

Program Announcement

Department of Defense (DOD) Congressionally Directed Medical Research Programs

Peer Reviewed Orthopaedic Research Program (PRORP)

Clinical Trial Award

Funding Opportunity Number: W81XWH-09-PRORP-CTA

Table of Contents

I.	Funding Opportunity Description.....	2
A.	Background Information	2
1.	Program Objectives	2
2.	Priority Research Areas.....	2
B.	Award Description	4
C.	Eligibility.....	8
D.	Funding.....	9
E.	Award Administration.....	10
II.	Timeline for Submission and Review.....	10
III.	Submission Process	10
A.	Step 1 – Pre-Application Components and Submission.....	11
B.	Step 2 – Application Components and Submission	12
IV.	Information for Application Review	15
A.	Application Review and Selection Overview	15
B.	Review Criteria	16
V.	Clinical Protocol and Supporting Clinical Documentation.....	19
A.	Required Elements of the Protocol.....	19
B.	Surveys, Questionnaires, and Other Data Collection Instruments	29
C.	Additional Protocol Language Requirements	29
VI.	Administrative Actions.....	30
VII.	Contact Information	32

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 Clinical Trial Award mechanism is being offered for the first time in FY09.

This award is intended to support the rapid implementation of clinical trials with the potential to have a significant impact on the *acute care* of military combat-relevant orthopaedic injuries. The clinical trials may be designed to evaluate promising new products, pharmacologic agents (drugs or biologics), devices, clinical guidance, and/or emerging approaches and technologies. All applications must specifically and clearly address the military relevance of the proposed research. Collaboration with military researchers and clinicians is encouraged; however, the use of military or veteran populations is not a prerequisite. Applications recruiting civilian populations as an alternative are strongly recommended.

PRORP Clinical Trial Award Focus Areas: This award mechanism seeks applications from all areas of clinical research as they relate to **at least one** of the Clinical Trial Award focus areas listed below. *If the proposed project is not relevant to the specified PRORP Clinical Trial 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:

- 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
- Restoration of joint function
 - Optimal materials and clinical care for joint reconstruction
 - Treatment of articular cartilage injury
 - Regeneration of bone, muscle, and cartilage
- 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

PIs must clearly specify in the Clinical Protocol (main body of the application) which type of clinical trial is being proposed: Phase 0 (Exploratory INDs), Phase I, Phase II, Phase III, or a combination. For descriptions of each type of clinical trial, please refer to <http://www.clinicaltrials.gov> and <http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm078933.pdf>. In addition, refer to the Application Instructions & General Information, Appendix 6, for helpful information about distinguishing clinical trials and clinical research.

It is expected that the proposed clinical trial will be initiated within 12 months of the award date. Investigational new drug (IND) applications, if applicable, should be submitted or approved prior to application for the PRORP Clinical Trial Award. ***If IND/IDE (Investigational Device Exemption) approval is not received within 6 months of the award date, the Government reserves the right to revoke funding.***

The following are important aspects of application for the Clinical Trial Award:

- Demonstrate availability of, and access to, a suitable patient population that will support a meaningful outcome for the study.
- Include preliminary data to support the feasibility of the research hypotheses and research approaches.
- Describe clearly defined and appropriate endpoints for the proposed clinical trial. Endpoints should correspond to the trial design and sample size proposed.
- Clearly articulate the statistical analysis plan. Include a power analysis that supports the sample size proposed.
- Discuss the potential impact of the study results for patients with combat-relevant orthopaedic injuries.
- Include a named study coordinator(s) who will guide the clinical protocol through Institutional Review Board (IRB), Human Subjects Research Review Board, and other regulatory approval processes, coordinate activities from all sites participating in the trial, and coordinate participant accrual.
- IND approvals, if applicable, should be initiated or completed before submission to the Clinical Trial Award mechanism. If IND/IDE approval is not received within 6 months of the award date, the Government reserves the right to revoke funding.
- Provide a Transition Plan (including funding and resources) showing how the product will progress to the next clinical trial phase and/or delivery to the military market after the successful completion of the PRORP award.

Optional Nested Career Development Award: A nested Career Development Award is being offered as an optional addition to the Clinical Trial Award. The intent of the nested Career Development Award is to support research training opportunities for military investigators pursuing careers in orthopaedic research. This award supports individuals in the early stages of their careers by providing the experience necessary to pursue career opportunities at the forefront of orthopaedic trauma research and make significant contributions to combat-relevant orthopaedic research and clinical care.

- **Career Development Award Principal Investigator (CDA-PI):** CDA-PIs may be active-duty research- or physician-scientists at either the postdoctoral or early-career level, located at a DOD research or clinical site. Only one (1) CDA-PI can be included as a Career Development Award applicant within a given Clinical Trial Award application. *“To be named” CDA-PIs are not allowed for the application submission.*
- **Orthopaedic Research Mentorship:** A designated mentor is required. This mentor must be an established orthopaedic trauma researcher; have a history of orthopaedic trauma research funding; and have a record of orthopaedic trauma research publications in peer-reviewed journals. In addition, the mentor must demonstrate a commitment to developing and sustaining the CDA-PI’s research career in orthopaedic trauma research. *It is anticipated, but not required, that the mentor will be an established investigator at an academic or other non-military institution.*
- Applications that contain a nested Career Development Award will qualify for a higher level of funding as described under the Funding Section (Section I.E).
- A **required Career Development Statement** (three-page limit) from the proposed PI should:
 - Identify the primary mentor. Multiple mentors may be proposed, if appropriate, but one must be identified as primary.
 - Describe the research that will be performed by the CDA-PI in the context of the proposed clinical trial.
 - Articulate career goals and how the proposed research training will promote a career in orthopaedic trauma research.
- Supporting documentation should include a biographical sketch for the CDA-PI and three Letters of Support. One of the letters must be from the CDA-PI’s primary mentor. A biosketch must also be provided for the mentor if not already included as a key personnel biosketch in the Clinical Trial Award application.
- To qualify for the nested Career Development Award, all requirements described above must be included in the application. If these requirements are not met, the Government reserves the right to review the application for a traditional Clinical Trial Award.

Multi-institutional Clinical Trials: If the proposed clinical trial is multi-institutional, plans for communication and data transfer between the collaborating institutions, as well as how specimens and/or imaging products obtained during the study will be handled, should be included in the appropriate sections of the Clinical Protocol. A separate Intellectual and Material Property Plan agreed upon by all participating institutions is also required for multi-institutional clinical trials.

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

PIs must be at or above the level of Assistant Professor (or equivalent). Refer to Application Instructions & General Information, Appendix 1, for general eligibility information.

Nested Career Development Award Option: CDA-PIs must have:

- completed a doctoral degree,
- a total of less than 8 years of postdoctoral clinical or research experience (excluding clinical residency or fellowship training), and
- received less than \$500,000 in direct costs in aggregate as a PI of Federally or privately funded, non-mentored, peer reviewed grants.

D. Funding

- The maximum period of performance is **4** years.
- The maximum allowable funding for the entire period of performance is **\$2.5M** in direct costs.
- The applicant may request the entire maximum direct cost amount for a project that may be less than the maximum **4**-year period of performance.
- Regardless of the period of performance proposed, the applicant 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.

Funding for a Clinical Trial Award that includes a nested **Career Development Award**:

- The maximum period of performance is **4** years.
- The maximum allowable direct cost amount for the entire period of performance is **\$2,725,000** if the application includes a nested Career Development Award.
 - Applications requesting the higher level of funding that do not include a nested Career Development Award will have their budgets reduced as appropriate.

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

- Salary
- Research supplies
- Equipment
- Clinical costs
- Research-related subject costs
- Travel between collaborating institutions
- Travel to scientific/technical meetings
- 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 (and, if applicable, the Career Development Award 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 \$32.4M of the \$112M FY09 PRORP appropriation to fund approximately eight Clinical Trial 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

At the Government's discretion and expense, the PI(s) and Clinical Study Coordinator(s) may be requested to participate in a pre-award meeting.

Quarterly technical progress reports will be required, in addition to financial reporting.

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

A change in PI will not be allowed for the Clinical Trial Award except under extenuating circumstances that will be evaluated on a case-by-case basis by and at the discretion of the Grants Officer, provided that the intent of the award mechanism is met.

Institutional transfer will not be allowed for the Clinical Trial Award except under extenuating circumstances that will be evaluated on a case-by-case basis and at the discretion of the Grants Officer, provided that the intent of the award mechanism is met.

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 \(https://cdmrp.org/\)](https://cdmrp.org/), and (2) an application submission through [Grants.gov \(http://www.grants.gov/\)](http://www.grants.gov/). *Applications will not be accepted unless the PI has 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 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 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 and Submission

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
- Proposal Contacts
- Collaborators and Conflicts of Interest (COI)
- **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 preproposal. The Preproposal Narrative should address the following:
 - **Focus Area:** Identify which of the PRORP Clinical Trial Award focus areas this application addresses.
 - **Research Idea:** Describe the ideas and reasoning on which proposed work is based, and how the application addresses a central problem in combat-relevant orthopaedic injuries.
 - **Research Strategy:** Concisely state the project’s objectives and specific aims, including whether the clinical trial is Phase 0, I, II, III, or a combination. If applicable, describe the role of the nested Career Development Award in the proposed project, including the CDA-PI and Mentor.
 - **Military Benefit:** Describe how the proposed work will have an impact on accelerating the movement of a promising treatment for orthopaedic injury into a military combat-relevant clinical application.

Pre-Application Supporting Documentation: The items to be included as supporting documentation for the pre-application are:

- **References:** One-page limit.
- **Biographical Sketches:** Include biographical sketches for the PI, other key collaborators, and the nested Career Development Award PI and Mentor (if applicable).

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 research, if successful, will have a significant clinical impact to innovate and/or improve clinical care for warfighters who have sustained combat-relevant orthopaedic injury.
- **Research Idea:** The degree to which the proposed research aligns with PRORP Clinical Trial Award focus areas. How well the preliminary data support the research idea.
- **Research Strategy:** How well the specific aims support the research idea and objectives.

B. Step 2 – Application Components and Submission

PIs will receive notification of invitation to submit an application for the Clinical Trial Award. Applications will not be accepted unless the PI has been invited. Do not submit an application unless a letter of invitation has been received. 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 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 package includes:

1. SF-424 (R&R) Application for Federal Assistance Form

2. Attachments Form

- **Attachment 1: Clinical Protocol (no page limit)**

The Clinical Protocol is the main body of the application and must address the required components described in Section V, Clinical Protocol and Supporting Clinical Documentation.

- **Attachment 2: Supporting Documentation**

- References Cited
- Acronyms and Symbol Definitions
- Facilities & Other Resources
- Description of Existing Equipment
- Publications URLs and/or Patent Abstracts (five-document limit)
- Letters of Institutional Support

If the PI is a practicing clinician, 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 enroll veteran volunteers or use data from veterans (e.g., Defense Manpower Data Center Data Request System, collaborating investigators from the VA, etc.) (if applicable)
- Intellectual and Material Property Plan (if applicable)
- **Attachment 3: Technical Abstract (one-page limit)**
- **Attachment 4: Public Abstract (one-page limit)**
- **Attachment 5: Statement of Work (SOW, three-page limit)**
- **Attachment 6: Detailed Budget and Justification**
- **Attachment 7: Military Benefit Statement (one-page limit)**

State explicitly how the proposed clinical trial, if successful, will accelerate the movement of the product, pharmacologic agent, device, clinical guidance, and/or emerging technology into clinical practice for combat-relevant orthopaedic injuries. 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. The following are examples of ways in which proposed studies, if successful, may have an impact. ***Although not all-inclusive***, these examples are intended to help PIs frame the impact of the proposed research:

- Has the potential to change the standard of care for military orthopaedic injuries
- Proposes new paradigms or challenges existing paradigms in patient care of military orthopaedic injuries
- Contributes to development or validation of evidence-based policy or guidelines for patient evaluation and care

Demonstrate how the proposed study is responsive to the health care needs of the Armed Forces and/or the U.S. 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 U.S. 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: Transition Plan (one-page limit)**

Provide information on the methods and strategies proposed to move the product to the next clinical trial phase and/or delivery to the military or civilian market after the completion of the PRORP award. The plan should include details of potential

funding sources, collaborations, other resources that will be used to provide this continuity of development, a potential timeline for deployment into the clinical setting, the involvement of appropriate intellectual property, licensing and/or business professionals, and plans for the further development and successful transition of the product.

- **Attachment 9: Data/Research Resources Sharing Plan (one-page limit)**

The Data/Research Resources Sharing Plan will not be reviewed during the peer or programmatic review processes. It will be used for administrative purposes only.

Describe how unique and/or final research data and resources will be shared with the research community and general public, including cases where preexisting data or research resources will be utilized and/or modified during the proposed study. Clearly explain any limitations associated with a preexisting agreement that preclude subsequent data/research resources sharing.

The content of the data/research resource sharing plan may depend on the data being collected or the resources being developed. PIs should describe briefly the expected schedule for sharing, format of the final dataset, documentation to be provided, analytic tools to be provided, data sharing or material transfer agreement (or other documentation) including criteria for deciding who can receive the data/research resource and whether or not any conditions will be placed on their use, and mode of data/research resource sharing (e.g., posting data on an institutional or personal website). If research involves human subjects and the data and/or research resource(s) are intended to be shared, the application should discuss how the rights and confidentiality of participants would be protected. PIs should follow their institution's technology transfer policies and provide links to model technology transfer agreement used by the institution, as appropriate. Refer to Application Instructions & General Information, Appendix 5, for examples of Data/Research Resources Sharing Plans.

- **Attachment 10: Nested Career Development Award Application (if applicable)**

- Career Development Statement (three-page limit): The proposed PI for the nested Career Development Award must submit a statement to include the following:
 - Identify the primary mentor.
 - Briefly describe the research that will be performed by the CDA-PI in the context of the proposed clinical trial.
 - Articulate career goals and how the proposed research training will promote a career in orthopaedic trauma research. Describe qualifications and achievements that make the CDA-PI the ideal candidate for this award. Describe the potential for a successful career in orthopaedic trauma research.

- Letters of Support: Three letters of support for the CDA-PI should be provided, including one letter from the primary mentor. Each letter should describe the attributes, qualifications, and achievements that support the CDA-PI as an ideal candidate for this award.
- **Attachment 11: Approval for Access to Military Populations (if applicable; one-page limit)**

If the PI has already established access to a service member population, 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 12: Request for Information on Study Population (if applicable)** *If the PI has not yet established access to a service member population*, 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 13: Federal Agency Financial Plan (if applicable)**
- **Attachments 14–15: Subaward Detailed Budget and Justification (if applicable)**

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

- PI Biographical Sketch (four-page limit)
 - Career Development Award PI Biographical Sketch (if applicable) (four-page limit)
- PI Current/Pending Support
- Key Personnel Biographical Sketches (four-page limit each)
- Key Personnel Current/Pending Support

4. 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 these prohibitions 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 that are of equal importance:

- **Military Benefit**
 - The degree to which the results of the proposed clinical trial will affect the patterns of clinical practice for military combat-relevant orthopaedic injuries (e.g., treatment, management, and/or quality of life).
- **Study Design**
 - How well the scientific rationale and preliminary data, including critical review and analysis of the literature, and laboratory and preclinical evidence support the rationale for testing the intervention.
 - The degree to which the study aims, hypotheses or objectives, experimental design, methods, data collection procedures, and analyses are designed to clearly answer an important clinical objective.
 - Whether the proposed outcome measures are appropriate for the purposes of the study.
 - How well the logistical aspects of the proposed clinical trial (e.g., communication plan, data transfer and management, and standardization of procedures) meet the needs of the proposed clinical trial.
 - How well the inclusion, exclusion, and randomization criteria meet the needs of the proposed clinical trial.
- **Ethics**
 - How well the risks to subjects are minimized, and whether there is sufficient evidence of a monitoring plan that is appropriate for the level of risk.

- The degree to which the described procedures are consistent with sound research design and, when appropriate, procedures used are already in use for diagnostic or treatment purposes.
- Whether the selection of subjects is appropriate for the trial design, informed consent is sought and appropriately documented, and appropriate safeguards are in place for vulnerable populations.
- **Intervention, Drug, or Device**
 - The degree to which the intervention, drug, or device to be tested is available and appropriate for the proposed clinical trial.
 - Whether there is documentation that an IND/IDE application has been submitted or approved (if applicable).
- **Patient Recruitment and Accrual**
 - How well the recruitment, informed consent, screening, and retention processes for volunteers will meet the needs of the proposed clinical trial.
 - Whether there is evidence of an adequate contingency plan to resolve potential delays (e.g., slow accrual, patient dropout) in clinical trial completion.
 - How well the protocol realistically considers access to and availability of volunteers for the clinical trial, the prospect of their participation, and the potential for volunteer attrition.
- **Statistical Plan (as appropriate to phase of study)**
 - How the statistical plan, including sample size projections and power analysis, is adequate for the study and all proposed correlative studies.
- **Transition Plan**
 - How well the transition plan describes deployment of the product, pharmacologic agent, cognitive/behavioral intervention, device, clinical guidance, and/or emerging approach and technology.
 - Whether there is evidence that the PI has or can secure additional funding, or whether the PI has clearly described potential options to secure the additional funding needed to bring the product, pharmacologic agent, cognitive/behavioral intervention, device, clinical guidance, and/or emerging approach and technology to a clinical trial phase and/or field deployment.
 - How well the plans are described for further development of the product or intervention, and how well the plan completes development of the product or intervention to ensure a successful transition.
- **Personnel**
 - The degree to which the clinical study team's background and expertise are appropriate to accomplish the proposed work (i.e., statistical expertise, expertise in combat-relevant orthopaedic injury, and clinical studies).
 - The degree to which the levels of effort of the clinical team (and, if applicable,

the proposed Career Development Award PI and Mentor) are appropriate for successful conduct of the proposed trial.

- Whether there is sufficient evidence that a study coordinator with appropriate expertise has been identified and provided with an appropriate level of effort.
- If applicable, how well the Career Development Award PI's career goals and plans, proposed research training, and qualifications of the Mentor will promote a career in orthopaedic trauma research.

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

- **Environment**

- Whether there is sufficient evidence to indicate an appropriate scientific environment, clinical setting, and the accessibility of institutional resources to support the clinical trial at each participating center or institution (including collaborative arrangements).
- Whether there is evidence for appropriate institutional commitment from each participating institution.
- If applicable, whether the intellectual and material property plan that is agreed upon by each participating institution is appropriate for the proposed clinical trial.

- **Budget**

- Whether the budget is appropriate for the proposed clinical trial 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 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. CLINICAL PROTOCOL AND SUPPORTING CLINICAL DOCUMENTATION

A. Required Elements of the Protocol

Please note that the protocol should address the following elements:

- Trial design
- Intervention, drug, or device to be tested
- Feasibility of the study
- Statistical plan
- Personnel involved in the study
- Ethics and/or regulatory issues

Protocol elements:

1. Protocol Title

2. **Phase:** Designate the phase of the trial (i.e., Phase 0, I, II, or a combination of phases).

3. **Principal Investigator (PI)/Study Staff:** List the complete name, address, telephone and fax number, and email address of the PI. List the names of all key study personnel who will have significant involvement in the study; include their professional credentials (e.g., M.D. or R.N.), highest degree(s), job title, and employing institution.

4. **Study Location(s):** List all centers, clinics, or laboratories where the study is to be conducted. Provide the Federal-wide or DOD Assurance number for each institution engaged in study. Include the name, degree(s), title, employing institution, and complete address of the investigator(s) for each study site.

5. **Time Required to Complete the Study:** State the month and year of the expected start and completion times.

6. **Background (Recommended Limit: 10 pages):** Include a literature review that describes in detail the rationale for conduct of the study. *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.* The background section should clearly support the choice of study variables and explain the basis for the study questions and/or study hypotheses. This section should establish the relevance of the study and explain the applicability of the proposed findings.

Note: If the protocol was initiated using other funding prior to obtaining the DOD funding, explain the history and evolution of the protocol and declare the source of prior funding. Specifically identify the portions of the study that will be supported with DOD funds. For ongoing protocols, HRPO approval is required prior to initiation of any human subjects research activities supported by the USAMRMC.

7. Objectives/Specific Aims/Study Questions: Provide a description of the purpose and objectives of the study with detailed specific aims and/or study questions/hypotheses.

8. Study Design: Describe the type of study to be performed (e.g., prospective, retrospective, randomized, controlled, etc.) and outline the proposed methodology in sufficient detail to show a clear course of action.

- Define the study variables and describe how they will be measured.
- Describe the methods that will be used to obtain a sample of volunteers from the accessible population (i.e., convenience, simple random, stratified random).
- If applicable, describe the subject-to-group assignment process (e.g., randomization, block randomization, stratified randomization, age-matched controls, alternating group, or other procedures).
- Explain the specific actions to accomplish the group assignment (e.g., computer assignment, use of table of random numbers).
- Describe the reliability and validity of psychometric measures, if applicable.

9. Study Population: Describe the target population (to whom the study findings will be generalized) and the nature, approximate number, and pertinent demographic characteristics of the accessible population at the study site (population from which the sample will be recruited/drawn). Demonstrate that the research team has access to the proposed study population. Specifically demonstrate approvals and plans to access veterans and/or obtain personal data on veterans. Furthermore, discuss past efforts in recruiting volunteers from the target population for previous clinical trials (if applicable), any potential barriers to accrual, such as a change in the target population demographics, a change in medical practices, or competing clinical trials; and plans for addressing unanticipated delays (e.g., slow accrual). Volunteer selection should be equitable. The protocol should include justification of any age, race, ethnicity, or sex limitations provided.

10. Inclusion/Exclusion Criteria: List the inclusion and exclusion criteria in the protocol. Inclusion/exclusion criteria should take into consideration the specific risk profile of the studies to be conducted and the standard of care for that patient population. Ensure that exclusions are justified. Clearly state the exclusion criteria for volunteers with disease, taking medications, or from certain groups.

Inclusion of Women and Minorities in Study. Consistent with the Belmont Report and recent congressional legislation, special attention is given to inclusion of women and minorities in studies funded or supported by the USAMRMC. This policy is intended to promote equity both in assuming the burdens and in receiving the benefits of human subjects research. If women and/or minorities will be excluded from the protocol, an appropriate justification must be included.

11. Description of the Recruitment Process: Explain methods for identification of potential volunteers (e.g., medical record review, obtaining sampling lists, health care provider identification, etc.).

- Describe the recruitment process *in detail*. Address who will identify potential volunteers, who will recruit them, and what methods will be used to recruit them.
- If volunteers will be compensated for participation in the study, a detailed description of the compensation plan should be included in the protocol. Ensure that the compensation plan is fair and does not provide undue inducement. If the study requires multiple visits, a plan for pro-rating payments in the event of volunteer withdrawal should be considered.
- Describe the recruitment and advertisement materials. The recruitment materials should not be coercive or offer undue inducements, and should accurately reflect the study. An ombudsman should be considered for use with particularly vulnerable populations.
- Some important considerations for recruitment materials include:
 - Recruitment materials should not promise a cure or benefit beyond what is mentioned in the protocol or consent form.
 - If the volunteers will be paid, the amount of payment should not be presented in bold type, larger than other text, or otherwise overemphasized.
 - Recruitment materials should not promise “free medical treatment” when treatment is not the true intent of the study.

12. Sample Size Justification: A complete power analysis must be included in the protocol to ensure that the sample size is appropriate to meet the objectives of the study. The protocol should specify the approximate number of volunteers that will be enrolled. If the protocol involves multiple sites, the number enrolled at each site should be stated in the master protocol.

13. Description of the Informed Consent Process: Specifically describe the plan for obtaining informed consent from volunteers. Provide the Informed Consent Form.

- Identify who is responsible for explaining the study, answering questions, and obtaining informed consent.
- Include information regarding the timing and location of the consent process.
- If applicable, address issues relevant to the mental capacity of the potential volunteer (e.g., altered capacity due to administration of any mind-altering substances such as tranquilizers, conscious sedation or anesthesia, brain injury, stress/life situations, or volunteer age).
- Address how privacy and time for decision making will be provided and whether or not the potential volunteer will be allowed to discuss the study with anyone before making a decision.
- As consent is an ongoing process, consider the need for obtaining ongoing consent or for re-assessing capacity over the course of a long-term study, and describe any relevant procedures to assure continued consent.
- If volunteers who cannot give their own consent to participate will be included in the study, there must be a plan for the consent of the individual’s Legally Authorized Representative (LAR) to be obtained prior to the volunteer’s participation in the study.

State law defines who may act as the LAR. The IRB of record should be consulted for guidance regarding who can serve as LAR for research at the study site.

- If illiterate volunteers are anticipated, the consent process to be followed for illiterate volunteers should be outlined in the protocol. The consent form should be verbally read/explained to the volunteer in the presence of a witness. The volunteers must sign or make a mark (such as a thumbprint) to indicate agreement to participate, and the witness must sign to attest that the content of the written consent form was accurately conveyed to the volunteer.
- If it is anticipated that volunteers who do not speak the primary language of the host country will be enrolled in a trial, all documentation provided to volunteers (consent form, information sheets, etc.) should be translated with a copy provided to the HRPO for review at a later date. A plan for ensuring that volunteers' questions will be addressed during the consent process and throughout the trial should be included.

NOTE: When consent will be obtained in a language other than English, documentation that the foreign language version of the consent form is an accurate translation of the English version of the consent form must be provided to the HRPO at a later date. Documentation from a qualified translator certifying the translation must be provided along with the English and foreign language version of the consent forms. The documentation of translation should include the following statement: "I certify that this is an accurate and true translation." The signature, name, address, phone number, and, if available, fax number of the translator should also be included.

- If a waiver of all or parts of the consent process is being sought, or a waiver of documentation of consent is desired, include justification for why the waiver should be considered. This justification should include how the protocol meets the criteria set forth in 32 CFR 219 (Title 32 of the Code of Federal Register, Section 219). If consent to use existing samples or data in a future study was provided as part of another study protocol, this should be clearly explained. If the institution is a covered entity, justification for Health Insurance Portability and Accountability Act (HIPAA) waiver requests should also be provided.

Assent. When minors are included in a study, a plan to obtain assent (agreement) from those with capacity to provide it, or a justification for a waiver of assent should be provided. Age-appropriate assent forms should be developed for use with minors when assent is obtained. Capacity to provide assent should also be considered for other populations that cannot provide informed consent, and assent should be obtained whenever possible.

14. Volunteer Screening Procedures: List and describe any evaluations (e.g., laboratory procedures, history, or physical examination) that are required to determine eligibility/suitability for study participation and the diagnostic criteria for entry. Please note that some screening procedures may require a separate consent or a two-stage consent process. Informed consent must be obtained prior to initiation of any procedures for the purpose of determining eligibility.

15. Study Procedures/Study Interventions: Describe the study intervention or activity that the volunteer will experience. Provide sufficient detail in chronological order for a person uninvolved in the study to understand what the volunteer will experience and when it will occur. Provide a schedule of study evaluations and follow-up procedures. Provide all case report forms, data collection forms, questionnaires, rating scales, and interview guides, etc., that will be used in the study.

16. Description of Protocol Drugs or Devices: If the protocol uses a drug, biologic, device, or nutritional supplement, provide the following information:

- For medical products regulated by the Food, Drug, and Cosmetic Act, designate the protocol as Phase 0, I, II or III research.
- If the study is in support of an application to the Food and Drug Administration (FDA) or other appropriate agency, provide the IND/IDE number and name of the sponsor.
- Provide complete names and composition of all medications, devices, or placebos.
- Identify the source of medications, devices, or placebos. Describe measures to ensure the consistency of dosing of active ingredients for nutritional supplements, if applicable.
- Describe the location of storage for study medications.
- Describe the dose range, schedule, and administration route of test articles.
- Describe washout period, if used, in detail.
- Describe the duration of drug or device treatment.
- Declare concomitant medications allowed.
- Provide information on treatment safety, including anticipated side effects, and any antidotes or treatments available for them.
- Describe the plan for disposition of unused drug.
- For FDA-regulated studies, describe the procedure by which the IND sponsor will monitor the protocol in accordance with 21 CFR 312.

17. Laboratory Evaluations:

- **Specimens to be collected, schedule, and amount.** All specimens that will be collected for study purposes must be clearly stated in the protocol. The collection schedule and amount of material collected must also be clearly described. This may be represented using a table or schematic for more involved protocols.
- **Evaluations to be made.** All evaluations that will be made for study purposes should be stated in the protocol. Copies of all data collection forms must be provided. The protocol should explain how the results of laboratory evaluations will be used to meet the objectives of the study (or to monitor safety of volunteers).
- **Storage.** Specimen storage must be described in the protocol, to include where, how long, any special conditions required, labeling, and disposition. If there is a plan to

store specimens for future use (either by the investigator or through an established repository), this should be outlined in the protocol. If samples will be collected for future use in other studies (and if this is not the sole purpose of the protocol), volunteers should be given the chance to opt out. Potential future uses of samples should be addressed to the degree possible. If volunteers are given a menu of options regarding sample donation for future research, procedures should be in place to ensure that volunteers' wishes for use of the samples are honored. Procedures for withdrawal of samples at the request of the volunteer should be described if samples will remain coded or identified.

- **Labs performing evaluations and special precautions.** The laboratory performing each evaluation should be clearly identified in the protocol, as well as any special precautions that should be taken in handling the samples. Special precautions that should be taken by the volunteer before, during, or after the laboratory procedure should be clearly defined. If transport of samples is required, provisions for ensuring proper storage during transport should be included in the protocol.

18. Data Analysis: Describe the data analysis plan. The data analysis plan should be consistent with the study objectives.

19. Data Management:

- **Methods used for data collection.** All methods used for data collection should be described in the protocol. Copies of data collection forms and any test instruments administered should be provided. Data collection forms should be adequate and accurate according to the data collection plan described in the protocol. Whenever possible, identifiers should be removed from data collection forms. Critical measurements used as endpoints should be identified.
- **Volunteer identifiers.** If unique identifiers or a specific code system will be used to identify volunteers, this process should be described in the protocol.
- **Confidentiality:**
 - The protocol should explain measures taken to protect the privacy of study volunteers and maintain confidentiality of study data. Strategies to protect the privacy and confidentiality of study records, particularly those containing identifying information, should be addressed. Investigators collecting particularly sensitive information should consider obtaining a Certificate of Confidentiality.
 - The protocol should address who will have access to study records, data, and specimens. The protocol should acknowledge that representatives of USAMRMC are eligible to review study records.
 - Requirements for reporting sensitive information to state or local authorities should be addressed in the protocol. Examples of sensitive information that may require reporting include positive HIV (human immunodeficiency virus), hepatitis, or tuberculosis test results, illegal residency, child or spouse abuse, or participation in other illegal activities. These requirements will vary from state to state. Investigators should consult his/her IRB for assistance with state requirements.

- **Disposition of data.** Describe where data (both electronic and hard copy) will be stored, who will keep the data, how the data will be stored, and the length of time data will be stored. Note that records of IND studies must be kept for 2 years after a New Drug Application is approved/issued, or for 2 years after the IND is withdrawn. Records required for IDE studies should be retained for 2 years following the date that the investigation is terminated or completed, or the date that the records are no longer required for support of the pre-market approval application, whichever is sooner.
- **Sharing study results.** In cases where the volunteer could possibly benefit medically or otherwise from the information, the protocol should explain whether or not the results of screening and/or study participation will be shared with volunteers or their primary care provider, to include results from any screening or diagnostic tests performed as part of the study. The potential benefits of providing volunteers with the information should be weighed against the potential risks. It is generally not advisable to use experimental assays or techniques to guide clinical care.

20. Risks/Benefits Assessment:

- **Foreseeable risks.** The protocol should clearly identify all study risks. Study risks include any risks that the volunteer is subjected to as a result of participation in the protocol. Consider psychological, legal, social, and economic risks as well as physical risks. If the risks are unknown, this should be stated in the protocol. If applicable, any potential risk to the study personnel should be identified.
- **Risk management and emergency response:**
 - The protocol should clearly list all measures to be taken to minimize and/or eliminate risks to volunteers and study personnel or to manage unpreventable risks. All safety measures in place to mitigate risk (e.g., core temperature monitoring, electrocardiogram monitoring, observation periods, special procedures to avoid disclosure of potentially damaging information) should be described.
 - Planned responses, such as dose reduction or stopping criteria based on toxicity grading scales or other predetermined alert values, and other safeguards should be detailed in the protocol.
 - If there is a chance a volunteer may require emergency care or treatment for an adverse event, the protocol should discuss the overall plan for provision of care for study-related injuries, to include who will be responsible for the cost of such care. For example, if a study sponsor or institution has committed to providing care for study-related injury at no cost to volunteers, this provision should be explained in the protocol. The clinical site must have adequate personnel and equipment to respond to expected adverse events, and the nearest medical treatment facility should be identified in the emergency response plan.
 - Any special precautions to be taken by the volunteers before, during, and after the study (e.g., medication washout periods, dietary restrictions, hydration, fasting, pregnancy prevention, etc.) must be addressed. If pregnant volunteers will be excluded from participation in the study, the method used to determine pregnancy status in women of childbearing potential must be specified. Also, the time that

will elapse between the pregnancy test and exposure to study procedures or medical products must be stated, as well as how long the non-pregnant volunteer should use effective contraceptive practices after participating in the study. Please note that contraceptive practices may be necessary for male volunteers participating in certain types of studies. For IND studies, pregnancy testing is recommended within 48-72 hours before the start of the study. Consideration should be given to repeating testing prior to administration of test articles.

- Any special care (e.g., wound dressing assistance, transportation due to side effects of study intervention impairing ability to drive) or equipment (e.g., thermometers, telemedicine equipment) needed for volunteers enrolled in the study must be described in the protocol.
- **Potential benefits.** Describe real and potential benefits of the study to the volunteer, a specific community, or society. Ensure that the benefits are not overstated. **NOTE: Payment and/or other compensation for participation are not considered to be benefits and must be addressed in a separate section.**
- **Intent to benefit.** If volunteers cannot give their own consent to participate in an experimental study, and Title 10 United States Code Section 980 (10 USC 980) (<http://www.dtic.mil/biosys/downloads/title10.pdf>) applies, a clear intent to benefit each volunteer must be described in the protocol. Please refer to the Application Instructions & General Information, Appendix 6, for more information.

21. Study Personnel:

- **Roles and responsibilities of key study personnel.** Briefly describe the duties of key study personnel. Describe their roles in the study effort. A study coordinator is required at an appropriate level of effort whose duties may include the following: Recruit and consent volunteers, maintain study records, administer study drug, take and record vital signs, and enter data into computer database. A key person must be identified who will be responsible for guiding the protocol through the IRB, HRPO, and other regulatory approval processes, coordinating activities from all sites participating in the trial, and coordinating participant accrual.
- **Conflicts of interest.** Investigators and key study staff must disclose any real or apparent conflicts of interest (financial or other). This information may be provided in the protocol or by submission of a conflict of interest declaration form. (Many institutions have a form for this purpose, as does the FDA. A Financial Disclosure Form for Investigators is also available on the HRPO website at <https://mrmc-www.army.mil/rodorphrpo.asp> that will meet this requirement.) Measures taken to mitigate the impact of conflicts of interest must be provided. Information regarding conflicts of interest should be disclosed to volunteers in the consent form. All protocols that support development of a drug, device, or other intellectual property require completion of a conflict of interest declaration by all investigators on the protocol. Other protocols may require conflict of interest statements on a case-by-case basis.

22. Roles and Responsibilities of Medical Monitor: The DOD requires that a medical monitor be assigned to greater-than-minimal-risk protocols. The specific roles the medical monitor will fulfill should be outlined in the protocol and not represent a conflict of interest.

NOTE: The HRPO requires that the medical monitor review all unanticipated problems involving risk to volunteers or others, serious adverse events, and all volunteer deaths associated with the protocol, and provide an unbiased written report of the event within 10 calendar days. At a minimum, the medical monitor should comment on the outcomes of the adverse event and relationship of the event to the protocol or test article. The medical monitor should also indicate whether he/she concurs with the details of the report provided by the PI. Reports for events determined by either the investigator or medical monitor to be possibly or definitely related to participation, and reports of events resulting in death should be promptly forwarded to the HRPO.

23. Study Organization and Management Plan: Provide an organizational chart and a timetable for completion for the clinical trial and publication. Provide a plan for ensuring the standardization of procedures among staff and across sites (if applicable). Provide a plan for real-time communication among collaborating institutions (if applicable).

24. Withdrawal from the Protocol: Volunteers may discontinue participation in the study at any time without penalty or loss of benefits to which the volunteer is otherwise entitled. If appropriate, the protocol should describe the procedure in place to support an orderly end of the volunteer's participation (e.g., exit exam or follow-up safety visits outside of the context of the research study, information regarding prorated payment for partial participation, etc.) and the consequences of a volunteer's decision to withdraw from the study. The anticipated circumstances under which the volunteer's participation may be terminated by the investigator or others should also be addressed (e.g., noncompliance, safety issues, loss of funding, etc.).

25. Modifications to the Protocol: Describe the procedures to be followed if the protocol is to be modified, amended, or terminated before completion. Note that any modification to the protocol, consent form, and/or questionnaires, including a change to the PI, must be submitted to the local IRB for review and approval. Major modifications to the study protocol and any modifications that could increase risk to volunteers must be submitted to the HRPO for approval *prior to implementation*. Some examples of major modifications include a change in PI, addition of a study site, changes in study design, and addition or widening of a study population. All other amendments will be submitted with the continuing review report to the HRPO for acceptance. Address the procedure for submitting amendments even if modifications to the protocol are not anticipated.

- **Protocol Deviations.** Describe procedures and notifications to be made in the event of deviations from the approved protocol to include both the local IRB and the HRPO.
NOTE: Any deviation to the protocol that may have an effect on the safety or rights of the volunteer or the integrity of the study must be promptly reported to the HRPO.

26. Reporting of Serious Adverse Events and Unanticipated Problems:

- Reporting procedures will differ from institution to institution, so it is important for investigators to identify the reporting requirements for all entities involved in review of the protocol, and to clearly define this procedure within the protocol.
- Serious adverse events and unanticipated problems can occur in any and all types of studies, not just experimental interventions or clinical trials.
- Include a definition of what constitutes an adverse event in the study. For IND or IDE studies, include definitions as described in 21 CFR 312.32 and the ICH (International Conference on Harmonization) E2A Guidelines (<http://www.ich.org/cache/compo/475-272-1.html>).
- Describe agencies or offices to be notified with point of contact information in the event of an unanticipated problem or serious adverse event.

All protocols should contain the following language regarding the HRPO reporting requirements for adverse events and unanticipated problems: “Unanticipated problems involving risk to volunteers or others, serious adverse events related to participation in the study, and all volunteer deaths related to participation in the study should be promptly reported by phone (301-619-2165), by email (hsrrb@amedd.army.mil), or by facsimile (301-619-7803) to the US Army Medical Research and Materiel Command’s Office of Research Protections, Human Research Protections Office. A complete written report should follow the initial notification. In addition to the methods above, the complete report can be sent to the US Army Medical Research and Materiel Command, ATTN: MCMR-ZB-P, 504 Scott Street, Fort Detrick, Maryland 21702-5012.”

For protocols that have a medical monitor assigned, the following language should also be included:

“The medical monitor is required to review all unanticipated problems involving risk to volunteers or others, serious adverse events, and all volunteer deaths associated with the protocol, and provide an unbiased written report of the event to the USAMRMC ORP, HRPO. At a minimum, the medical monitor should comment on the outcomes of the event or problem, and in the case of a serious adverse event or death comment on the relationship to participation in the study. The medical monitor should also indicate whether he/she concurs with the details of the report provided by the study investigator. Reports for events determined by either the investigator or medical monitor to be possibly or definitely related to participation, and reports of events resulting in death should be promptly forwarded to the HRPO.”

27. Continuing Review and Final Report: The protocol should acknowledge that a copy of the approved continuing review report and the local IRB approval notification will be submitted to the HRPO as soon as these documents become available. A copy of the approved final study report and local IRB approval notification will be submitted to the HRPO as soon as these documents become available.

B. Surveys, Questionnaires, and Other Data Collection Instruments: If the study involves surveys, questionnaires, case report forms, data collection forms, rating scales, interview guides, or other instruments, include a copy of the most recent version of each of these documents with the protocol submission. For each instrument that is used, the following information at a minimum should be addressed.

- Information collected with study instrument must be related to the objectives of the study.
- Procedures for use of study instruments should be clear in the protocol. Study instruments should be coded to protect confidentiality whenever possible.
- For study instruments provided to and/or completed by volunteers, the study instrument should be legible and presented at a reading level appropriate to the population. Copies of instruments submitted for review must also be legible.

C. Additional Protocol Language Requirements

The following are reporting requirements and responsibilities of the PI to the USAMRMC ORP, HRPO, and should be reflected in the protocol:

- The protocol will be conducted in accordance with the protocol submitted to and approved by the USAMRMC ORP, HRPO, and will not be initiated until written notification of approval of the research project is issued by the USAMRMC ORP, HRPO.
- Accurate and complete study records will be maintained and made available to representatives of the USAMRMC as a part of their responsibility to protect human subjects in research. Research records will be stored in a confidential manner so as to protect the confidentiality of subject information.
- The knowledge of any pending compliance inspection/visit by the FDA, OHRP, or other government agency concerning clinical investigation or research, the issuance of Inspection Reports, FDA Form 483, warning letters, or actions taken by any Regulatory Agencies, including legal or medical actions, and any instances of serious or continuing noncompliance with the regulations or requirements will be reported immediately to USAMRMC ORP, HRPO.

VI. 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 the application:

- Submission of an application for which a letter of invitation was not received.
- Clinical Protocol is missing.
- Budget is missing.
- Page size is larger than 8.5 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 Clinical Protocol.
- Documents not requested will be removed.
- Following the application deadline, you may be contacted by the 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:

- 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 proposed research is not a clinical trial.
- Submission of the same research project to different award mechanisms within the same program or to other CDMRP programs.
- The 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.

VII. 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](https://www.grants.gov) (<http://www.grants.gov/>) portal should be directed to the Grants.gov help desk, which is available Monday through Friday, 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 that the CDMRP help desk is unable to answer questions about Grants.gov submissions.

Phone: 800-518-4726, Monday through Friday, 7:00 a.m. to 9:00 p.m. Eastern time

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.