Program Announcement

Department of Defense (DOD) Congressionally Directed Medical Research Programs

Peer Reviewed Orthopaedic Research Program (PRORP)

Translational Research Partnership Award

Funding Opportunity Number: W81XWH-09-PRORP-TRPA

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I. FUNDING OPPORTUNITY DESCRIPTION

A. Background Information

1. Program Objectives

The Peer Reviewed Orthopaedic Research Program (PRORP) was established in Fiscal Year 2009 (FY09) to address the leading burden of injury and loss of fitness for military duty by funding innovative, high-impact, clinically relevant research to advance treatment and rapid rehabilitation from musculoskeletal injuries sustained during combat or combat-related activities. The FY09 congressional appropriations bills, Public Law 110-329 and 111-32, provided $61 million (M) and $51M, respectively, for a total appropriation of $112M to support military-relevant, peer-reviewed orthopaedic research. The Government reserves the right to increase or decrease the PRORP funding to execute the program.

The FY09 PRORP challenges the scientific community to design innovative research that will foster new directions for and address neglected issues in the field of medical research focused on combat-relevant orthopaedic problems. Though the program emphasizes funding groundbreaking research, all projects must demonstrate appropriate judgment and sound rationale. The program highly encourages the submission of applications involving multidisciplinary collaborations among academia, industry, the military services, the Department of Veterans Affairs (VA), and other Federal Government agencies.

2. Priority Research Areas

The FY09 PRORP priority research areas relevant to musculoskeletal injury are provided below. **Not all of the following research areas may be applicable to this Program Announcement/ Funding Opportunity;** some areas are relevant to other mechanisms offered by the FY09 PRORP. Focus areas specific to this award mechanism are provided in Section B, Award Description. ***All applications for PRORP funding must specifically and clearly address a focus area of the specific award mechanism to which the application is being submitted.***

The FY09 PRORP priority research areas are:

- Acute Care of Battle Injuries (**Roles II and III**)
  - Enhancement of the tissue environment for healing
    - Optimal indicators of viability for soft tissue and bone
    - Methods of enhancing viability
    - Modulators of local inflammatory processes
    - Optimal indicators for limb salvage vs. amputation
    - Optimal timing and materials for vascular, nerve, and other soft tissue repair
  - Prevention of complications
    - Preventing, identifying, and treating compartment syndrome
    - Early intervention strategies for acute management of pain

        - Methods of early bone or soft tissue stabilization
        - Early prevention strategies for infection
    - Development of in vivo translational models for the acute injury environment
- Definitive Care of Battle Injuries
    - Restoration of joint function
        - Optimal materials and clinical care for joint reconstruction
        - Treatment of articular cartilage injury
        - Regeneration of bone, muscle, and cartilage
        - Development of *in vivo* translational models
    - Treatment of orthopaedic injuries (and sequelae) of the spine not related to spinal cord injury (e.g., spinal fractures, acute herniated disks, infection of the spinal column, acute instabilities)
    - Restoration of Function
        - Clinical studies of motor and sensory reinnervation
        - Development of a functional innervated muscle for soft tissue injury
    - Acceleration of healing
        - Clinical efficacy of new and existing products
        - Modulation of systemic responses to injury healing
        - Clinical care for segmental bone loss
- Rehabilitation
    - Evaluation of clinical efficacy of new technologies
        - New and novel approaches to rehabilitation, prosthetics, and orthotics
    - Evaluation of clinical outcomes of rehabilitation strategies, prosthetics, and/or orthotics
    - Evidence-based rehabilitation strategies for warriors in transition with orthopaedic-related injuries
- Prosthetics and Orthotics
    - Maintenance/enhancement of long-term socket performance/fit
        - Design and development of flexible socket suspension systems
        - Evaluation of socket performance
        - Maintenance of limb volume/mass
        - Clinical applications of new technologies
    - Solution of critical issues in osseointegration
        - Translational investigation of skin/prosthesis interface for osseointegrated sockets
        - Reduction of infection risk of osseointegrated limb interfaces

B. Award Description

The PRORP Translational Research Partnership Award mechanism is being offered for the first time in FY09.

This award supports the development of multi-institutional, multidisciplinary, translational research partnerships between up to four clinicians and laboratory scientists to accelerate the movement of promising research hypotheses into clinical application in a manner that would be less readily achievable through separate efforts. This award is intended to support both new and established scientists across a broad spectrum of disciplines in research projects that are likely to make a major impact on military combat-relevant orthopaedic injuries. There must be at least one laboratory scientist and at least one clinician participating in the partnership. In addition, at least one member of the partnership must have experience either in orthopaedic research or orthopaedic medicine. Partnerships between academic institutions or government agencies and military investigators/clinicians are highly encouraged.

Observations that drive a research hypothesis may be derived from a laboratory discovery, population-based studies, or a clinician's firsthand knowledge from providing care to patients. While the ultimate goal of translational research is to move an observation forward into clinical application, members of the partnership should view translational research as a two-way continuum between bench and bedside. The research plan must involve a reciprocal flow of ideas and information within the partnership. It should be clear that all partnering investigators have had equal intellectual input into the design of the research project. A proposed project in which the clinical partner merely supplies tissue samples or access to patients will not meet the intent of this mechanism.

The Translational Research Partnership Award does not support clinical trials, but may support correlative studies that are associated with an existing clinical trial and projects that develop clinical endpoints for clinical trials. Research projects may also include preclinical studies in animal models and human subjects and human anatomical substances. Developmental pathways for translational research that may be useful for designing translational research studies for support under this mechanism may be found at (http://www.cancer.gov/aboutnci/trwg/Pathways-to-Clinical-Goals). These pathways, while created for cancer research initiatives, have broad applicability to other areas of research, are comprehensive, and span the entire translational research continuum from discovery of a target to clinical trials. Refer to the Application Instructions & General Information, Appendix 6, for helpful information about distinguishing clinical trials and clinical research.

PRORP Translational Research Partnership Award Focus Areas: This award mechanism seeks applications from all areas of translational research as they relate to **at least one** of the Translational Research Partnership Award focus areas listed below. ***If the proposed project is not relevant to the specified PRORP Translational Research Partnership Award focus areas, the Government reserves the right to administratively withdraw the application.*** All applications must have a direct relevance to orthopaedic injuries sustained during military combat or related activities. The focus areas are:

- Restoration of joint function
    - Optimal materials and clinical care for joint reconstruction
    - Treatment of articular cartilage injury
    - Regeneration of bone, muscle, and cartilage
    - Development of *in vivo* translational models
- Treatment of orthopaedic injuries (and sequelae) of the spine not related to spinal cord injury (e.g., spinal fractures, acute herniated disks, infection of the spinal column, acute instabilities)
- Acceleration of healing
    - Clinical efficacy of new and existing products
    - Modulation of systemic responses to injury/healing
    - Clinical care for segmental bone loss
- Restoration of function
    - Translational studies of motor and sensory reinnervation
    - Development of a functional innervated muscle for soft tissue injury
- Solution of critical issues in osseointegration
    - Translational investigation of skin/prosthesis interface for osseointegrated sockets
    - Reduction of infection risk of osseointegrated limb interfaces

Important aspects of the Translational Research Partnership Award are as follows:

1. Partnership: The success of the project depends on the unique skills and contributions of each partner. Of the two to four partners, at least one partner must be a clinician, at least one partner must be a laboratory scientist, and at least one partner must have experience either in orthopaedic research or orthopaedic medicine.

2. Military Benefit: The proposed research should provide a significant benefit to the field of military combat-relevant orthopaedic injury research, and be likely to accelerate the movement of new diagnostic and therapeutic approaches in preclinical research into clinical application. The proposed research is expected to make an important and original contribution to advancing combat-relevant orthopaedic research or orthopaedic medicine.

3. Preliminary Data: Preliminary data to support the feasibility of the research hypotheses and research approaches are required; however, these data may come from fields other than orthopaedic research.

4. Multi-institutional: Partnerships between academic institutions, government agencies, and/or military institutions/investigators are highly encouraged. If the partnership is multi-institutional, it is expected that the applicants will submit a communication plan.

Encouraged DOD Collaboration and Alignment: Military relevance is a key feature of this award. Therefore, PIs are strongly encouraged to collaborate, integrate, and/or align their projects with military and/or VA research laboratories and programs. The following websites may be useful in identifying information about ongoing DOD areas of research interest:

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

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

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

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

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

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

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

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

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

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

U.S. Army Research Laboratory
http://www.arl.army.mil

U.S. Naval Research Laboratory
http://www.nrl.navy.mil

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

Use of Human Subjects and Human Biological Substances*:* All DOD-funded research involving human subjects and human biological substances must be reviewed and approved by the USAMRMC Office of Research Protections (ORP), Human Research Protection Office (HRPO), in addition to local IRBs. The HRPO is mandated to comply with specific laws and directives governing all research involving human subjects that is conducted or supported by the DOD. These laws and directives are rigorous and detailed, and will require information in addition to that supplied to the local review board. Allow a minimum of 6 months for regulatory review and approval processes for studies involving human subjects. Refer to Application Instructions & General Information, Appendix 6, for detailed information.

Use of Military Populations: Describe the military population(s) to be used for the proposed study, if applicable. Coordination of access to various military populations is described below.

> **1. Active Duty, National Guard, Reserve troops, and/or military patient populations** (not CENTCOM Area of Responsibility): Unless the PI has already established access to a service member population, access to Active Duty, National Guard, or Reserve troops must be coordinated through the CDMRP. Collaboration with Associate Investigators in military treatment facilities is encouraged as a method for access to patient populations. ***PIs who do not have a previously established study population should not contact unit Commanders at this time or during preparation of the proposal submission. If selected for funding, the PI will be provided guidance on how to obtain access to the appropriate population.***

2. CENTCOM Area of Responsibility military populations: Access to military populations in these areas is very limited and will be coordinated through the CDMRP as described above.

Research conducted using military populations in Iraq is conducted with oversight by the Multi-National Force - Iraq (MNF-I). PIs who are outside of this system and submit a research proposal designed to recruit patients within MNF-I must coordinate with the in-theatre Deployed Combat Casualty Research Team charged with facilitating an in-theater review, and be approved by the MNF-I Command and the MNF-I designated Institutional Review Board (IRB). The same is true for research conducted in Afghanistan in the US Forces - Afghanistan (USFOR-A) Area of Responsibility. PIs who are outside of this system and submit a research proposal designed to recruit patients within USFOR-A must coordinate with the in-theatre Deployed Combat Casualty Research Team charged with facilitating an in-theater review, and be approved by the USFOR-A Command and the USFOR-A -designated Institutional Review Board (IRB). If selected for funding, CDMRP will assist with guidance on how to obtain the required in-theatre approvals

Given the constraints of wartime operations, investigators without an ongoing collaboration with an appropriate military investigator should strongly consider alternatives to conducting in-theater research. DOD-supported human subjects research can only be conducted by institutions (including those in-theater) with approved Federal Assurances of Compliance from the Human Research Protection Office. It is suggested that proposals submitted necessitating the use of this population involve civilian and non-deployed military populations as an alternative.

3. Department of Veterans Affairs (VA) Medical Centers patient populations: Access to patient populations from VA Medical Centers or use of information from VA data systems must be coordinated by the PI. PIs who submit a research project designed to recruit patients from a VA Medical Center or use information from VA data systems and those who do not have an appointment at one of the VA Medical Centers must include a collaborator with a VA appointment. This collaborator must be willing to assume the role of PI for the VA component of the research. IRB approval from all participating VA clinical sites will be required.

C. Eligibility

Independent investigators at all academic levels (or equivalent) are eligible to submit applications. Refer to the Application Instructions & General Information, Appendix 1, for general eligibility information.

D. Funding

Each collaborative partner will be a PI, and a separate award will be made to each partner's institution. The PIs are expected to be equal partners in the research, and the direct cost funding should be divided accordingly unless otherwise warranted and clearly justified.

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

- The maximum allowable, ***combined*** funding for the entire period of performance is **$750,000** in direct costs.
- The applicants may request the entire maximum direct cost amount for a project that may be less than the maximum **3**-year period of performance.
- Regardless of the period of performance proposed, the applicants may not exceed the maximum direct cost. In addition to the direct costs, indirect costs may be proposed in accordance with your institution's negotiated rate agreement.

Within the guidelines provided in the Application Instructions & General Information, funds can cover:

- Salary
- Research supplies
- Equipment
- Clinical research costs (While correlative clinical research studies are allowed under this award mechanism, clinical trials are not supported.)
- Travel to scientific/technical meetings
- Travel between collaborating institutions
- Other direct costs as described in Application Instructions & General Information, Attachment 6, Detailed Budget and Justification

In addition, travel funds must be requested for the PI to attend one DOD military research-related meeting to be determined by the Office of the Congressionally Directed Medical Research Programs (CDMRP) during the award performance period.

The CDMRP expects to allot approximately $3.5M of the $112M FY09 PRORP appropriation to fund approximately three Translational Research Partnership Award applications, depending on the quality and number of applications received. ***Funding of applications received in response to this Program Announcement/Funding Opportunity is contingent on the availability of Federal funds for this program.***

E. Award Administration

Refer to the Application Instructions & General Information, Appendix 5, for general award administration information.

In addition to written progress reports, awardees may expect requests for formal progress presentation in clinical symposia to accelerate transition into clinical practice.

II. TIMELINE FOR SUBMISSION AND REVIEW

Submission is a two-step process consisting of (1) pre-application submission and (2) application submission. ***Pre-application submission is the required first step***.

Pre-application Submission Deadline:	**August 13, 2009, 5:00 p.m. Eastern time**
Invitation to Submit an Application:	**No later than September 30, 2009**
Application Submission Deadline:	**November 17, 2009, 11:59 p.m. Eastern time**
Scientific Peer Review:	**January 2010**
Programmatic Review:	**March 2010**

Awards will be made approximately 4 to 6 months after receiving a funding notification letter, but no later than September 30, 2010.

III. SUBMISSION PROCESS

Submission is a two-step process consisting of (1) a pre-application submission through the CDMRP eReceipt system (https://cdmrp.org/), and (2) an application submission through Grants.gov (http://www.grants.gov/). ***Applications will not be accepted unless the PIs have been invited. Do not submit an application unless a letter of invitation has been received.***

PIs and organizations identified in the application submitted through Grants.gov should be the same as those identified in the pre-application. If there is a change in a PI or organization after submission of the pre-application, the PI must contact the eReceipt help desk at help@cdmrp.org or 301-682-5507.

The Translational Research Partnership Award is structured to accommodate multiple PIs. Initiating and Partnering PIs each have different submission requirements; however, all PIs should contribute equally to the preparation of the application. ***The Initiating PI must complete the pre-application submission process and submit the contact information for all of the Partnering PI(s).*** If an application is invited, the Initiating PI will receive a letter of invitation via email by the CDMRP eReceipt system. The letter will provide the information necessary to begin the application submission through Grants.gov. The Partnering PI(s) will subsequently be notified separately by email. Please note that all of the Partnering PI(s) must follow the link in this email and register with CDMRP eReceipt in order to associate his/her grant application package with that of the Initiating PI.

Failure by the Initiating PI or any Partnering PI to submit his/her required application components will result in administrative rejection of all applications associated with the proposed research project.

The Government reserves the right to administratively withdraw duplicative applications submitted within the same program or to other CDMRP programs.

A. Step 1 – Pre-Application Components, Submission, and Screening

1. Pre-Application Components for the Initiating PI

Pre-application submission is the required first step. The pre-application consists of the components discussed below. All pre-application components must be submitted electronically through the CDMRP eReceipt system by ***5:00 p.m. Eastern time on the pre-application deadline date***. Refer to the Application Instructions & General Information for detailed information.

- **Proposal Information:** The Initiating PI must enter the Application Information before continuing the pre-application.
- **Proposal Contacts:** The Initiating PI must enter his/her contact information.
- **Collaborators and Conflicts of Interest (COI):** The Initiating PI must enter the contact information for the collaborating PI(s) in the "Partnering PIs" section.
- **Preproposal Narrative:** The Preproposal Narrative has a ***three-page limit*** inclusive of figures, tables, graphs, photographs, diagrams, chemical structures, pictures, pictorials, cartoons, and other information needed to judge the pre-application. The Preproposal Narrative should address the following:
    - **Focus Area:** Identify which of the PRORP Translational Research Partnership Award focus areas the application addresses.
    - **Research Hypothesis:** Describe the ideas and reasoning on which proposed research is based, and how the application addresses a central problem in combat-relevant orthopaedic injuries. Show how the perspective of each partner contributes to the development of the hypothesis.
    - **Research Strategy:** Concisely state the project's objective and specific aims.
    - **Partnership:** Describe how the project depends on the unique skills of each partner. Provide the time commitment for each partner. Describe how the proposed partnership of two to four PIs involves a substantial contribution by each partner and the reciprocal flow of ideas and information.
    - **Military Benefit:** Describe how the proposed research will have a significant impact on accelerating the movement of a scientific hypothesis in orthopaedic research into military combat-relevant clinical application, and provide a significant benefit to the lives of individuals who have sustained combat-relevant orthopaedic injuries.
- **Pre-Application Supporting Documentation:** The items to be included as supporting documentation for the pre-application are:
    - **References Cited:** One-page limit.
    - **Biographical Sketches:** Include biographical sketches for the Initiating PI, Partnering PI(s), and other key collaborators.

2. Pre-Application Screening

Pre-applications will be screened by the PRORP Integration Panel (IP), composed of scientists, clinicians, and consumer advocates. The pre-application screening criteria are as follows:

- **Military Benefit:** The degree to which the proposed partnership and research, if successful, will accelerate the movement of new diagnostic and therapeutic approaches in orthopaedic research into clinical application and ultimately benefit the health and lives of warfighters who have experienced or may experience combat-relevant orthopaedic injury.
- **Partnership:** The extent to which the partners' backgrounds, expertise, and levels of effort are appropriate to accomplish the proposed research, and whether the research proposed could not be readily accomplished by either a single investigator or through separate efforts. Each award must include two to four PIs.
- **Research Hypothesis:** The degree to which the proposed research aligns with Translational Research Partnership Award focus areas. How well the preliminary data support the hypothesis.
- **Research Strategy:** How well the specific aims support the research hypothesis and objectives.

B. Step 2 – Application Components and Submission

PIs will receive notification of invitation to submit an application for the Translational Research Partnership Award. Applications will not be accepted unless the PIs have been invited. Do not submit an application unless the Initiating and Partnering PI(s) receive a letter of invitation. If invited to submit an application, the Partnering PI(s) will be contacted via e-mail by the CDMRP eReceipt system and provided the information necessary to begin application submission through Grants.gov. Please note that each Partnering PI must follow the link in this email and register with CDMRP eReceipt in order to associate his/her grant application package with that of the Initiating PI.

Applications must be submitted electronically by the Authorized Organizational Representative (AOR) through Grants.gov (www.grants.gov).

Because the invitation to submit an application is based on the contents of the pre-application, PIs should not change the title, research objectives, or focus area(s).

Each application must include the completed Grants.gov application package of forms and attachments identified in www.grants.gov for the US Army Medical Research Acquisition Activity (USAMRAA) Program Announcement/Funding Opportunity. In addition to the specific instructions below, please refer to the Application Instructions & General Information for detailed requirements of each component.

The CDMRP requires separate Grants.gov application package submissions for Initiating and Partnering PIs. The CDMRP eReceipt system assigns a unique log number to each PI that must be used when submitting his/her Grants.gov application package. To obtain his/her unique log number, before submitting their application to Grants.gov, each Partnering PI must associate him- or herself with the Initiating PI's application by accepting the link sent by the CDMRP eReceipt system. ***Each PI also must submit an identical copy of a jointly created Statement of Work (SOW).***

Failure by the Initiating PI or any Partnering PI to submit his/her required application components will result in administrative rejection of all applications associated with the proposed research project.

The package includes:

1. **Application Submission Components for the Initiating PI**

   - **SF-424 (R&R) Application for Federal Assistance Form**
   - **Attachments Form**
     - **Attachment 1: Project Narrative (15-page limit)**

       The Project Narrative is the main body of the application and should demonstrate that a translational research partnership either exists or will be developed to address one of the Translational Research Partnership Award focus areas in combat-relevant orthopaedic research. Applications must include preliminary data to support the feasibility of the research hypotheses and research approaches; however, these data may come from fields other than orthopaedic research.

       Describe the proposed project in detail using the following outline:

     - **Background:** Present the ideas and reasoning behind the proposed research, to include relevant literature citations. Describe previous experience most pertinent to this application.
     - **Hypothesis or Objective:** State the hypothesis to be tested or the objective to be reached.
     - **Specific Aims:** Concisely explain the project's specific aims. If the proposed research is part of a larger study, present only tasks that the DOD award would fund.
     - **Research Strategy:** Describe the experimental design, methods, and analyses, including appropriate controls, in sufficient detail for analysis. Address potential problem areas and present alternative methods and approaches. Describe the statistical plan for the research proposed. If human subjects or human biological samples will be used, include a detailed plan for the recruitment of subjects or the acquisition of samples.

Observations that drive a research hypothesis may be derived from a laboratory discovery, population-based studies, or a clinician's firsthand knowledge from providing care to patients. While the ultimate goal of translational research is to move an observation forward into clinical application, members of the partnership should view translational research as a two-way continuum between bench and bedside. ***The Translational Research Partnership Award does not support clinical trials***, ***but may support correlative studies that are associated with an existing clinical trial and/or projects that develop clinical endpoints for clinical trials.***

- **Partnership:** Describe how the research project depends on the unique skills and contributions of each member of the partnership. Provide the time commitment of each partner toward the proposed research project. Describe how the proposed partnership involves a substantial contribution by each partner and the reciprocal flow of ideas and information. Demonstrate how the translational partnership will maximize the use of existing resources and minimize unnecessary duplication. If partners are from different institutions, describe the communication plan and provide evidence of institutional support for resolving potential intellectual and material property issues and removing institutional barriers to achieving high levels of cooperation.
- **Attachment 2: Supporting Documentation**
  - References Cited
  - Acronyms & Symbol Definitions
  - Facilities & Other Resources
  - Description of Existing Equipment
  - Publication URLs and/or Patent Abstracts (five-document limit)
  - Letters of Institutional Support

    For PI(s) who are practicing clinicians, the institution must clearly demonstrate a commitment to the clinician's research.
  - Letters of Collaboration (if applicable)
  - Letter(s) from appropriate authority showing approved access to veterans if proposing to study veteran volunteers or use data from veterans (e.g., Defense Manpower Data Center Data Request System, collaborating investigators from the Veterans Administration, etc.) (if applicable)
  - Intellectual and Material Property Plan
- **Attachment 3: Technical Abstract**
- **Attachment 4: Public Abstract**
- **Attachment 5: Statement of Work (SOW; three-page limit)**

  The Initiating and Partnering PI(s) must create a joint SOW.
- **Attachment 6: Detailed Budget and Justification**

- **Attachment 7: Military Benefit Statement (one-page limit)**

  State explicitly how the proposed work, if successful, will have an impact on accelerating the movement of a promising hypothesis in combat-relevant orthopaedic research into clinical application. Further, describe the impact of this study on the lives of individuals recovering from combat-relevant orthopaedic injuries, including but not limited to how the expected results of the proposed work will contribute to the goals of decreasing the clinical impact of these injuries.

  Demonstrate how the proposed study is responsive to the health care needs of the Armed Forces and/or the US veteran population. If active duty military or veteran population(s) will be used in the proposed research project, describe the population(s), the appropriateness of the population(s) for the proposed study, 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 targeted population (i.e., Armed Forces and/or the US veteran population). Show how the proposed study complements ongoing DOD areas of orthopaedic research interest. Describe how the study design will replicate field conditions, if applicable.

- **Attachment 8: Translatability Statement (one-page limit)**

  State explicitly how the proposed research as performed through the proposed partnership will translate promising, well-founded research findings into clinical application for combat-relevant orthopaedic injuries.

- **Attachment 9: Approval for Access to Military Populations (if applicable; one-page limit)**

  If access to a service member population has already been established, a letter of support, signed by the lowest ranking person with approval authority, should be included for studies involving active duty military; military-controlled study materials; databases; and/or restricted facilities (e.g., biological or chemical containment facilities).

- **Attachment 10: Request for Information on Study Population (if applicable)**

  If access to a service member population has not yet been established, a Request for Information on Study Population form should be submitted. This form is provided in the Application Instructions and General Information for the Program Announcement/Funding Opportunity.

- **Attachment 11: Federal Agency Financial Plan (if applicable)**

- **Attachments 12–15: Subaward Detailed Budget and Justification (if applicable)**

2. Research & Related Senior/Key Person Profile (Expanded Form)

- PI Biographical Sketch (four-page limit)
- PI Current/Pending Support
- Key Personnel Biographical Sketches (four-page limit each)
- Key Personnel Current/Pending Support

3. Research & Related Project/Performance Site Location(s) Form

4. Application Components for the Partnering PIs

Before submitting the application to Grants.gov, the Partnering PI(s) must associate themselves with the application by accepting the link sent by the CDMRP eReceipt system. The CDMRP eReceipt system assigns a unique and separate log number which must be used when submitting the Grants.gov application package.

The application submission process for Partnering PI(s) uses an abbreviated application package of forms and attachments from Grants.gov. Each Partnering PI will be contacted via email by the CDMRP eReceipt system and provided with the information necessary to begin application submission through Grants.gov. Please note that each Partnering PI must follow the link in this email and register with CDMRP eReceipt in order to associate his/her grant application package with that of the Initiating PI.

The Partnering PIs package includes:

- **SF-424 (R&R) Application for Federal Assistance Form**
- **Attachments Form**
  - Attachment 5: Statement of Work (SOW; three-page limit): The Initiating and Partnering PI(s) must create a joint SOW.
  - Attachment 6: Detailed Budget and Justification
  - Attachment 11: Federal Agency Financial Plan (if applicable)
  - Attachments 12-15: Subaward Detailed Budget and Justification (if applicable)
- **Research & Related Project/Performance Site Location(s) Form**

IV. INFORMATION FOR APPLICATION REVIEW

A. Application Review and Selection Overview

All applications are evaluated by scientists, clinicians, and consumer advocates using a two-tier review process. The first tier is a scientific peer review of applications against established criteria for determining scientific merit. The second tier is a programmatic review that compares submissions to each other and recommends applications for funding based on scientific merit, overall goals of the program, and the specific intent of the award

mechanism. Additional information about the two-tier review process used by the CDMRP may be found at http://cdmrp.army.mil/fundingprocess

The peer review and programmatic review processes are conducted confidentially to maintain the integrity of the merit-based selection process. Each tier of review requires panelists to sign a non-disclosure statement attesting that application and evaluation information will not be disclosed outside the panel. Violations of the non-disclosure statement can result in the dissolving of a panel(s) and other corrective actions. Institutional personnel and PIs are prohibited from contacting persons involved in the application review process to gain protected evaluation information or to influence the evaluation process. Violations of this prohibition will result in the administrative withdrawal of the institution's application. Violations by panelists or PIs that compromise the confidentiality of the peer review and programmatic review processes may also result in suspension or debarment of their employing institutions from Federal awards. Furthermore, it is a crime for Federal officials to disclose confidential information of one party to another third party (Title 18 United States Code 1905).

The Government reserves the right to review all applications based on one or more of the required attachments or supporting documentation (e.g., Military Benefit Statement).

B. Review Criteria

1. Peer Review: All applications will be evaluated according to the following criteria, which are listed in order of decreasing importance:

- **Translational Potential**
  - The degree to which the project, if successful, will lead to the translation of promising, well-founded laboratory or clinical research findings into clinical applications for combat-relevant orthopaedic injuries.
- **Military Benefit**
  - The degree to which the proposed research, if successful, will have a significant impact on the diagnosis and treatment of combat-relevant orthopaedic injuries, specifically with regard to the PRORP Translational Research Partnership Award focus areas.
  - How the proposed research will make original and important contributions towards the goal of advancing treatment and/or recovery from musculoskeletal injuries sustained during combat or combat-relevant activities.
- **Partnership**
  - Whether all PIs meet the eligibility requirements.
  - The degree to which the proposed partnership will advance orthopaedic research in a way that could not be accomplished by a single investigator.
  - Whether there is sufficient evidence that all partners are contributing substantially to the development and implementation of the research plan, and to the reciprocal flow of ideas.

- How well the multiple institutions, if applicable, within the partnership will support the proposed project, and if an appropriate communication plan is proposed.
- How well the partners' background, expertise, and levels of effort will support the proposed project.
- Whether there is sufficient evidence of a plan to resolve intellectual and material property issues.

- **Research Strategy and Feasibility**
  - The degree to which the scientific rationale supports the project and its feasibility, as demonstrated by a critical review and analysis of the literature, relevant preliminary data, and logical reasoning.
  - How well the hypotheses or objectives, aims, experimental design, methods, and analyses are developed.
  - How well the PIs acknowledge potential problem areas and consider alternative approaches.
  - The degree to which the plan to study military populations, if applicable, is appropriate and feasible.

The following criteria will not be individually scored, but may impact the overall evaluation of the application:

- **Budget**
  - Whether the budget is appropriate for the proposed research and within the limitations of the award mechanism.
- **Application Presentation**
  - How the writing and components of the application influenced the review.

2. Programmatic Review: The following criteria are used by programmatic reviewers to make funding recommendations that maintain the program's broad portfolio:

- Adherence to the intent of the award mechanism
- Programmatic relevance
- Ratings and evaluations of the peer reviewers
- Relative translational potential and military benefit
- Program portfolio balance, with consideration for the award mechanism focus areas

Scientifically sound applications that best fulfill the above criteria and most effectively address the unique focus and goals of the program will be identified by IP members and recommended for funding to the Commanding General, US Army Medical Research and Materiel Command.

V. ADMINISTRATIVE ACTIONS

After receipt of pre-applications from eReceipt or applications from Grants.gov, the following administrative actions may occur:

A. Rejection

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

- Preproposal Narrative exceeds page limit.
- Preproposal Narrative is missing.
- Page size is larger than 8.5 inches x 11.0 inches (approximately 21.59 cm x 27.94 cm).

The following will result in administrative rejection of all applications associated with the proposed research project:

- Initiating or Partnering PI(s) application is missing.
- Submission of an application for which a letter of invitation was not received.
- Project Narrative exceeds page limit.
- Project Narrative is missing.
- Initiating or Partnering PI(s) budget is missing.
- Page size is larger than 8.5 inches x 11.0 inches (approximately 21.59 cm x 27.94 cm).

B. Modifications

- Pages exceeding the specified limits will be removed for all documents other than the Preproposal Narrative and the Project Narrative.
- Documents not requested will be removed.
- Following the application deadline, you may be contacted by CDMRP via email with a request to provide certain missing supporting documents (excluding those listed directly above in Section A., Rejection). The missing documents must be provided by 5:00 p.m. Eastern time on the second full business day following the date the email was sent. Otherwise, the application will be peer reviewed without the missing documents.

C. Withdrawal

The following may result in administrative withdrawal of the application:

- At least one partner is not a clinician, at least one partner is not a laboratory scientist, and/or at least one partner does not have experience either in orthopaedic research or orthopaedic medicine.
- FY09 IP member(s) is found to be involved in the pre-application or application processes including, but not limited to, concept design, application development,

budget preparation, and the development of any supporting document. A list of the FY09 IP members may be found at http://cdmrp.army.mil/09prorppanel

- The application includes a clinical trial.
- Submission of the same research project to different award mechanisms within the same program or to other CDMRP programs.
- The Initiating PI or a Partnering PI does not meet the eligibility criteria as described in this Program Announcement/Funding Opportunity.
- The application does not conform to this Program Announcement/Funding Opportunity description to an extent that precludes appropriate scientific peer and programmatic review.
- Direct costs as shown on the Detailed Budget and Justification form exceed the maximum allowed by the award mechanism.
- Inclusion of URLs, with the exception of links to published references.
- The proposed project is not relevant to at least one of the award mechanism-specific focus areas.

D. Withhold

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

VI. CONTACT INFORMATION

A. Program Announcement/Funding Opportunity, application format, or required documentation: To view all funding opportunities offered by the CDMRP, perform a Grants.gov basic search using the CFDA Number 12.420. Submit questions as early as possible. Response times will vary depending upon the volume of inquiries. Every effort will be made to answer questions within 5 working days.

Phone: 301-619-7079
Fax: 301-619-7792
Email: cdmrp.pa@amedd.army.mil

B. eReceipt system: Questions related to pre-application components through the CDMRP eReceipt system should be directed to the eReceipt help desk, which is available Monday through Friday from 8:00 a.m. to 5:00 p.m. Eastern time.

Phone: 301-682-5507
Website: https://cdmrp.org
Email: help@cdmrp.org

C. Grants.gov contacts: Questions related to application submission through the Grants.gov (http://www.grants.gov/) portal should be directed to the Grants.gov help desk, which is available Monday through Friday from 7:00 a.m. to 9:00 p.m. Eastern time. Deadlines for application submission are 11:59 p.m. Eastern time on the deadline date. Please note the CDMRP help desk is unable to answer questions regarding Grants.gov submissions.

Phone: 800-518-4726
Email: support@grants.gov

Grants.gov will notify PIs of changes made to this Program Announcement/Funding Opportunity and/or application package ONLY if the PI subscribes to the mailing list by clicking on the "send me change notification emails" link on the Opportunity Synopsis page for this announcement. If the PI does not subscribe and the application package is updated or changed, the original version of the application package may not be accepted.