless the PI has submitted a complete pre-application package.

The pre-application process in eBRAP must be completed before the application can be submitted. After pre-application submission, go to "My Applications" and click on "Start Full Application" for the log number under which the pre-application was submitted.

The application process should be started early to avoid missing deadlines. There are no grace periods.

All application components must be submitted by the indicated deadline by the PI through eBRAP (https://eBRAP.org/). Material submitted after the deadline, unless specifically requested by the Government, will not be forwarded for processing. ***The organization's Business Official or Authorized Organization Representative (or Resource Manager/ Comptroller*) *must approve/verify the full application submission prior to the verification/ approval deadline.***

eBRAP Application Package Components: For the FY17 PH/TBIRP TBI-DAA, the eBRAP application package includes the following components, which are organized in eBRAP by separate tabs. **To access these tabs, go to "My Applications" and click on "Start Full Application"** for the log number under which the pre-application was submitted.

- **Tab 1 – Summary:** Provides a summary of the application information.

- **Tab 2 – Application Contacts:** This tab will be populated by eBRAP. Add the Business Official or Authorized Organization Representative.

- **Tab 3 – Full Application Files:** Under each Application Component in eBRAP, upload each as an individual PDF file. Refer to Appendix 1, Formatting Guidelines, for detailed formatting guidelines.

  1. **Application Component: Attachments:** Each attachment must be uploaded as an individual PDF file unless otherwise stated.

     - **Attachment 1: Project Narrative (15-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 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:** Describe in detail the rationale for the study and include a literature review, preliminary studies, and/or preclinical data that led to the development of the proposed project. The background section should clearly support the choice of study variables and should explain the basis for the study questions and/or study hypotheses. Establish the relevance and applicability of the proposed study and findings to the intent of the award mechanism and at least one of the FY17 PH/TBIRP TBI-DAA Research Areas.
- **Objectives/Specific Aims/Hypotheses:** Provide a description of the purpose and objectives of the study with detailed specific aims and hypotheses.
- **Research Design and Methods:**
  - Describe the experimental design, methods, and analyses including appropriate controls in sufficient detail for analysis.
  - Define the study variables and describe how they will be measured. Include a description of appropriate controls and the endpoints to be tested.
  - Include a complete power analysis to demonstrate that the sample size is appropriate to meet the objectives of the study.
  - Describe how data from the DoDTR will be accessed.
  - Describe the types of datasets necessary to complete the proposed work.
- **Technical Risks:** Identify and describe potential problem areas in the proposed approach and alternative methods and approaches that will be employed to mitigate any risks that are identified.
- **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. As part of the plan, please discuss how patient privacy will be maintained and protected in accordance with HIPAA, the Health Insurance Portability and Accountability Act, privacy and security protections. Refer to Appendix 2, Administrative Information, Section E, for more information about the CDMRP expectations for making data and research resources publicly available.

- **Attachment 2: Supporting Documentation.** Start each document on a new page. Combine and upload as a single file named "Support.pdf." If documents are scanned to pdf, the lowest resolution (100 to 150 dpi) should be used. ***There are no page limits for any of these components unless otherwise noted.***

Include only those components described below; inclusion of items not requested 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 publications 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 Program Announcement/Funding Opportunity, 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, to include:
  - Availability of and access to research resources (to include any proprietary material for the purpose/duration of the proposed research)
  - Availability of and access to appropriate data or databases, if applicable
  - If applicable, a letter from the collaborator's Commander or Commanding Officer at the intramural organization that authorizes the collaborator's involvement in the proposed research. This also applies to collaborators from DoD organizations.
- **Letter(s) of Support for Use of Military and VA Populations or Resources:** Since the proposed research plan involves access to active duty military and/or VA patient data or resources, include a letter(s) of support, signed by the lowest-ranking person with approval authority, confirming such access. If access cannot be confirmed at the time of application

submission, the Government reserves the right to withhold or revoke funding until the PI has demonstrated support for and access to the relevant resources.

- **Joint Sponsorship (if applicable):** Describe present or prospective joint sponsorship of any portion of the program outlined in the application. In the absence of agreements among sponsors for joint support, the application should be structured so that the research can be carried out without the resources of any other sponsor. If, however, it is desirable to request partial support from another agency, the proposed plan should be stated and the reasons documented. If the plan cannot be formulated at the time the application is submitted, information should be sent later as an addendum to the application. Prior approval from both agencies must be secured for research to be undertaken under joint sponsorship. Provide letters of support related to recruitment, subject access, and data access plans.
- **Intellectual Property:** Refer to Appendix 2, Administrative Information, for additional information, and provide the following.
  - Intangible property acquired, created, or developed under this award will be subject to all rights and responsibilities established at 2 CFR 200.315. Should the applicant intend to use, in the performance of this program, pre-existing, legally protected and perfected intangible property and for which no Federal funds had been used in the development of said property, the applicant must:
    - Clearly identify all such property;
    - Identify the cost to the Federal Government for use or license of such property, if applicable; or
    - Provide a statement that no property meeting this definition will be used on this project.
  - Intellectual and Material Property Plan (if applicable): Provide a plan for resolving intellectual and material property issues among participating organizations.
  - Commercialization Strategy (if applicable): Describe the commercialization plan. The plan should include intellectual property, market size, financial analysis, strengths and weaknesses, barriers to the market, competitors, and management team. Discuss the significance of this development effort, when it can be anticipated, and the potential commercial use for the technology being developed.
- **Current Quad Chart:** Complete the Quad Chart template, a one-page PowerPoint file that must be downloaded from the CDMRP eBRAP system at https://ebrap.org/eBRAP/public/Program.htm, and saved, using Adobe Acrobat Reader, as a PDF file.

- **Attachment 3: Technical Abstract (one-page limit): Upload as "TechAbs.pdf."** 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.

  The technical abstract is used by all reviewers and should be clear and concise and written using the outline below.

  - **Background:** Present the ideas and reasoning behind the proposed work.
  - **Objective/Hypothesis:** State the objective/hypothesis to be tested. Provide evidence or rationale that supports the objective/hypothesis.
  - **Specific Aims:** State the specific aims of the study.
  - **Study Design:** Briefly describe the study design including appropriate controls.
  - **Impact:** Identify the FY17 PH/TBIRP TBI-DAA Research Area(s) to be addressed and briefly describe how the proposed research will impact the understanding of the relationship between potentially concussive events and management of TBI.

- **Attachment 4: Lay Abstract (one-page limit): Upload as "LayAbs.pdf."** 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.*** Use only characters available on a standard QWERTY keyboard. Spell out all Greek letters, other non-English letters, and symbols. Graphics are not allowed.

  The lay abstract should not duplicate the technical abstract. The lay abstract should be written using the outline below:

  - Describe the objectives and rationale for the research in a manner that will be readily understood by readers without a science or medical background.
  - Identify the FY17 PH/TBIRP TBI-DAA Research Area(s) to be addressed.
  - Describe the types of patients that will be helped by the research and how it will help them. Include currently available statistics to the related injury/ condition, if applicable.
  - Describe the potential clinical applications, benefits, and risks.
  - Describe the projected timeline to achieve the expected patient-related outcome.
  - Describe how the proposed project will benefit Service members, Veterans, and/or their family members.

- **Attachment 5: Statement of Work (SOW) (three-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). For the FY17 PH/TBIRP TBI-DAA mechanism, use the SOW format example titled "SOW (Statement of Work) Generic Format." The SOW must be in PDF format prior to attaching.

- **Attachment 6: Impact and Military Benefit (two-page limit): Upload as "Impact.pdf."** Explain the proposed research project's potential impact and military benefit as follows:
    - **Short-Term Impact:** Describe the anticipated short-term outcome(s) that will be directly attributed to the results of the proposed research. Describe how the proposed work will impact the understanding of the relationship between potentially concussive events and management of TBI.
    - **Long-Term Impact:** Describe the anticipated long-term vision for implementation of the knowledge generated from the proposed research. Compare the anticipated research outcomes to currently available clinical guidance/practice, if applicable.
    - **Military Benefit:** Clearly articulate how the proposed research can improve the management of TBI.
    - **Public Purpose:** Concisely describe how this research can benefit the general public.
    - **Challenges:** Describe potential issues or challenges that might limit the impact of the proposed research. Applications should also identify any possible solutions to these challenges or potential issues.

2. Application Component: Key Personnel

Each attachment must be uploaded as an individual PDF file unless otherwise stated. The Biographical Sketches and the Previous/Current/Pending Support for the PI and Key Personnel may either be attached to the Research & Related Senior/ Key Person Profile (Expanded) Form or uploaded as individual files in the "Key Personnel" Application Component.

- **Research & Related Senior/Key Person Profile (Expanded) Form:** Upload the completed Research & Related Senior/Key Person Profile (Expanded) Form as "Key Personnel.pdf."
- **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 the PDF that is not editable.

Biographical Sketches should be used to demonstrate background and expertise through education, positions, publications, and previous work accomplished.

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

  For all previous (award period of performance ending within the past 5 years), current, and pending research support, include the title, time commitments, supporting agency, name and address of the funding agency's procuring Contracting/Grants Officer, period of performance, level of funding, brief description of the project's goals, and list of the specific aims. If applicable, identify where the proposed project overlaps with other existing and pending research projects. Clearly state if there is no overlap.

- **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."

3. **Application Component: Budget:** Use the DoD Military Budget Form available on the "Funding Opportunity and Forms" page in eBRAP (https://ebrap.org/eBRAP/public/Program.htm). Refer to Appendix 4, Budget Form Instructions for detailed information on completing this form.
   - Upload the DoD Military Budget Form as "Budget_LastName.pdf."
   - Budget Justification (no page limit): Upload as "BudgetJustification_LastName.pdf." The budget justification must include a Federal Agency Financial Plan as described in Appendix 4.
   - Subaward Budget: Include all Subaward budgets. Complete a separate detailed Budget using the DoD Military Budget Form including a budget justification for each subaward (subgrant or subcontract) in accordance with the instructions listed above. Title each individual subaward, "Budget," and "Budget Justification," with the name of the subawardee/subrecipient organization
   - **Federal Agency Financial Plan (required):** Provide a detailed Federal Agency Financial Plan after the budget justification information in the DoD Military Budget Form. The plan delineates how all FY17 funding will be obligated by **September 30, 2018,** and FY18 funding will be obligated by **September 30, 2019**. The plan must include the funding mechanism(s) or contractual arrangements that will be used to carry over funds between fiscal years, if applicable. Any FY17 or FY18 funding not obligated by above-stated deadlines may be withdrawn by the issuing Comptroller.

4. **Application Component: Project/Performance Site Location(s) Form**: Use the Project/Performance Site Location(s) Form available on the "Funding Opportunity and Forms" page in eBRAP (https://ebrap.org/eBRAP/public/Program.htm). Upload as "Performancesites.pdf."

- On the Project/Performance Site Location(s) Form, indicate the primary site where the work will be performed. If a portion of the work will be performed at any other site(s), include the name and address for each collaborating location in the data fields provided. Add more sites as necessary using the "Next Site" button. If more than eight performance site locations are proposed, provide the requested information in a separate file and attach it to this form. Each additional research site requesting funds will require a subaward budget.

- **Tab 4 – Application and Budget Data:**

  Review and edit the Proposed Project Start Date, Proposed End Date, and Budget Data pre-populated from the Budget Form.

- **Tab 5 – Submit/Request Approval of the Full Application**

  Once all components have been uploaded, and prior to the full application submission deadline, enter your password in the space provided next to "Enter Your Password Here" and press the "Submit Full Application" button. eBRAP will validate files against the Program Announcement/Funding Opportunity requirements and discrepancies will be noted. If no discrepancies are noted, press the "Confirm Submission" button to complete the application submission**. eBRAP will notify the applicant's Resource Manager/Comptroller or equivalent Business Official by email to log into eBRAP to review and approve the application prior to the Verification/Approval deadline.**

C. Submission Dates and Times

All submission dates and times are indicated on the title page of this Program Announcement/ Funding Opportunity. Pre-application and application submissions are required. Failure to meet either of these deadlines will result in submission rejection.

III. APPLICATION REVIEW INFORMATION

A. 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 of applications against established criteria for determining technical merit. Each application is evaluated for its own merit, independent of other applications. The second tier is a programmatic review that makes recommendations for funding to the Commanding General, USAMRMC, on behalf of the DHA and OASD(HA), based on technical merit, the relevance to the mission of the DHP and JPC-6/CCCRP, the specific intent of the award mechanism, and to other specified evaluation criteria in the Program Announcement/Funding Opportunity. Programmatic review is a comparison-based process in which applications with scientific and technical merit compete in a common pool. ***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 III.B.2, Programmatic Review.*** Additional information about the two-tier process used by the CDMRP can be found at http://cdmrp.army.mil/about/fundingprocess.shtml.

All CDMRP review processes are conducted confidentially to maintain the integrity of the merit-based selection process. Panel members sign a statement 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 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 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 Title 18 United States Code 1905.

B. Application Review Process

1. **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**
     - How well the scientific rationale supports the research project.
     - How relevant and applicable the proposed research and anticipated findings are to at least one of the FY17 PH/TBIRP TBI-DAA Research Areas.
     - How well the hypotheses or objectives, aims, experimental design, methods, and analyses are developed and integrated into the project.
     - How consistent the methods and procedures are with a sound research design.
     - How well the planned DoDTR data access supports the overall project.
     - How well the types of datasets necessary to complete the proposed work support the overall project.
     - How well the study is designed to achieve the research objectives, including the endpoints/outcome measures to be used, and to generate reproducible and rigorous results.
     - How well the PI acknowledges potential problems and addresses alternative approaches.
     - Whether the research can be completed within the proposed period of performance.
     - How well the PI has outlined a plan for management and sharing of research data as appropriate for the type of study.
     - How well the application identifies intellectual property ownership, describes any appropriate intellectual and material property plan among participating organizations (if applicable), and addresses any impact of intellectual property issues on product development and subsequent Government access to products supported by this Program Announcement/Funding Opportunity.

- **Statistical Plan**
    - To what degree the statistical plan, including sample size projections and power analysis, and data analysis plan are adequate for the study and all proposed correlative studies.
- **Impact**
    - To what extent the anticipated short-term research outcomes and long-term vision of the proposed research may impact the understanding of the relationship between potentially concussive events and management of TBI.
    - To what extent the proposed research can benefit the general public.
    - If applicable, to what degree the knowledge to be generated from research proposed represents an improvement to currently available clinical guidance/practice.
- **Personnel**
    - Whether the composition of the research or study team (e.g., study coordinator, statistician) is appropriate.
    - Whether the levels of effort by the PI and other key personnel are appropriate to ensure success of this project.
    - Whether the record(s) of accomplishment of the investigator(s) demonstrates his/her ability to accomplish the proposed work.

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

- **Budget**
    - Whether the budget is appropriate for the proposed research.
    - Whether the maximum total costs are equal to or less than the allowable maximum total costs as published in the Program Announcement/Funding Opportunity.
- **Application Presentation**
    - To what extent the writing, clarity, and presentation of the application components influence the review.
- **Environment**
    - To what degree the scientific environment and the accessibility of institutional/ organizational resources support the proposed research requirements (including collaborative arrangements).
    - How the quality and extent of institutional/organizational support are appropriate for the proposed project.

2. **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:

   a. **Ratings and evaluations of the peer reviewers**

   b. **Relevance to the mission of the DHP and JPC-6/CCCRP, as evidenced by the following:**

      - Adherence to the intent of the award mechanism
      - Programmatic relevance
      - Program portfolio composition
      - Relative impact and military benefit

C. Application Review Dates

All application review dates and times are indicated on the title page of this Program Announcement/Funding Opportunity.

D. Notification of Application Review Results

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

IV. ADMINISTRATIVE ACTIONS

After receipt of pre-applications and applications from eBRAP, the following administrative actions may occur:

A. Rejection

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

- Letter of Intent is missing.

The following will result in administrative rejection of the application:

- Letter of Intent was not submitted.
- Project Narrative exceeds the page limit.
- Project Narrative is missing.
- Budget is missing.

B. Modification

- Pages exceeding the specific limits will be removed prior to review for all documents other than the Project Narrative.
- Documents not requested will be removed.

C. Withdrawal

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

- An FY17 PH/TBIRP TBI-DAA 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 FY17 PH/TBIRP TBI-DAA Programmatic Panel members can be found at http://cdmrp.army.mil/phtbi/panels/panels17_daa.***
- The application fails to conform to this Program Announcement/Funding Opportunity description to the extent that appropriate review cannot be conducted.
- 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. The identities of the peer review contractor and the programmatic review contractor may be found at the CDMRP website (http://cdmrp.army.mil/about/2tierRevProcess). Applications that include names of personnel from either of these companies will be administratively withdrawn unless plans to manage COIs are provided and deemed appropriate by the Government. Refer to Appendix 2, Administrative Information, for additional information.
- Personnel from applicant or collaborating organizations are found to have contacted persons involved in the review process to gain protected evaluation information or to influence the evaluation process.
- Proposed research includes animal studies or prospective enrollment of human subjects.

D. Withhold

Applications that appear to involve research misconduct will be administratively withheld from further consideration pending institutional investigation. The institution will be required to provide the findings of the investigation to CDMRP for a determination of the final disposition of the application.

V. AWARD ADMINISTRATION INFORMATION

A. Award Notice

Awards will be made no later than September 30, 2019.

B. Administrative Requirements

Refer to Appendix 2, Administrative Information, for general information regarding administrative requirements.

C. Reporting and Deliverables

Refer to Appendix 2, Administrative Information, for Reporting and Deliverable requirements for this award.

Quarterly technical progress reports, quad charts, and in-person presentations will be required.

D. Award Transfers

Approval of a PI or organizational transfer request will be on a case-by-case basis at the discretion of the CDMRP.

VI. AGENCY CONTACTS

A. CDMRP Help Desk

Questions related to Program Announcement/Funding Opportunity content or submission requirements as well as questions related to the submission of the pre-application 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

VII. APPLICATION SUBMISSION CHECKLIST

Application Components	Upload Order	Action	Completed
Attachments	1	Project Narrative: Upload as Attachment 1 with file name "ProjectNarrative.pdf."	
	2	Supporting Documentation: Upload as Attachment 2 with file name "Support.pdf."	
	3	Technical Abstract: Upload as Attachment 3 with file name "TechAbs.pdf."	
	4	Lay Abstract: Upload as Attachment 4 with file name "LayAbs.pdf."	
	5	Statement of Work: Upload as Attachment 5 with file name "SOW.pdf."	
	6	Impact and Military Benefit: Upload as Attachment 6 with file name "Impact.pdf."	
Key Personnel		Research & Related Senior/Key Person Profile (Expanded): Upload as "Key Personnel.pdf."	
		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.	
Budget		Upload Budget (Budget_LastName.pdf) and Budget Justification (BudgetJustification_LastName.pdf), and Subaward Budgets and Budget Justifications as applicable.	
Project/Performance Site Location(s) Form		Upload Project/Performance Site Location(s) Form as "Performancesites.pdf."	

APPENDIX 1
FORMATTING GUIDELINES

All pre-application and application documents must be legible and should conform to the formatting guidelines described below. The font size, spacing, page size, and margins may differ between the word processing, PDF, and printed versions. These guidelines apply to the document properties of the electronic version of the PDF file(s) as viewed on a computer screen.

- **Document Format:** All attachments must be in PDF.
- **Font Size:** 12 point, 10 pitch.
- **Font Type:** Times New Roman.
- **Spacing:** Single space or no more than six lines of type within a vertical inch (2.54 cm).
- **Page Size:** No larger than 8.5 inches x 11.0 inches (21.59 cm x 27.94 cm).
- **Margins:** At least 0.5 inch (1.27 cm) in all directions.
- **Print Area:** 7.5 inches x 10.0 inches (19.05 cm x 25.40 cm).
- **Color, High-Resolution, and Multimedia Objects:** Project narratives and pre-application files may include color, high-resolution, or multimedia objects (e.g., MPEG, WAV, or AVI files) embedded in the PDF files; however, these objects should not exceed 15 seconds in length and a size of 10 MB. Photographs and illustrations must be submitted in JPEG format; bit map or TIFF formats are not allowed.
- **Scanning Resolution:** 100 to 150 dots per inch.
- **Internet URLs:** URLs directing reviewers to websites that contain additional information about the proposed research are not allowed in the application or its components. Inclusion of such URLs may be perceived as an attempt to gain an unfair competitive advantage. However, links to publications referenced in the application are encouraged.
- **Language:** All documents must be submitted in English, unless otherwise specified in the Program Announcement/Funding Opportunity (e.g., foreign transcripts submitted with English translations).
- **Headers and Footers:** Should not be used. Pre-existing headers and footers on required forms are allowed.
- **Page Numbering:** Should not be used.
- **Recommended Component Size:** Each attachment should not exceed 20 MB.

APPENDIX 2
ADMINISTRATIVE INFORMATION

A. Disclosure of Proprietary Information

Do not include proprietary information in a pre-application or abstract. Proprietary information should only be included in a full application if necessary for evaluation.

Proprietary information submitted in an application may be disclosed outside the Government for the sole purpose of technical evaluation. Evaluators must agree that proprietary information in the application will be used for evaluation purposes only and will not be further disclosed or used.

All applications may be subject to public release under the Freedom of Information Act (FOIA) to the extent that they are incorporated into an award document; applications that are not selected for funding will not be subject to public release.

B. Marketing of Proprietary Information

Conspicuously and legibly mark any proprietary information that is included in the application.

C. Conflict of Interest (COI)

All awards must be free of COIs, as defined at 32 CFR 32.42, that could bias the research results. Prior to award, applicants are 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 that a COI cannot be adequately managed.

D. Reporting Requirements

Reporting requirements and deliverables will be determined prior to award funding and may vary depending on the research being conducted. Anticipated reporting requirements and deliverables may include the following:

- **Progress Reports:** Quarterly, annual, and final reports will be required. These reports will present a detailed summary of scientific issues and accomplishments. A final report will be submitted within 90 days of the end of the award period and will detail the findings, their potential impact to the military or Veteran population, and other issues for the entire project. The format for the progress reports is available on eBRAP at https://ebrap.org/eBRAP/public/Program.htm.
- **Quad Charts:** Quad Charts that outline the specific aims, approach, timeline and costs, and goals/milestones will be required with every quarterly report. The format for the quad chart is available on eBRAP at https://ebrap.org/eBRAP/public/Program.htm.

E. Publication, Acknowledgement, and Public Release

- **Publication of Findings:** Publication of findings is a requirement of this submission. It is expected that at study completion researchers will submit their findings to an appropriate peer-reviewed journal for publication. Copies of all scientific publications, presentations, and reports resulting from this funding mechanism shall be submitted to CDMRP when published or completed even if beyond the period of performance to

allow reporting to the Defense Health Program and Congress on the accomplishments of the program.

- **Acknowledgment:** The recipient agrees that in the release of information relating to this award such release shall include the statements below, as applicable. "Information" includes, but is not limited to, news releases, articles, manuscripts, brochures, advertisements, still and motion pictures, speeches, trade association meetings, and symposia.
    - "This work was supported by the Defense Health Agency (J9), Research and Development Directorate through Defense Health Program Research, Development, Test and Evaluation funding. Opinions, interpretations, conclusions and recommendations are those of the author and are not necessarily endorsed by the Department of Defense."
    - "In conducting research using animals, the investigator(s) adheres to the laws of the United States and regulations of the Department of Agriculture." Include required assurances, approvals, documents, and information specified on the Animal Care and Use Review Office (ACURO) website (https://mrmc.detrick.army.mil/index.cfm?pageid=Research_Protections.acuro&rn=1).
    - "In the conduct of research utilizing recombinant DNA, the investigator adhered to NIH Guidelines for research involving recombinant DNA molecules." (http://www.nih.gov)
    - "In the conduct of research involving hazardous organisms or toxins, the investigator adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories." (http://www.cdc.gov/biosafety)

F. Sharing of Data and Research Resources

- It is the intent of the Department of Defense (DoD) that data and research resources generated by this funded research be made available to the research community (which includes both scientific and consumer advocacy communities) and to the public at large.
- Expectations for sharing of data and research resources apply to all basic research, clinical studies, surveys, and other types of research funded through this award. This includes all data and research resources generated during the project's period of performance through grants, cooperative agreements, or contracts. It is critically important to share unique data and research resources that cannot be readily replicated, including but not limited to the following:
    - **Unique Data**[2] are defined as data that cannot be readily replicated. Examples of unique data include large surveys that are expensive to replicate; studies of unique populations, such as patients to whom access is not widely available; studies conducted at unique times, such as during military conflict; studies of rare phenomena, such as rare diseases.

[2] Adapted from https://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm#unique

- **Final Research Data**[3] are defined as recorded factual material commonly accepted in the scientific community as necessary to document and support research findings. These are not the summary statistics or tables; rather, final research data are the data on which summary statistics and tables are based. Final research data do not include laboratory notes or notebooks, partial datasets, preliminary analyses, drafts of scientific papers, plans for future research, peer review reports, communications with colleagues, or physical objects, such as gels or laboratory specimens.
- **Research Resources**[4] include, but are not limited to, the full range of tools that scientists and technicians use in the laboratory, such as cell lines, antibodies, reagents, growth factors, combinatorial chemistry, DNA libraries, clones and cloning tools (such as Polymerase Chain Reaction [PCR]), methods, laboratory equipment, and machines.

- ***Data and research resources generated from this funded research should be made as widely available as possible while safeguarding the privacy of participants and protecting confidential and proprietary data and third-party intellectual property.*** By sharing and leveraging data and research resources, duplication of very expensive and time-consuming efforts can be avoided, allowing for the support of more investigators with Federal funds. Such sharing allows for a more expeditious translation of research results into knowledge, products, and procedures to improve human health.
- ***The PI may be required to participate in the following:***
  - Systems Biology: If the project includes systems biology (SB)-related research, the PI may be required to make SB data, generated via an award, available to the research community by depositing research data into the SysBioCube system (https://sysbiocube-abcc.ncifcrf.gov/).
- ***For additional information on data sharing, refer to the document titled "Congressionally Directed Medical Research Programs: Policy on Data and Resource Sharing," available on eBRAP under Resources and Reference Material at https://ebrap.org/eBRAP/public/Program.htm.***

[3] Adapted from https://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm
[4] Adapted from http://www.gpo.gov/fdsys/pkg/FR-1999-12-23/pdf/99-33292.pdf

APPENDIX 3
REGULATORY REQUIREMENTS

A. Surety, Safety, and Environmental Requirements

Based on recent changes to DoD compliance requirements (DA PAM 385-69, **DA PAM 385-10**, 32 CFR 651 6 September 2012), provisions previously requested for Safety and Environmental Compliance have been removed. However, in certain instances, compliance review may require submission of additional documentation prior to the awarding of any assistance agreement. Such instances may include use of Army-provided infectious agents or toxins, select biological agents or toxins, select chemical agent(s), or pesticides outside of an established laboratory. The US Army Medical Research and Materiel Command (USAMRMC) Office of Surety, Safety, and Environment will identify any need for compliance review and documents must be submitted upon request.

B. Research Protections Review Requirements – Use of Human Subjects, Human Anatomical Substances, Human Data, Human Cadavers, and Animals

The USAMRMC Office of Research Protections (ORP) ensures that research conducted, contracted, sponsored, supported, or managed by the USAMRMC and involving human subjects, human anatomical substances, human data, human cadavers, and animals are conducted in accordance with Federal, DoD, Army, USAMRMC, and international regulatory requirements.

Principal Investigators (PIs) and applicant organizations **may not commence performance** of research involving the above, **or expend funding** on such efforts, until and unless regulatory documents are submitted and approved by the USAMRMC ORP to ensure that DoD regulations are met. All expectations described below are consistent with the DoD Instruction (DoDI) 3216.01, "Use of Animals in DoD Programs," as issued 13 September 2010, available at https://mrmc.amedd.army.mil/index.cfm?pageid=research_protections.acuro_regulations and DoDI 3216.02, "Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research," as issued on 8 November 2011, and available at http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf.

The ORP Animal Care and Use Review Office (ACURO) is responsible for administrative review, approval, and oversight of all animal research protocols, including all changes made during the life of the protocol.

The ORP Human Research Protection Office (HRPO) is responsible for administrative review, approval, and oversight of research involving human subjects, human anatomical substances or data, and use of human cadavers. ***Research involving use of human data and/or specimens that is anticipated to be exempt from human subjects protections regulations requires a determination from the PI's institution as well as the ORP HRPO at USAMRMC.*** A timeframe for submission of the appropriate protocols and required approvals will be established during negotiations.

1. Research Involving Human Subjects, Human Subjects Data, or Human Anatomical Substances

In addition to local Institutional Review Board (IRB) review, investigators must submit all USAMRMC-funded research protocols involving human subjects and

human anatomical substances for review and approval by the USAMRMC ORP HRPO prior to implementation of the research. The focus of this review is to validate IRB review as appropriate and ensure that DoD, Army, and USAMRMC regulatory requirements have been met.

Human subject research definitions, categories, and resource information may be found in the Human Subject Resource Document on the eBRAP website (https://ebrap.org/eBRAP/public/Program.htm). This information is a guide only; it is not intended to be a source for human subject protection regulations. Questions regarding applicable human subject protection regulations, policies, and guidance should be directed to the local IRB, the ORP HRPO (usarmy.detrick.medcom-usamrmc.other.hrpo@mail.mil), and/or the U.S. Food and Drug Administration (FDA) as appropriate. For in-depth information and to access HRPO protocol submission forms, refer to the ORP HRPO website (https://mrmc.amedd.army.mil/index.cfm?pageid=Research_Protections.hrpo).

ORP HRPO-required language must be inserted into the consent form, and compliance with DoD regulations may require additional information be included in the protocol.

The ORP HRPO ensures that DoD-supported and/or -conducted research complies with specific DoD laws and requirements governing research involving human subjects. These laws and requirements may require information in addition to that supplied to the local IRB.

During the regulatory review process for research involving human subjects, the ORP HRPO requirements must be addressed, and any changes to the already approved protocol must be approved as an amendment by the local IRB. It is strongly recommended that investigators carefully read the "Information for Investigators" found at https://mrmc.amedd.army.mil/index.cfm?pageid=research_protections.hrpo. The time to approval depends greatly on adherence to the requirements described within. If the protocol has not been submitted to the local IRB at the time of award negotiation, these guidelines should be considered before submission.

Documents related to the use of human subjects or human anatomical substances will be requested if the application is recommended for funding. ***Allow at least 2 to 3 months for regulatory review and approval processes for studies involving human subjects.***

Specific requirements for research involving human subjects or human anatomical substances can be found at https://mrmc.amedd.army.mil/index.cfm?pageid=research_protections.hrpo.

a. Assurance of Compliance: Each institution engaged in non-exempt human subjects research must have a current Department of Health and Human Services Office for Human Research Protection (OHRP) Federal-wide Assurance (FWA) or DoD Assurance.

b. Training: Personnel involved in human subjects research must have appropriate instruction in the protection of human subjects. Documentation confirming completion of appropriate instruction may be required during the regulatory review process.

c. Informed Consent Form: The following must appear in the consent form:

- A statement that the DoD is providing funding for the study.
- A statement that representatives of the DoD are authorized to review research records.
- In the event that a Health Insurance Portability and Accountability Act (HIPAA) authorization is required, the DoD must be listed as one of the parties to whom private health information may be disclosed.

d. Intent to Benefit: The requirements of Title 10 of the United States Code Section 980 (10 USC 980), which are applicable to DoD-sponsored research, must be considered. 10 USC 980 requires that "Funds appropriated to the Department of Defense may not be used for research involving a human being as an *experimental subject* unless (1) the informed consent of the subject is obtained ***in advance***; or (2) in the case of research intended to be beneficial to the subject, the informed consent may be obtained from a legal representative of the subject."

An individual not legally competent to provide informed consent (e.g., incapacitated individuals, cognitively impaired, minors) may not be enrolled as an ***experimental subject*** in a DoD-supported study unless the research is intended to benefit each subject enrolled in the study, to include subjects enrolled in study placebo arms. Studies designed in a manner that permits all subjects to potentially benefit directly from medical treatment or enhanced surveillance beyond the standard of care can meet the 10 USC 980 requirements. Note that the definition of ***experimental subject*** as defined in the DoDI 3216.02 has a much narrower definition than ***human subject***. Research with experimental subjects must involve an intervention or interaction where the primary purpose of the research is to collect data regarding the effects of the intervention or interaction.

10 USC 980 is only applicable to certain intervention studies. It does not apply to retrospective studies, observational studies, studies that involve only blood draws, and tissue collections. Contact the HRPO at usarmy.detrick.medcomusamrmc.other.hrpo@mail.mil if further clarification regarding applicability of 10USC 980 to the proposed research project is required.

2. Research Monitor Requirement: ***For research determined to be greater than minimal risk, DoDI 3216.02 requires that the IRB approve, by name, an independent research monitor with expertise consonant with the nature of risk(s) identified within the research protocol.*** The IRB must approve a written summary of the monitor's duties, authorities, and responsibilities.

The research monitor's duties should be based on specific risks or concerns about the research. The research monitor may perform oversight functions and report his/her observations and findings to the IRB or a designated official. The research monitor may be identified from within or outside the PI's institution. Research monitor functions may include:

- Observing recruitment and enrollment procedures and the consent process for individuals, groups or units;
- Overseeing study interventions and interactions;

- Reviewing monitoring plans and UPIRTSO reports (Unanticipated Problems Involving Risk to Subjects or Others); and/or
- Overseeing data matching, data collection, and analysis.

There may be more than one research monitor (e.g., if different skills or experiences are necessary). The monitor may be an ombudsman or a member of the data safety monitoring board. At a minimum, the research monitor:

- May discuss the research protocol with the investigators, interview human subjects, and consult with others outside of the study about the research;
- Shall have authority to stop a research protocol in progress, remove individual human subjects from a research protocol, and take whatever steps are necessary to protect the safety and well-being of human subjects until the IRB can assess the monitor's report; and
- Shall have the responsibility for promptly reporting his or her observations and findings to the IRB or other designated official and the HRPO.

A curriculum vitae or biographical sketch and human subjects protection training for the research monitor must be provided. There should be no apparent conflict of interest, and the research monitor cannot be under the supervision of the PI, other investigators, or research staff associated with the proposed research project. If the duties of the research monitor could require disclosure of subjects' Protected Health Information outside a covered entity (i.e., the research monitor is not an agent of the covered entity), the PI's institution may require the identity and location of the research monitor to be described in the study HIPAA authorization. It is acceptable to provide appropriate compensation to the research monitor for his or her services.

3. **Military Personnel Volunteers:** The following is important information for research projects proposing to include military personnel as volunteers.

   - **Recruitment of Military Personnel:** Civilian investigators attempting to access military volunteer pools are advised to seek collaboration with a military investigator familiar with service-specific requirements.

     A letter of support from Commanders of military units in which recruitment will occur or the study will be conducted will be requested by the HRPO. Some military sites may also require that each volunteer seek written permission from their supervisor prior to participation in research studies.

     Special consideration must be given to the recruitment process for military personnel. The Chain of Command must not be involved in the recruitment of military personnel and cannot encourage or order service members to participate in a research study.

     For greater-than-minimal-risk research, an ombudsman must be employed when conducting group briefings with active duty personnel to ensure that volunteers understand that participation is voluntary; this ombudsman may be recommended in other situations as well, especially when young enlisted Service members, who by virtue of their age and enlistment status are trained to follow orders, are being recruited. Service members are trained to act as a unit, so peer pressure should also be considered and minimized, if possible.

- **Payment to Federal Employees and Military Personnel:** Under 24 USC 30, payment to Federal employees and active duty military personnel for participation in research while on duty is limited to blood donation and may not exceed $50 per blood draw. These individuals may not receive any other payment or non-monetary compensation for participation in a research study unless they are off duty or on leave during the time they are participating in the protocol.
- **Confidentiality for Military Personnel:** Confidentiality risk assessment for military personnel requires serious consideration of the potential to affect the military career. Medical and psychological diagnoses can lead to limitation of duties and/or discharge from active duty. Information regarding alcohol or drug abuse, drunk driving, and sexual or spousal abuse can lead to actions under the Uniform Code of Military Justice, including incarceration and dishonorable discharge.

4. **Site Visits:** The USAMRMC ORP HRPO conducts site visits as part of its responsibility for compliance oversight.

Accurate and complete study records must be maintained and made available to representatives of the USAMRMC as a part of their responsibility to protect human subjects in research. Research records must be stored in a confidential manner so as to protect the confidentiality of subject information.

Additional information pertaining to the human subjects regulatory review process, guidelines for developing protocols, and suggested language for specific issues can be found at https://mrmc.amedd.army.mil/index.cfm?pageid=research_protections.hrpo.

5. **Protocol Submission Format:** The ORP HRPO accepts protocol submissions in the format required by the local IRB. The IRB protocol application, if separate from the protocol itself, should be included with protocol submissions. A HRPO protocol submission form should be completed and submitted with each protocol.

APPENDIX 4
BUDGET FORM INSTRUCTIONS

An estimate of the total proposed research project cost, with a breakdown of all cost categories for each year, must be submitted on the DoD Military Budget Form and Justification form. For limits on funding amounts, types of costs, and period of performance, refer to the Program Announcement/Funding Opportunity. No budget will be approved by the Government exceeding the cost limit stated in the specific Program Announcement/Funding Opportunity. The budget and budget justification should include sufficient detail for the Government to determine whether the proposed costs are allowable, allocable, and reasonable for the proposed research.

Begin by entering the PI name, eBRAP log number, and period of performance fields at the top of the DoD Military Budget Form.

DoD Civilian and Military Personnel: Personnel involved in the project should be listed in this section; however, this award is not intended to provide salary support for any Federal employee, as those costs were to have been included in infrastructure costs. If salary support is requested, sufficient justification must be provided in the budget justification section.

- **Name:** Beginning with the PI, list all participants who will be involved in the project during the initial budget period, whether or not salaries are requested. Include all collaborating investigators, research associates, individuals in training, mentor (if applicable), and support staff.
- **Role on Project:** Identify the role of each personnel listed. Describe his/her specific functions in the proposed research in the budget justification.
- **Type of Appointment (Months):** List the number of months per year reflected in an individual's contractual appointment with the applicant organization. The Government assumes that appointments at the applicant organization are full time for each individual. If an appointment is less than full time (e.g., 50%), note this with an asterisk (*) and provide a full explanation in the budget justification. Individuals may have split appointments (e.g., for an academic period and a summer period). For each type of appointment, identify and enter the number of months on separate lines.
- **Annual Base Salary:** Enter the annual organizational base salary (based on a full-time appointment) for each individual listed for the project.
- **Effort on Project:** List the percentage of each appointment to be spent on this project for all staff members including unpaid personnel.
- **Salary Requested:** Enter the salary for each position for which funds are requested. This is calculated automatically from the data provided. If you do not wish this to be calculated for you, uncheck the small "Calculate Salary" checkbox in the bottom of the field. Calculate the salary request by multiplying an individual's organizational base salary by the percentage of effort on the project.
- **Fringe Benefits:** Enter the fringe benefits requested for each individual in accordance with organizational guidelines.
- **Totals:** Calculated automatically from the data provided.

- **Major Equipment:** Provide an itemized list of proposed equipment, showing the cost of each item. Equipment is any article of nonexpendable tangible property having a useful life of more than 1 year and an acquisition cost of $5,000 or more per unit.
- **Materials, Supplies, and Consumables:** The budget justification for supporting material and supply (consumable) costs should include a general description of expendable material and supplies.
- **Travel Costs:** PIs are responsible for budgeting for all costs associated with travel, including airfare, hotel, etc., associated with the trip. Anticipated travel costs should be built into the budget at current or projected DoD per diem rates. Travel costs must include:
    - Travel costs for the PI to attend one DoD-related meeting to be determined at the discretion of the Government during the award performance period.

  Travel costs may include:
    - Travel costs for up to one investigator to travel to one scientific/technical meeting during the period of performance.
    - Travel costs between collaborating organizations.
- **Research-Related Subject Costs:** Include itemized costs of subject participation in the proposed research. These costs are strictly limited to expenses specifically associated with the proposed research.
- **Other Direct Costs:** Itemize other anticipated direct costs such as publication and report costs, equipment rental (provide hours and rates), communication costs, and organizationally provided services. Unusual or expensive items should be fully explained and justified. Estimate the costs of publishing and reporting research results, including direct charges for clerical preparation, illustrations, reprints, and distribution. Organizationally provided services should be supported by the organization's current cost/rate schedule. These items should be described in detail and clearly justified.
- **Subcontract Costs (Partnership/Collaboration Costs):** Should an intramural organization propose collaboration with an extramural entity for part of the research effort, the intramural organization will receive all funds and is responsible for executing all necessary contractual or assistance funding awards to collaborating partners through the agency's procedures. **All direct and indirect costs of any partnership/collaboration costs must be included in the total direct costs of the primary award**. The nature of the partnership/collaboration should be described in the Budget Justification section.
- **Total Direct Costs:** Calculated automatically from the data provided for the initial budget period on page F-2 and for the entire proposed period of support on page F-3.
- **Total Indirect Costs:** If funds for indirect costs are requested, sufficient justification must be provided in the budget justification section. The Government reserves the right to disallow any indirect costs not sufficiently justified. All direct and indirect costs of any proposed collaborator must be included in the total direct costs of the primary award. (See Section I.E., Funding.)
- **Total Costs:** This section is calculated automatically from the data provided.
- **Fee:** A profit or fixed fee is not allowable on awards or on subawards.

***Budget Justification Instructions*:** Provide a clear budget justification for each item in the budget over the entire period of performance in the Justification section) of the DoD Military Budget Form. Itemize direct costs within each budget category for additional years of support requested beyond Year 1.