

# **I. OVERVIEW OF THE FUNDING OPPORTUNITY**

**Program Announcement for the Department of Defense**

**Defense Health Program**

**Congressionally Directed Medical Research Programs**

**Reconstructive Transplant Research Program**

**Idea Discovery Award**

**Announcement Type: Initial**

**Funding Opportunity Number: W81XWH-19-RTRP-IDA**

**Catalog of Federal Domestic Assistance 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), July 17, 2019
- **Invitation to Submit an Application:** August 2019
- **Application Submission Deadline:** 11:59 p.m. ET, October 16, 2019
- **End of Application Verification Period:** 5:00 p.m. ET, October 21, 2019
- **Peer Review:** December 2019
- **Programmatic Review:** February 2020

*This Program Announcement must be read in conjunction with the General Application Instructions, version 20190218. The General Application Instructions document is available for downloading from the Grants.gov funding opportunity announcement by selecting the “Package” tab, clicking “Preview,” and then selecting “Download Instructions.”*

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## **II. DETAILED INFORMATION ABOUT THE FUNDING OPPORTUNITY**

### **II.A. Program Description**

Applications to the Fiscal Year 2019 (FY19) Reconstructive Transplant Research Program (RTRP) are being solicited for the Defense Health Agency (DHA) J9, Research and Development Directorate, by the U.S. Army Medical Research Acquisition Activity (USAMRAA) using delegated authority provided by United States Code, Title 10, Section 2358 (10 USC 2358). 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 execution management agent for this Program Announcement is the Congressionally Directed Medical Research Programs (CDMRP).

The RTRP was initiated in 2012 to provide support for research of exceptional scientific merit that has the potential to make a significant impact on improving the function, wellness, and overall quality of life for injured military Service members and Veterans, their caregivers and family members, and the American public. Appropriations for the RTRP from FY12 through FY18 totaled \$81 million (M). The FY19 appropriation is \$12M.

The RTRP challenges the scientific community to design innovative research that will optimize form, function, appearance, and psychosocial health for catastrophically injured Service members, Veterans, and American civilians through the development of effective reconstructive transplantation solutions. More specifically, the RTRP seeks vascularized composite allotransplantation (VCA)-focused research, also known as composite tissue allotransplantation. VCA refers to the transplantation of multiple tissues such as muscle, bone, nerve, and skin, as a functional unit (e.g., a hand or face) from a deceased donor to a recipient with a severe injury. The ultimate goal is to return injured Service members to duty and restore their quality of life.

Applications from investigators within the military Services and applications involving multi-institutional and multidisciplinary collaborations among academia, industry, the military Services, the U.S. Department of Veterans Affairs (VA), and other Federal Government agencies are highly encouraged.

#### **II.A.1. FY19 RTRP Focus Areas**

To meet the intent of the FY19 RTRP Idea Discovery Award mechanism, applicants must address at least one of the FY19 RTRP Focus Areas listed below (select both a bolded Focus Area and the appropriate subtopic):

##### **Reduce the risks of VCA-associated immunosuppression**

- Define the unique mechanisms of VCA immunogenicity
- Develop novel approaches for improving VCA immune tolerance

- Identify unique immunosuppression requirements for VCA compared to other solid organ transplants

### **Develop reliable non-invasive methods or tools for monitoring VCA graft rejection**

- Develop reliable non-invasive biomarkers for monitoring chronic VCA graft rejection in a large animal model
- Identify and/or validate new peripheral biomarkers for acute and chronic rejection
- Develop assays or devices for clinical graft monitoring utilizing validated biomarkers

### **Advance existing or develop innovative ex vivo tissue preservation strategies to extend the timeline between procurement and transplantation**

- Develop novel approaches and models for perfused, hypothermic, high subzero and low subzero, or static preservation strategies
- Determine the extent to which VCA tissue preservation technology impacts VCA immunogenicity

#### **II.A.2. Award History**

The RTRP Idea Discovery Award mechanism was offered for the first time in FY15. Since then, 45 applications have been received, and 14 have been recommended for funding.

#### **II.B. Award Information**

The FY19 RTRP Idea Discovery Award is intended to support innovative, untested, high-risk/potentially high-reward concepts, theories, paradigms, and/or methods relevant to reconstructive transplant. The outcome of research supported by this award should be the generation of robust data that can be used as a foundation for new avenues of scientific investigation. Important aspects of this award mechanism include:

- **Innovation:** The proposed research project should be novel and innovative. Innovative research may introduce a new paradigm, challenge existing paradigms, look at existing problems from new perspectives, or exhibit other uniquely creative qualities. Research that is an incremental advance upon published data, or a logical progression of an already established research project, is not considered innovative and will not be considered for funding under this award mechanism.
- **Hypothesis and Rationale:** The proposed research project should include a well-formulated testable hypothesis based on strong scientific rationale and study design.
- **Preliminary Data:** Inclusion of *preliminary and/or published data that supports the scientific rationale is strongly encouraged*; however, the proposed work should be innovative and untested.

- **Impact:** Projects should address at least one of the [FY19 RTRP Focus Areas](#). The anticipated outcome(s)/product(s), including material and/or knowledge products, should be clearly articulated, as should the anticipated long-term gains from this research trajectory.
- **Military Relevance:** All projects should be responsive to the healthcare needs of military Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers or clinicians, as well as the general public. Collaboration with military researchers and clinicians is encouraged.

Because the FY19 RTRP Idea Discovery Award is designed for preliminary investigations, *projects involving human subjects or anatomical substances will not be supported unless they are exempt under Title 32, Code of Federal Regulations, Part 219, Section 104(d) (32 CFR 219.104[d]) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.* Studies that do not qualify for exempt status or expedited review will be administratively withdrawn and will not be funded. Therefore, *clinical trials are not allowed under this funding opportunity.* **New FY19 definition:** A clinical trial is a research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include placebo or other control) to evaluate the effects of the interventions on biomedical or behavioral health-related outcomes.

The anticipated total costs budgeted for the entire period of performance for an FY19 RTRP Idea Discovery Award will not exceed **\$500,000**. Refer to [Section II.D.5, Funding Restrictions](#), for detailed funding information.

*The CDMRP expects to allot approximately \$2.5M to fund approximately five Idea Discovery Award 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 FY19 funding opportunity will be funded with FY19 funds, which will expire for use on September 30, 2025.*

Awards will be made no later than September 30, 2020. For additional information refer to [Section II.F.1, Federal Award Notices](#).

The types of awards made under the Program Announcement will be assistance agreements (grants or cooperative agreements). The level of involvement on the part of the Department of Defense (DoD) during project performance is the key factor in determining whether to award a grant or cooperative agreement.

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

**Research Involving Human Anatomical Substances, Human Subjects, or Human Cadavers:** All DoD-funded research involving new and ongoing research with human anatomical substances, human subjects, or human cadavers must be reviewed and approved by the U.S. Army Medical Research and Materiel Command (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 anatomical substances, human subjects, or human cadavers 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.*** Additional time for regulatory reviews may be needed for clinical studies taking place in international settings. When possible, protocols should be written for research with human subjects and/or human anatomical substances that are specific to the DoD-supported effort outlined in the submitted application as a stand-alone study. Submission to HRPO of protocols involving more than the scope of work in the DoD-funded award will require HRPO review of the entire protocol (DoD and non-DoD funded). DoD human subjects protection requirements may be applied to non-DoD funded work and necessitate extensive revisions to the protocol. Applications that involve recruitment of human subjects must indicate the quarterly enrollment targets across all sites in [Attachment 5: Statement of Work \(SOW\)](#). Successful applicants will work with USAMRAA to establish milestones for human subjects recruitment. Continued support for the project will be based upon satisfactory progress in meeting the established milestones. Refer to the General Application Instructions, Appendix 1, and the Human Subject Resource Document available on the electronic Biomedical Research Application Portal (eBRAP) “Funding Opportunities & Forms” web page (<https://ebrap.org/eBRAP/public/Program.htm>) for additional information.

***Under this FY19 RTRP Idea Discovery Award mechanism, research involving human subjects or anatomical substances will not be supported unless they are exempt under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.***

**DoD and VA Collaboration and Alignment Encouraged:** Relevance to the healthcare needs of the Armed Forces and Veterans, as well as their family members, caregivers, or clinicians, is a key feature of this award. Therefore, applicants are encouraged to integrate and/or align their research projects with DoD and/or VA research laboratories and programs. Collaboration with the DoD and/or VA is also encouraged. A list of websites that may be useful in identifying additional information about ongoing DoD and VA areas of research interest or potential opportunities for collaboration can be found in [Appendix 2](#).

**Use of DoD or VA Resources:** If the proposed research involves access to active duty military patient populations and/or DoD 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. Access to target active duty military patient population(s) and/or DoD resource(s) or database(s) should be confirmed by including a letter of support, signed by the lowest-ranking person with approval authority.

If the proposed research involves access to VA patient populations, VA study resources and databases, and/or VA research space and equipment, VA Principal Investigators (PI)s/Co-PIs must have a plan for obtaining and maintaining access throughout the proposed research. Access to VA patients, resources, and/or VA research space should be confirmed by including 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. If appropriate, the application should identify the VA-affiliated non-profit corporation (NPC) as the applicant institution for VA PIs. If the VA NPC is not identified as the applicant institution for administering the funds, the application should 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.

Access to certain DoD or VA patient populations, resources, or databases may only be obtained by collaboration with a DoD or VA investigator who has a substantial role in the research and may not be available to a non-DoD or non-VA investigator if the resource is restricted to DoD or VA personnel. Investigators should be aware of which resources are available to them if the proposed research involves a non-DoD or non-VA investigator collaborating with the DoD and/or VA. If access cannot be confirmed at the time of application submission, the Government reserves the right to withdraw or revoke funding until the PI has demonstrated support for and access to the relevant population(s) and/or resource(s). Refer to [Section II.D.2.b.ii, Full Application Submission Components](#), for detailed information.

**Rigor of Experimental Design:** All projects should adhere to a core set of standards for rigorous study design and reporting to maximize the reproducibility and translational potential of preclinical research. The 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](http://www.nature.com/nature/journal/v490/n7419/full/nature11556.html)). While these standards are written for preclinical studies, the basic principles of randomization, blinding, sample-size estimation, and data handling derive from well-established best practices in clinical studies. Projects that include research on animal models are required to submit [Attachment 9: Animal Research Plan](#), as part of the application package to describe how these standards will be addressed. Applicants should consult the ARRIVE (Animal Research: Reporting *In Vivo* Experiments) guidelines to ensure relevant aspects of rigorous animal research are adequately planned for and, ultimately, reported. The ARRIVE guidelines can be found at <https://journals.plos.org/plosone/article/file?type=supplementary&id=info:doi/10.1371/journal.pone.0146533.s001>.

**Research Involving Animals:** All DoD-funded research involving new and ongoing research with animals must be reviewed and approved by the USAMRMC ORP 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. Specific documents relating to the use of animals in the proposed research will be requested **if the**

**application is selected for funding.** The ACURO must review and approve all animal use prior to the start of working with animals, including amendments to ongoing projects. PIs must submit the institutional animal use protocol, IACUC approval of that protocol, and a version of the animal use appendix titled, “Research Involving Animals.” ***Allow at least 2 to 3 months for ACURO regulatory review and approval processes for animal studies.*** Refer to the General Application Instructions, Appendix 1, for additional information.

The CDMRP intends that information, data, and research resources generated under awards funded by this Program Announcement 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 the General Application Instructions, Appendix 2, Section K.

## **II.C. Eligibility Information**

### **II.C.1. Eligible Applicants**

**II.C.1.a. Organization: All organizations, including international organizations, are eligible to apply.**

**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.

As applications for this Program Announcement may be submitted by extramural and intramural organizations, these terms are defined below.

**Extramural Organization:** An eligible non-DoD organization. Examples of extramural organizations include academic institutions, biotechnology companies, foundations, other 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.

**Note:** Applications from an intramural DoD organization or from an extramural Federal Government organization may be submitted to Grants.gov through a research foundation.

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

### **II.C.1.b. Principal Investigator**

Investigators at or above the level of postdoctoral fellow (or equivalent) are eligible to be named as the PI on an application.

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.

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

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

Refer to [Section II.H.2, 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 Program Announcement.

## **II.D. Application and Submission Information**

*Submission of applications that are essentially identical or propose essentially the same research project to different funding opportunities within the same program and fiscal year is prohibited and will result in administrative withdrawal of the duplicative application(s).*

**Extramural Submission:** An application submitted by an organization to Grants.gov.

**Intramural DoD Submission:** An application submitted by a DoD organization to eBRAP.

### **II.D.1. Address to Request Application Package**

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.

**Extramural Submissions:**

- Pre-application content and forms must be accessed and submitted at [eBRAP.org](http://eBRAP.org).
- Full application packages must be accessed and submitted at Grants.gov.

### ***Intramural DoD Submissions:***

- Pre-application content and forms must be accessed and submitted at [eBRAP.org](https://eBRAP.org).
- Full application packages must be accessed and submitted at [eBRAP.org](https://eBRAP.org).

Contact information for the CDMRP Help Desk and the Grants.gov Contact Center can be found in [Section II.G, Federal Awarding Agency Contacts](#).

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

Submission is a two-step process requiring both ***pre-application*** and ***full application*** as indicated below. The submission process should be started early to avoid missing deadlines. There are no grace periods.

**Pre-Application Submission:** All pre-applications for both extramural and intramural organizations must be submitted through eBRAP (<https://eBRAP.org/>).

**Full Application Submission:** Full applications must be submitted through the online portals as described below.

***Extramural Organization Submissions:*** 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](#).

***Intramural DoD Organization Submissions:*** Intramural DoD organizations may submit full applications to either eBRAP or Grants.gov. Intramural DoD organizations that are unable to submit to Grants.gov should submit through eBRAP. Intramural DoD organizations with the capability to submit through Grants.gov may submit following the instructions for extramural submissions through Grants.gov or may submit to eBRAP.

***For Both Extramural and Intramural 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 Program Announcement 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 Program Announcement.

***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](mailto: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. **Incorrect selection of extramural or intramural submission type will delay processing.**

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](mailto: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 PI must contact the CDMRP Help Desk at [help@eBRAP.org](mailto:help@eBRAP.org) or 301-682-5507.

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 Application 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>. Note that the codes have recently been revised. 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.

[FY19 RTRP 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](mailto:help@eBRAP.org) or 301-682-5507.

- **Tab 4 – Conflicts of Interest (COIs)**

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.*

- **Preproposal Narrative (two-page limit):** The Preproposal Narrative page limit 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 Preproposal Narrative and could confer an unfair competitive advantage is prohibited and may result in administrative withdrawal of the pre-application.

The Preproposal Narrative should include the following:

- **Hypothesis/Background:** State the hypothesis to be tested, and concisely describe the new concept, theory, paradigm, and/or method that addresses an important problem in reconstructive transplantation.
- **Rationale:** Concisely state the rationale for the proposed research, and explain how it supports the hypothesis.
- **Specific Aims/Study Design:** Concisely state the project’s specific aims and describe the scientific approach and how it will accomplish the study aims. Include a description of controls, as appropriate. Include any relevant literature citations that support this approach.

- **Innovation:** Describe how the proposed research is innovative (e.g., proposes new concepts, theories, or paradigms; challenges existing paradigms; looks at existing problems from new perspectives and/or methods; etc.) and has the potential to reveal new avenues for investigation in reconstructive transplantation.
- **Impact:** Describe how the proposed research addresses at least one of the [FY19 RTRP Focus Areas](#). Describe the anticipated outcome(s)/product(s) (including material and knowledge products) from this research (short-term impact), as well as the anticipated long-term gains from this research trajectory (long-term impact). Articulate how this research is part of the path toward practical applications in individuals recovering from traumatic injury.
- **Military Relevance:** Describe how the proposed research project would impact healthcare needs of military Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers or clinicians, as well as the general public.
- **Pre-Application Supporting Documentation:** The items to be included as supporting documentation for the pre-application *must be uploaded as individual files* and are limited to the following:
  - References Cited (one-page limit): List the references cited (including URLs if available) in the Preproposal Narrative using a standard reference format that includes the full citation (i.e., author[s], year published, reference title, and reference source, including volume, chapter, page numbers, and publisher, as appropriate).
  - List of Abbreviations, Acronyms, and Symbols: Provide a list of abbreviations, acronyms, and symbols used in the Preproposal Narrative.
  - Key Personnel Biographical Sketches (five-page limit per individual): *All biographical sketches should be uploaded as a single combined file.* Biographical sketches should be used to demonstrate background and expertise through education, positions, publications, and previous work accomplished.

- **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 DHP and the RTRP, pre-applications will be screened based on the following criteria:

- **Hypothesis/Rationale:** How well the background and scientific rationale supports the hypothesis for the proposed research project.

- **Specific Aims/Study Design:** How well the specific aims are stated and supported through scientific rationale and referenced literature, and how well the proposed research project's study design will address these aims.
  - **Innovation:** To what extent the proposed research is innovative (e.g., proposes new concepts, theories, or paradigms; challenges existing paradigms; looks at existing problems from new perspectives and/or methods; etc.) and has the potential to reveal new avenues of investigation in reconstructive transplant research.
  - **Impact and Alignment with Focus Area(s):** How well the proposed research addresses at least one of the [FY19 RTRP Focus Areas](#) and will lead toward practical applications in individuals recovering from traumatic injury.
  - **Military Relevance:** How the proposed research would benefit the healthcare needs of military Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers or clinicians, as well as the general public.
- **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 the PI has received notification of invitation.

*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 Program Announcement. The full application package is submitted by the Authorized Organizational Representative through Grants.gov (<https://www.grants.gov>) for extramural organizations or through eBRAP (<https://ebrap.org/>) for intramural organizations. 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 Application 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.

**Table 1. Full Application Submission Guidelines**

| Extramural Submissions   | Intramural DoD Submissions   |
|--|--|
| <b>Application Package Location</b>  |  |
| Download application package components for W81XWH-19-RTRP-IDA from Grants.gov ( <a href="https://www.grants.gov">https://www.grants.gov</a> ) 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.   | Download application package components for W81XWH-19-RTRP-IDA from eBRAP ( <a href="https://ebrap.org">https://ebrap.org</a> ).   |
| <b>Full Application Package Components</b>   |  |
| <b>SF424 Research &amp; Related Application for Federal Assistance Form:</b> Refer to the General Application Instructions, Section III.A.1, for detailed information.   | <p><b>Tab 1 – Summary:</b> Provide a summary of the application information.</p> <p><b>Tab 2 – Application Contacts:</b> This tab will be pre-populated by eBRAP; add Authorized Organizational Representative.</p>  |
| <p>Descriptions of each required file can be found under Full Application Submission Components:</p> <ul style="list-style-type: none"> <li>• <a href="#">Attachments</a></li> <li>• <a href="#">Research &amp; Related Personal Data</a></li> <li>• <a href="#">Research &amp; Related Senior/Key Person Profile (Expanded)</a></li> <li>• <a href="#">Research &amp; Related Budget</a></li> <li>• <a href="#">Project/Performance Site Location(s) Form</a></li> <li>• <a href="#">Research &amp; Related Subaward Budget Attachment(s) Form</a> (if applicable)</li> </ul> | <p><b>Tab 3 – Full Application Files:</b> Upload files under each Application Component in eBRAP. Descriptions of each required file can be found under Full Application Submission Components:</p> <ul style="list-style-type: none"> <li>• <a href="#">Attachments</a></li> <li>• <a href="#">Key Personnel</a></li> <li>• <a href="#">Budget</a></li> <li>• <a href="#">Performance Sites</a></li> </ul> <p><b>Tab 4 – Application and Budget Data:</b> Review and edit proposed project start date, proposed end date, and budget data pre-populated from the Budget Form.</p> |



| Extramural Submissions   | Intramural DoD Submissions  |
|--|---|
| <b>Application Package Submission</b>  |   |
| <p><b>Create a Grants.gov Workspace.</b><br/>Add participants (investigators and Business Officials) to Workspace, complete all required forms, and check for errors before submission.</p> <p><b>Submit a Grants.gov Workspace Package.</b><br/>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 <b>at least 24-48 hours prior to the close date</b> to allow time to correct any potential technical issues that may disrupt the application submission.</p> <p><b>Note:</b> 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 <i>prior to</i> the application submission deadline.</p> | <p><b>Submit package components to eBRAP (<a href="https://ebrap.org">https://ebrap.org</a>).</b></p> <p><b>Tab 5 – Submit/Request Approval Full Application:</b> After all components are 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 notify your Resource Manager/ Comptroller/Task Area Manager or equivalent Business Official by email.</p>  |
| <b><u>Application Verification Period</u></b>  |   |
| <p>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 <b><i>with the exception of the Project Narrative and Research &amp; Related Budget Form.</i></b></p>   | <p>After eBRAP has processed the full application, the organizational Resource Manager/Comptroller/ Task Area Manager or equivalent Business Official and PI will receive email notification of this status and will be able to view and modify application components in eBRAP. During the application verification period, the full application package may be modified <b><i>with the exception of the Project Narrative and Research &amp; Related Budget Form.</i></b> Your Resource Manager/ Comptroller/Task Area Manager or equivalent Business Official should log into eBRAP to review and to approve prior to the application verification deadline.</p> |



| Extramural Submissions   | Intramural DoD Submissions  |
|--|---|
| <b>Further Information</b>   |   |
| <p><b>Tracking a Grants.gov Workspace Package.</b><br/>           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.<br/>           Refer to the General Application Instructions, Section III, for further information regarding Grants.gov requirements.</p> | <p>Refer to the General Application Instructions, Section IV, for further information regarding eBRAP requirements.</p> |

**Both Extramural and Intramural Organizations:** Application viewing, modification, and verification in eBRAP are strongly recommended, but not required. ***The Project Narrative and Research & Related Budget Form cannot be changed after the application submission deadline.*** Prior to the full application deadline, a corrected or modified full application package may be submitted. 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 must be submitted using the unique eBRAP log number to avoid delays in application processing.

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

- **Extramural Applications Only**

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

- **Extramural and Intramural Applications**

**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 Application 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 MB, and the file size for the entire full application package may not exceed 200 MB.

- **Attachment 1: Project Narrative (five-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.

- **Hypothesis/Background:** State the hypothesis to be tested, and concisely describe the new concept, theory, paradigm, and/or method that addresses at least one of the [FY19 RTRP Focus Areas](#).
- **Rationale:** Concisely state the rationale for the proposed research, and explain how it supports the hypothesis. Inclusion of preliminary and/or published data to support the rationale is strongly encouraged (however, the proposed work should be innovative and untested).
- **Specific Aims/Study Design:** State the project’s specific aims, and describe the study design and how it will accomplish the study aims. If the proposed work is part of a larger study, then present only tasks that would be funded under this FY19 RTRP award.
  - Describe the study design, methods, and analyses, including appropriate controls, in sufficient detail for evaluation of appropriateness and feasibility.
  - 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, and identification of primary endpoints.
  - Describe the statistical plan and rationale for the statistical methodology. Provide a sample size estimate and the method by which it was derived, including power analysis calculation, as applicable. Include any plans for blinding and randomization.
  - Address potential problem areas and present alternative methods and approaches.
  - If animal studies are proposed, briefly describe the key elements of the study/ studies as they relate to the overall project; detailed information is required in [Attachment 9: Animal Research Plan](#).
  - Projects involving human subjects or anatomical substances must be exempt under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.

- **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 Program Announcement, 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.

- For projects involving human subjects or anatomical substances, provide evidence that the proposed study is exempt under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.
- Intellectual Property: Information can be found in 2 CFR 200.315, “Intangible Property.”
  - 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 Application Instructions, Appendix 2, Section K, for more information about the CDMRP expectations for making data and research resources publicly available.
- 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 ACOS/R&D or Clinical Service Chief confirming access to VA patients, resources, and/or VA research space. For VA PIs, if the VA NPC 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: 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.

Technical abstracts should be written using the outline below.

- **Hypothesis/Background:** State the hypothesis to be tested, and concisely describe the new concept, theory, paradigm, and/or method that addresses an important problem in reconstructive transplantation.
- **Rationale:** Concisely state the rationale for the proposed research, and explain how it supports the hypothesis.
- **Specific Aims/Study Design:** State the project’s specific aims, and describe the study design and how it will accomplish the study aims.

- **Innovation:** Describe how the proposed research is innovative (e.g., proposes new concepts, theories, or paradigms; challenges existing paradigms; looks at existing problems from new perspectives and/or methods; etc.) and has the potential to reveal new avenues for investigation in reconstructive transplantation.
- **Impact:** Describe how the proposed research addresses at least one of the [FY19 RTRP Focus Areas](#). Describe the anticipated outcome(s)/product(s) from this research as well as the long-term gains from this research trajectory, including how this research is part of the path toward practical applications in individuals recovering from traumatic injury.
- **Military Relevance:** Describe how the proposed research project would impact healthcare needs of military Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers or clinicians, as well as the general public.
- **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.

***Do not duplicate the technical abstract.*** Minimize the use of acronyms and abbreviations, where appropriate. The lay abstract is an important component of the application review process because it addresses issues of particular interest to the consumer community. Lay abstracts should be written using the outline below.

- Clearly describe the objectives and rationale for the application in a manner ***readily understood by readers without a background in science or medicine.***
- Identify the [FY19 RTRP Focus Area\(s\)](#) to be addressed.
- Describe the innovative aspects of the proposed research.
- Describe the ultimate impact of the proposed research. The following questions may be helpful in generating your description:
  - What types of patients will the research help, and how will it help them? Include the current available statistics to the related injury/condition.
  - What are the potential clinical applications, benefits, and risks?
  - What is the projected time it may take to achieve a patient-related outcome?
- Briefly describe how the proposed project will benefit Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers or clinicians, as well as the general public.

- What are the likely contributions of the proposed research to advancing the field of reconstructive transplant research?
- **Attachment 5: Statement of Work (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 Idea Discovery Award mechanism, use the SOW format example titled “SOW Generic Format”. The SOW must be in PDF format prior to attaching.

The SOW should include a list of major tasks that support the proposed specific aims, followed by a series of subtasks outlined related to the major tasks and milestones within the period of performance. The SOW should describe only the work for which funding is being requested by this application and, as applicable, should also:

- Include the name(s) of the key personnel and contact information for each study site/subaward site.
- Indicate the number (and type, if applicable) of research subjects (animal or human) and/or human anatomical samples projected or required for each task and at each site. Refer to the General Application Instructions, Appendix 1, for additional information regarding regulatory requirements.
- For studies with prospective accrual of human subjects, indicate quarterly enrollment targets. *Projects involving human subjects or anatomical substances must be exempt under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.*
- If applicable, identify cell line(s) and commercial or organizational source(s) to be used.
- If applicable, indicate timelines required for regulatory approvals relevant to human subjects research (e.g., Investigational New Drug and Investigational Device Exemption applications) by the U.S. Food and Drug Administration or other Government agency.
- **Attachment 6: Innovation Statement (one-page limit): Upload as “Innovation.pdf”.** Describe how the proposed research is innovative (e.g., proposes new concepts, theories, or paradigms; challenges existing paradigms; looks at existing problems from new perspectives and/or methods; etc.) and has the potential to reveal new avenues for investigation in reconstructive transplantation. Research that is an incremental advance upon published data, or a logical progression of an already established research project, is not considered innovative and will not be considered for funding under this award mechanism.
- **Attachment 7: Impact Statement (one-page limit): Upload as “Impact.pdf”.** Describe how the proposed research is relevant to at least one of the [FY19 RTRP Focus Areas](#). Detail the anticipated outcome(s)/product(s), including material and/or

knowledge products, which will be directly attributed to the results of the proposed research project (short-term impact). Compare the anticipated outcomes from the proposed project to material and/or knowledge products already available, if applicable. Describe the anticipated long-term gains from this research trajectory. Articulate how this research is part of the path toward practical applications in individuals recovering from traumatic injury.

- **Attachment 8: Military Relevance Statement (one-page limit): Upload as “MilRel.pdf”.** Demonstrate how the proposed research is responsive to the healthcare needs and quality of life of military Service members and/or Veterans recovering from traumatic injury, and/or their family members, caregivers, or clinicians, as well as the general public. If the active duty military, Veteran, or military family member or caregiver population(s) will be used in the proposed research project, describe the population(s), the appropriateness of the population(s) for the proposed research, and the feasibility of using the population. If a non-military population will be used for the proposed research project, explain how the population simulates the military population. If applicable, show how the proposed research project aligns with DoD and/or VA areas of research interest.
- **Attachment 9: Animal Research Plan, if applicable (five-page limit): Upload as “AnimalPlan.pdf”.** When the proposed study involves animals, the applicant is required to submit a summary describing the animal research that will be conducted. Applicants should not submit a verbatim replica of the protocol(s) to be submitted to the IACUC as the Animal Research Plan. 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 and state the endpoints/outcome measures to be assessed. Describe how the study will be controlled.
  - Describe the randomization and blinding procedures for the study and any 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 endpoint(s).
- **Attachment 10: 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 Application Instructions, Appendix 5, Section B, Representations.

- **Attachment 11: DoD Military Budget Form(s), if applicable: Upload as “MFBudget.pdf”.** If a military facility (Military Health System 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 the DoD Military Budget Form, 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 Application Instructions, Section III.A.8, for detailed information.

- **Extramural and Intramural Applications**

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 USC A§1681 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:** For extramural submissions (via Grants.gov), refer to the General Application Instructions, Section III.A.3, and for intramural submissions (via eBRAP), refer to the General Application Instructions, Section IV.A.2, for detailed information.

**Research & Related Senior/Key Person Profile (Expanded):** For extramural submissions (via Grants.gov), refer to the General Application Instructions, Section III.A.4, and for intramural submissions (via eBRAP), refer to the General Application Instructions, Section IV.A.3, for detailed information.

- **PI Biographical Sketch (five-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”.
- **Key Personnel Biographical Sketches (five-page limit each):** Upload as “Biosketch\_LastName.pdf”.
- **Key Personnel Previous/Current/Pending Support (no page limit):** Upload as “Support\_LastName.pdf”.



**Research & Related Budget:** For extramural submissions (via Grants.gov), refer to the General Application Instructions, Section III.A.5, and for intramural submissions (via eBRAP), refer to the General Application Instructions, Section IV.A.4, 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:** For extramural submissions (via Grants.gov), refer to the General Application Instructions, Section III.A.6, and for intramural submissions (via eBRAP), refer to the General Application Instructions, Section IV.A.5, for detailed information.

- **Extramural Applications Only**

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

- **Extramural Subaward:** Complete the Research & Related Subaward Budget Form through Grants.gov. (Refer to the General Application 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.
- **Intramural DoD Collaborator(s):** Complete the DoD Military Budget Form and upload to Grants.gov attachment form as Attachment 11. (Refer to the General Application Instructions, Section IV.A.4, for detailed information.) Each Intramural DoD Collaborator should include costs per year on the Grants.gov Research & Related Budget Form under subaward costs.

**DoD Military Budget Form:** A military facility collaborating in the performance of the project should be treated as a subaward for budget purposes. **Note:** Applicants should complete the **DoD Military Budget Form (Attachment 11)** to show all direct and indirect costs. The costs per year should be included on the Grants.gov Research & Related Budget Form under subaward costs. Refer to the General Application Instructions, Section III.A.8, for detailed information.

### **II.D.3. Dun and Bradstreet Data Universal Numbering System (DUNS) Number and System for Award Management (SAM)**

Applicant organizations and all sub-recipient organizations must have a DUNS number to submit applications to Grants.gov. The applicant organization must also be registered in the Entity Management functional area of the SAM with an “Active” status to submit applications through the Grants.gov portal. Verify the status of the applicant organization’s Entity registration in SAM well in advance of the application submission deadline. Allow several weeks to complete the entire SAM registration process. If an applicant has not fully complied with the requirements at the time the Federal awarding agency is ready to make a Federal award, the Federal awarding

agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant. Refer to the General Application 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**

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 retrieved files against the specific Program Announcement requirements, and discrepancies will be noted in both the email and in the “Full Application Files” tab in eBRAP. eBRAP does not confirm the accuracy of file content. It is the applicant’s responsibility to review all application components and ensure proper ordering as specified in the Program Announcement. ***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 Budget Form cannot be changed after the application submission deadline.

***Extramural Submission:*** 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.

***Intramural DoD Submission:*** After eBRAP has processed the full application, the organizational Resource Manager/Comptroller/Task Area Manager or equivalent Business Official and PI will receive email notification of the status and will be able to view and modify application components in eBRAP. During the application verification period, the full application package, ***with the exception of the Project Narrative and Budget Form***, may be modified. The Resource Manager/Comptroller/Task Area Manager or equivalent Business Official should log into eBRAP to review and to approve the application package prior to the application verification deadline.

***For All Submissions:*** 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. Funding Restrictions**

The maximum period of performance is **2** years.

The anticipated total costs (direct and indirect) budgeted for the entire period of performance will not exceed **\$500,000**. If indirect cost rates have been negotiated, indirect costs are to be

budgeted in accordance with the organization's negotiated rate. No budget will be approved by the Government exceeding **\$500,000** total costs or using an indirect cost rate exceeding 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 **2** years.

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

- Travel costs for the PI to present project information or disseminate project results at a DoD-sponsored meeting (e.g., the Military Health System Research Symposium) during the period of performance. These travel costs are in addition to those allowed for annual scientific/technical meetings.

May be requested for (not all-inclusive):

- Salary
- Research supplies
- Equipment
- Support for multidisciplinary collaborations, including travel
- Travel costs for up to one investigator to travel to no more than one scientific/technical meeting per year in addition to the required meeting described above. The intent of travel costs to scientific/technical meetings is to present project information or disseminate project results.

Awards made to extramural organizations will consist solely of assistance agreements (grants and cooperative agreements). 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. Intramural applicants are responsible for coordinating through their agency's procedures the use of contractual or assistance funding awards or other appropriate agreements to support extramural collaborators. Refer to the General Application 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 Application Instructions, Section III.A.5.***

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. The time is considered when establishing the award's period of performance. It is anticipated that awards made from this

FY19 funding opportunity will be funded with FY19 funds, which will expire for use on September 30, 2025.

#### **II.D.6. Other Submission Requirements**

Refer to the General Application 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 listed in decreasing order of importance:

- **Innovation**
  - To what extent the proposed research is innovative (e.g., proposes new concepts, theories, or paradigms; challenges existing paradigms; looks at existing problems from new perspectives and/or methods; etc.) and has the potential to reveal new avenues of investigation in reconstructive transplant research.
  - How the proposed research represents more than an incremental advance on previous work (either the applicant's work or published data).
- **Hypothesis and Rationale**
  - How well the background and scientific rationale supports the hypothesis for the proposed research.
  - If applicable, how well preliminary data support the scientific rationale for the proposed research.
- **Study Design**
  - How well the specific aims are stated and supported through scientific rationale and referenced literature, and how well the proposed research project's study design will address these aims.
  - To what degree the statistical plan and power analysis are appropriate for the proposed project, as applicable.
  - How well the application acknowledges potential problems and addresses alternative approaches.
  - If applicable, to what degree the intellectual and material property plan is appropriate.

***For applications involving animal research:***

- How well the animal study (or studies), as applicable, is designed to achieve the objectives, including the choice of model and endpoints/outcome measures.

***For applications involving human subjects or human anatomical substances:***

- Whether the proposed research protocol is exempt under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110, as evidenced by supporting documentation.
- The degree to which the plan to study human subjects and/or human anatomical substances is designed to achieve the objectives, and is appropriate and feasible, including demonstrated access to the selected population(s) or resource(s).

***For applications involving military or Veteran populations:***

- The degree to which the plan to study military or Veteran populations is appropriate and feasible, including demonstrated access to the selected population.

- **Impact**

- How well the proposed research addresses at least one of the [FY19 RTRP Focus Areas](#).
- How the anticipated outcome(s)/product(s) from this research will impact the reconstructive transplant community in the short-term.
- How the long-term gains from this research trajectory will lead to toward practical applications in individuals recovering from traumatic injury.

- **Personnel**

- How the background and expertise of the PI and key personnel demonstrate their ability to perform the proposed work.
- How well the PI's record of accomplishment demonstrates his/her ability to accomplish the proposed research project.
- Whether the levels of effort by the PI and other key personnel are appropriate to ensure the successful conduct of the project.

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

- **Environment**

- Whether the scientific environment is appropriate for the proposed research project.

- Whether the research requirements are supported by the availability and accessibility to facilities and resources (including collaborative arrangements).
- Whether the quality and extent of organizational support are appropriate for the proposed research project.
- **Budget**
  - Whether the **total** maximum costs are equal to or less than the allowable total maximum costs as published in the Program 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 FY19 RTRP, as evidenced by the following:
  - Adherence to the intent of the award mechanism
  - Program portfolio composition
  - Programmatic relevance
  - Relative innovation, impact, and military relevance

#### **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, USAMRMC, on behalf of the DHA and the OASD(HA). ***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://cdmnp.army.mil/about/2tierRevProcess>. A PI Information Paper

describing the funding recommendations and review process for the award mechanisms for the RTRP 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 200.88, over the period of performance, the Federal awarding agency is required to review and consider any information about the applicant that is available in the Federal Awardee Performance and Integrity Information System (FAPIIS).

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

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 Department of Defense Grant and Agreement Regulations (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 FY19 funds are anticipated to be made no later than September 30, 2020. Refer to the General Application 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.

*Only an appointed USAMRAA Grants 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 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.

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

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

Unless otherwise restricted, changes in PI or organization will be allowed at the discretion of the USAMRAA Grants Officer, provided that intent of the award mechanism is met. An organizational transfer of an award will not be allowed in the last year of the (original) period of performance or any extension thereof.

Refer to the General Application Instructions, Appendix 2, Section B, for general information on organization or PI changes.

### **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 Program Announcement.

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



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

Refer to full text of the latest [DoD R&D General Terms and Conditions](#), the [USAMRAA General Research Terms and Conditions with Institutions of Higher Education, Hospitals, and Non-Profit Organizations](#): Addendum to the DoD R&D General Terms and Conditions and the [USAMRAA General Research Terms and Conditions with For-Profit Organizations](#) for further information.

### **II.F.3. Reporting**

Refer to the General Application 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 as well as a final progress report will be required. In addition, quarterly technical progress reports and quad charts will be required.

Awards resulting from this Program Announcement will incorporate additional reporting requirements related to recipient integrity and performance matters. Recipient organizations that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 are required to provide information to FAPIIS 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 Application Instructions, Appendix 5, Section B).

## **II.G. Federal Awarding Agency Contacts**

### **II.G.1. CDMRP Help Desk**

Questions related to Program Announcement content or submission requirements 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](mailto: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](mailto:support@grants.gov)

Sign up on Grants.gov for “send me change notification emails” by following the link on the “Synopsis” page for the Program Announcement 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. Program Announcement and General Application Instructions Versions**

Questions related to this Program Announcement should refer to the Program name, the Program Announcement name, and the Program Announcement version code 20190218e. The Program Announcement numeric version code will match the General Application Instructions version code 20190218.

### **II.H.2. Administrative Actions**

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

#### **II.H.2.a. Rejection**

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

- Preproposal Narrative exceeds page limit.
- Preproposal Narrative is missing.

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.

#### **II.H.2.b. Modification**

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

- Documents not requested will be removed.

### II.H.2.c. Withdrawal

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

- An FY19 RTRP 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 FY19 RTRP Programmatic Panel members can be found at <https://cdmrp.army.mil/rtrp/panels/panels19>.*
- The application fails to conform to this Program Announcement 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 FY19, the identities of the peer review contractor and the programmatic review contractor may be found at the CDMRP website (<https://cdmrp.army.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.
- Applications from extramural organizations, including non-DoD Federal agencies, received through eBRAP may be withdrawn.
- Applications submitted by an intramural DoD organization may be withdrawn if the intramural organization cannot coordinate the use of contractual, assistance, or other appropriate agreements to provide funds to extramural collaborators.
- Submission of the same research project to different funding opportunities within the same program and fiscal year.
- The invited application proposes a different research project than that described in the pre-application.
- Inclusion of projects involving human subjects or anatomical substances that do not qualify for exempt status under 32 CFR 219.104(d) or eligible for expedited review under 32 CFR 219.110 or 21 CFR 56.110.

- A clinical trial is proposed.
- The PI does not meet the eligibility criteria.

#### **II.H.2.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 Officer for a determination of the final disposition of the application.

### II.H.3. Application Submission Checklist

| Application Components   | Action   | Completed |
|--|--|-----------|
| SF424 Research & Related Application for Federal Assistance ( <b>Extramural submissions only</b> ) | Complete form as instructed  |           |
| Summary (Tab 1) and Application Contacts (Tab 2) ( <b>Intramural submissions only</b> )            | Complete tabs 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"  |           |
|  | Technical Abstract: Upload as Attachment 3 with file name "TechAbs.pdf"  |           |
|  | Lay Abstract: Upload as Attachment 4 with file name "LayAbs.pdf"   |           |
|  | Statement of Work: Upload as Attachment 5 with file name "SOW.pdf"   |           |
|  | Innovation Statement: Upload as Attachment 6 with file name "Innovation.pdf"   |           |
|  | Impact Statement: Upload as Attachment 7 with file name "Impact.pdf"   |           |
|  | Military Relevance Statement: Upload as Attachment 8 with file name "MilRel.pdf"                                       |           |
|  | Animal Research Plan: Upload as Attachment 9 with file name "AnimalPlan.pdf" if applicable.                            |           |
|  | Representations (extramural submissions only): Upload as Attachment 10 with file name "RequiredReps.pdf" if applicable |           |
|  | DoD Military Budget Form(s): Upload as Attachment 11 with file name "MFBudget.pdf" if applicable                       |           |
| Research & Related Personal Data   | Complete form as instructed  |           |

| Application Components   | Action   | Completed |
|--|--|-----------|
| 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 ( <b>Extramural submissions only</b> )     | Complete as instructed. Attach Budget Justification (BudgetJustification.pdf) to the appropriate field     |           |
| Budget ( <b>Intramural submissions only</b> )                        | Complete the DoD Military Budget Form and justification  |           |
| Project/Performance Site Location(s) Form                            | Complete form as instructed  |           |
| Research & Related Subaward Budget Attachment(s) Form, if applicable | Complete form as instructed  |           |

## APPENDIX 1: 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                  |
| CDMRP    | Congressionally Directed Medical Research Programs              |
| CFR      | Code of Federal Regulations                                     |
| COI      | Conflict of Interest  |
| DHA      | Defense Health Agency   |
| DHP      | Defense Health Program  |
| DoD      | Department of Defense   |
| DoDGARs  | Department of Defense Grant and Agreement Regulations           |
| DUNS     | Data Universal Numbering System                                 |
| eBRAP    | Electronic Biomedical Research Application Portal               |
| EC       | Ethics Committee  |
| ET       | Eastern Time  |
| FAD      | Funding Authorization Document                                  |
| FAPIIS   | Federal Awardee Performance and Integrity Information System    |
| FY       | Fiscal Year   |
| HRPO     | Human Research Protection Office                                |
| IACUC    | Institutional Animal Care and Use Committee                     |
| IRB      | Institutional Review Board                                      |
| M        | Million   |
| MIPR     | Military Interdepartmental Purchase Request                     |
| NPC      | Non-Profit Corporation  |
| OASD(HA) | Office of the Assistant Secretary of Defense for Health Affairs |
| ORCID    | Open Researcher and Contributor ID, Inc.                        |
| ORP      | Office of Research Protections                                  |
| PI       | Principal Investigator  |
| RDT&E    | Research, Development, Test, and Evaluation                     |
| RTRP     | Reconstructive Transplant Research Program                      |
| SAM      | System for Award Management                                     |
| SOW      | Statement of Work   |
| STEM     | Science, Technology, Engineering, and/or Mathematics            |
| USAMRAA  | U.S. Army Medical Research Acquisition Activity                 |
| USAMRMC  | U.S. Army Medical Research and Materiel Command                 |
| USC      | United States Code  |
| VA       | Department of Veterans Affairs                                  |
| VCA      | Vascularized Composite Allotransplantation                      |

## APPENDIX 2: DOD AND VA WEBSITES

PIs are encouraged to integrate and/or align their research projects with DoD and/or VA research laboratories and programs. Collaboration with DoD and/or VA investigators is also encouraged. Below is a list of websites that may be useful in identifying additional information about DoD and VA areas of research interest, ongoing research or potential opportunities for collaboration.

Air Force Office of Scientific Research  
<https://www.wpafb.af.mil/afrl/afosr/>

Air Force Research Laboratory  
<https://www.wpafb.af.mil/afrl>

Armed Forces Institute of Regenerative  
Medicine  
<https://www.afirm.mil>

Armed Forces Radiobiology Research  
Institute  
<https://www.usuhs.edu/afri/>

Center for Neuroscience and Regenerative  
Medicine  
<http://www.cnrmmstudies.org/>

Clinical and Rehabilitative Medicine  
Research Program  
[https://mrmc.amedd.army.mil/index.cfm?pa  
geid=medical\\_r\\_and\\_d.cmrp.overview](https://mrmc.amedd.army.mil/index.cfm?pa<br/>geid=medical_r_and_d.cmrp.overview)

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

Congressionally Directed Medical Research  
Programs  
<https://cdmrp.army.mil>

Defense Advanced Research Projects  
Agency  
<https://www.darpa.mil>

Defense Health Agency  
<https://health.mil/dha>

Defense Health Agency (DHA) J9, Research  
and Development Directorate  
[https://health.mil/About-  
MHS/OASDHA/Defense-Health-  
Agency/Research-and-Development](https://health.mil/About-<br/>MHS/OASDHA/Defense-Health-<br/>Agency/Research-and-Development)

Defense Technical Information Center  
<https://www.dtic.mil>

Defense Threat Reduction Agency  
<https://www.dtra.mil/>

Military Health System Research  
Symposium  
[https://mhsrs.amedd.army.mil/SitePages/Ho  
me.aspx](https://mhsrs.amedd.army.mil/SitePages/Ho<br/>me.aspx)

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  
<https://t2health.dcoe.mil>

National Museum of Health and Medicine  
<https://www.medicalmuseum.mil/index.cfm>

Naval Health Research Center  
<https://www.med.navy.mil/sites/nhrc>

Naval Medical Research Center  
[www.med.navy.mil/sites/nmrc](http://www.med.navy.mil/sites/nmrc)

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

Office of Naval Research  
<https://www.onr.navy.mil>

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

Telemedicine and Advanced Technology  
Research Center  
<https://www.tatrc.org/>



Uniformed Services University of the Health Sciences

<https://www.usuhs.edu/research>

U.S. Air Force 59th Medical Wing

<https://www.59mdw.af.mil/>

U.S. Army Aeromedical Research Laboratory

[www.usaarl.army.mil](http://www.usaarl.army.mil)

U.S. Army Center for Environmental Health Research

<https://usacehr.amedd.army.mil>

U.S. Army Institute of Surgical Research

<https://www.usaisr.amedd.army.mil/>

U.S. Army Medical Research Acquisition Activity

<https://www.usamraa.army.mil/>

U.S. Army Medical Research and Materiel Command

<https://mrmc.amedd.army.mil>

U.S. Army Medical Research Institute of Infectious Diseases

<https://www.usamriid.army.mil/>

U.S. Army Research Institute of Environmental Medicine

<https://www.usariem.army.mil/>

U.S. Army Research Laboratory

<https://www.arl.army.mil>

U.S. Army Sharp, Ready & Resilient Directorate

<http://readyandresilient.army.mil>

U.S. Department of Defense Blast Injury Research Program

<https://blastinjuryresearch.amedd.army.mil>

U.S. Department of Veterans Affairs, Office of Research and Development

<https://www.research.va.gov>

U.S. Naval Research Laboratory

<https://www.nrl.navy.mil>

Walter Reed Army Institute of Research

<https://www.wrair.army.mil/>