Program Announcement

Department of Defense (DOD)

Congressionally Directed Medical Research Programs (CDMRP)

Lung Cancer Research Program (LCRP)

Collaborative Translational Research Award

Funding Opportunity Number: W81XWH-09-LCRP-CTRA

TABLE OF CONTENTS

.

I. FUNDING OPPORTUNITY DESCRIPTION

A. Program Objectives

The Lung Cancer Research Program (LCRP) was established in Fiscal Year 2009 (FY09) to promote innovative and competitive research focused on the development of integrated components to identify, treat, and manage early curable lung cancer and the establishment of a tissue bank. The FY09 appropriation is $20 million (M).

The goal of the FY09 LCRP is to eradicate deaths from lung cancer to better the health and welfare of the military and the American public. As such, the LCRP will support and integrate research from multiple disciplines for early detection, diagnosis, prevention, cure, and control of lung cancer.

B. Award Description

The LCRP Collaborative Translational Research Award (CTRA) supports partnerships between clinicians and laboratory scientists at multiple institutions to conduct translational research in lung cancer.

The purpose of the CTRA is to support ***multi-institutional, multi-disciplinary*** collaborations among clinicians and laboratory scientists that will accelerate the movement of promising ideas in lung cancer into clinical applications.

The FY09 LCRP CTRA ONLY accepts applications that address at least two of the seven Areas of Emphasis listed below.

- Identification or development of non-invasive or minimally invasive tools to improve the detection of the initial stages of lung cancer
- Identification and development of tools for screening or early detection of lung cancer. Screening may include, but is not limited to, computed tomography scans, X-rays, other imaging, biomarkers, genetics/genomics/proteomics, and assessment of risk factors
- Understanding the molecular mechanisms that lead to clinically significant lung cancer
- Identification of the mechanisms that lead to the development of the various types of lung cancer
- Identification of innovative strategies for prevention and treatment of early lung cancer
- Understanding predictive and prognostic markers to identify responders and non-responders
- Understanding acquired resistance to treatment

The CTRA supports the development of translational research collaborations among ***four*** independent investigators (known as partners). The four partners, consisting of an Initiating Principal Investigator (PI) and three Partnering PIs, must be from at least two distinct institutions. The proposed research must address two or more of the seven Areas of Emphasis in a manner that would maximize the collective expertise of the investigators involved. At least

one partner must be a clinician, and at least two partners must have experience either in lung cancer research or lung cancer patient care. It should be clear that all partners have equal intellectual input into the design of the research project. A proposed project in which one of the partners merely supplies tissue samples or access to patients will not meet the intent of this mechanism.

Observations that drive a research idea may be derived from a laboratory discovery, population-based studies, or a clinician's firsthand knowledge of patients and anecdotal data. The ultimate goal of translational research is to move an observation forward into the clinical application. The CTRA supports preclinical studies in human subjects and human anatomical substances (excluding cell lines), Phase 0 (Exploratory) and Phase I clinical trials, correlative studies that are associated with an existing clinical trial, and projects that develop clinical endpoints for clinical trials. ***Applications involving cell lines or animals will not be funded.*** Developing the research plan must involve a reciprocal flow of ideas and information within the research team. 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 are comprehensive and span the entire translational research continuum from discovery of a target to clinical trials.

The use of existing resources is encouraged, including libraries of compounds or probes, tissue or bio-specimen repositories, and other existing sets of tissue, blood, or images.

Important aspects of the CTRA are as follows:

1. Collaboration: The success of the project depends on the unique skills and contributions of each partner. Of the four partners, at least one partner must be a clinician, and at least two partners must have experience either in lung cancer research or lung cancer patient care.

2. Translational: The application should provide evidence for the reciprocal transfer of ideas between basic and clinical science in developing and implementing the research plan.

3. Areas of Emphasis: The proposed research must address two or more of the seven Areas of Emphasis.

4. Multidisciplinary: Proposals should emphasize a ***multidisciplinary program*** in which two or more ***major*** disciplines are integrated into the research team environment. ***It is the responsibility of all of the partners (PIs) to clearly and explicitly articulate how the proposed disciplines are distinct and necessary for this research.*** For this award, major disciplines include, but are not limited to:

- Basic biological sciences
- Pathology
- Clinical
- Chemistry, Pharmacology, Toxicology
- Imaging

- Engineering, physical, and mathematical sciences
- Public health and health services research

5. Multi-institutional: At least one Partnering PI must be from an institution different than that of the Initiating PI. ***The DOD LCRP strongly encourages submissions from and partnerships with investigators at Military Medical Treatment Facilities, Military labs, and the Department of Veterans Affairs (VA) Medical Centers and research laboratories.***

6. Impact: The proposed research should have a significant impact on the concepts or methods that are likely to accelerate the movement of promising ideas in lung cancer into clinical applications.

7. Preliminary Data: Preliminary data to support the feasibility of the research hypotheses and research approaches are required; however, these data do not necessarily need to come from the lung cancer research field.

C. Eligibility

Independent investigators from academia, research institutions, industry, government agencies, and private foundations are eligible to submit applications. Refer to the Application Instructions and General Information, Appendix 1, for general eligibility information.

D. Funding

Each 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.

- The maximum period of performance is **4** years.
- The maximum allowable funding for the entire period of performance is **$800,000** in direct costs per PI.
- The PI 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 PI 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 and General Information, funds can cover:

- Salary
- Research supplies
- Equipment
- Clinical research costs
- Travel to scientific/technical meetings

- Travel between collaborating institutions

The Office of the Congressionally Directed Medical Research Programs (CDMRP) expects to allot $10.5M of the $20M FY09 LCRP monies to fund approximately 2 Collaborative Translational Research Award applications, depending on the quality and number 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

Awards that include a clinical trial cannot be transferred to another institution except under extreme 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. Refer to the Application Instructions and General Information, Appendix 5, for general award administration information.

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 a required first step***.

Pre-application Submission Deadline:	**November 19, 2009, 5:00 p.m. Eastern time (ET)**
Application Submission Deadline:	**December 3, 2009, 11:59 p.m. ET**
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/).

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 CTRA is structured to accommodate four PIs. One PI will be identified as the Initiating PI and will be responsible for the majority of the administrative tasks associated with application submission. The other three PIs will be identified as the Partnering PIs. Initiating and Partnering PIs each have different submission requirements; however, all PIs should contribute to the preparation of the research application. ***The Initiating PI must complete the pre-application process and submit contact information for each of the three Partnering PIs.*** The Partnering PIs 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.

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

The Government reserves the right to reject duplicative applications submitted to different award mechanisms 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. ET on the deadline date***. Refer to the Application Instructions and General Information for detailed information.

The Initiating PI is responsible for submission of all pre-application components.

- **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 Partnering PIs in the "Partnering PI" section to indicate his/her role in the project. In addition, any other persons who should be excluded from review of the application should be named.
- **Letter of Intent (LOI) Narrative (one-page limit)**
    - State which two (or more) of the seven Areas of Emphasis that this application addresses

B. Step 2 - Application Components and Submission

Application submissions will not be accepted unless the pre-application process is completed by the pre-application deadline. Applications must be submitted electronically by the Authorized Organizational Representative (AOR) through Grants.gov (www.grants.gov) by 11:59 p.m. ET on the deadline date.

Each application submission 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 and 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 and separate 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.

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

    - **SF-424 (R&R) Application for Federal Assistance Form**
    - **Attachments Form**
        - **Attachment 1: Project Narrative (25-page limit).** The Project Narrative is the main body of the application and should describe the translational research collaboration, and how it will address two of the seven Areas of Emphasis in lung cancer. Describe the proposed research in detail. ***Applications must include preliminary data to support the feasibility of the research hypotheses and research approaches; however, these data do not necessarily need to come from the lung cancer research field.***

        Describe the proposed project 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 this application 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.

          The CTRA supports preclinical studies in human subjects and human anatomical substances (excluding cell lines), Phase 0 (Exploratory) and Phase I clinical trials, correlative studies that are associated with an existing clinical trial, and projects that develop clinical endpoints for clinical trials. ***Applications involving cell lines or animals will not be funded.*** Include a detailed plan for the recruitment of human subjects or the acquisition of human biological samples.
        - **Collaboration:** Describe how the project incorporates multiple disciplines and depends on the unique skills of the Initiating PI and each Partnering PI. Provide the time commitment for each partner as well. Describe how the proposed collaboration involves a substantial contribution by each partner and the reciprocal flow of ideas and information. Demonstrate how the translational

collaboration will maximize the use of existing resources and minimize unnecessary duplication. 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
  - Letters of Collaboration (if applicable)
  - Intellectual and Material Property Plan
- **Attachment 3: Technical Abstract (1-page limit)**
- **Attachment 4: Public Abstract (1-page limit)**
- **Attachment 5: Statement of Work (SOW) (3-page limit)**

  The Initiating and Partnering PIs must create a joint SOW.
- **Attachment 6: Detailed Budget and Justification**
- **Attachment 7: Impact Statement (1-page limit)**

  Explain how the proposed research, if successful, will have an impact on the concepts or methods that drive the field of lung cancer research. Describe how the proposed research will make original and important contributions towards the goal of identifying, treating, or managing early curable lung cancer.
- **Attachment 8: Areas of Emphasis Statement (1-page limit)**

  Describe how the proposed research addresses two or more of the FY09 LCRP Areas of Emphasis.
- **Attachment 9: Approval for Access to Military Populations (if applicable), (1-page limit)**

  If studies include active duty military, military families, or veterans; military-controlled study materials; databases; and/or restricted facilities (e.g., biological or chemical containment facilities) a letter of support, signed by the lowest ranking person with approval authority, should be provided.
- **Attachment 10: Federal Agency Financial Plan (if applicable)**
- **Attachments 11-15: Subaward Detailed Budget and Justification (if applicable)**

- **Research & Related Senior/Key Person Profile (Expanded Form)**
    - Include the Biographical Sketches and Current/Pending Support for the Initiating and three Partnering PIs. PI Biographical Sketch (four-page limit)
    - PI Current/Pending Support
    - Key Personnel Biographical Sketches (four-page limit each)
    - Key Personnel Current/Pending Support
- **Research & Related Project/Performance Site Location(s) Form**

2. Application Components for each Partnering PI

Before submitting the proposal application to Grants.gov, each Partnering PI must associate him- or herself with the proposal 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 the Partnering PIs uses an abbreviated application package of forms and attachments from Grants.gov. The Partnering PIs package includes:

- **SF-424 (R&R) Application for Federal Assistance Form**
- **Attachments Form**
    - Attachment 5: SOW: The Initiating and Partnering PIs must create a joint SOW.
    - Attachment 6: Detailed Budget and Justification
    - Attachment 10: Federal Agency Financial Plan (if applicable)
    - Attachments 11-15: Subaward Detailed Budget and Justification (if applicable)
- **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 proposals 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 program review processes are conducted confidentially to maintain the integrity of the merit-based selection process. Each tier review requires panelists to sign a nondisclosure statement attesting that application and evaluation information will not be disclosed outside the panel. Violations of the non-disclosure statement can result in the

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., Impact Statement or Area of Emphasis 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**
  - How the project will translate promising, well-founded laboratory or clinical research findings into clinical applications for patients with or populations at risk for lung cancer.
- **Research Strategy and Feasibility**
  - How 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 the partners acknowledge potential problem areas and consider alternative approaches.
- **Collaboration**
  - How the proposal addresses two of the seven Areas of Emphasis in a way that could not be accomplished by a single investigator.
  - Evidence that all partners contribute substantially to the development and implementation of the research plan, and to the reciprocal flow of ideas.
  - How the partners' background, expertise, and levels of effort support the proposed project.
  - How the multiple disciplines and multiple institutions within the collaboration support the proposed project.
  - Whether all partners (Initiating and Partnering PIs) meet the eligibility requirements.

Impact

- If successful, how the collaboration and the aims of the study project will eventually move from a clinical observation, a laboratory discovery, or population-based study into clinical applications.
- How the proposed research will have an impact on the concepts or methods that drive the field of lung cancer research.
- How the proposed research will make original and important contributions towards the goal of identifying, treating, or managing early curable lung cancer.

- **Research Resources**
  - How well the partners plan to maximize use of existing resources and avoid unnecessary duplication of effort.
  - How well the research requirements are supported by the availability of and accessibility to facilities and resources.
  - How well the application addresses processes for ongoing communication, decision-making, allocation of resources, coordination of research progress and results, and sharing of data among all participating PIs and institutions.
  - Evidence of a plan to resolve intellectual and material property issues between collaborating institutions.

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

- **Budget**
  - How the budget is appropriate for the proposed research.
- **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:

- Ratings and evaluations of the peer reviewers,
- Programmatic relevance,
- Relative impact,
- Program portfolio balance, with consideration of the Areas of Emphasis,
- Adherence to the intent of the award mechanism.

Scientifically sound proposals that best fulfill the above criteria and most effectively address the unique focus and goals of the program will be identified by Integration Panel (IP) members and recommended for funding to the Commanding General, US Army Medical Research and Materiel Command. The highest scoring applications from the first tier of review are not automatically recommended for funding. All applications are carefully

considered to ensure that the funds available are allocated to those proposals that best fulfill the goals, objectives, and Areas of Emphasis of the program.

V. ADMINISTRATIVE ACTIONS

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

A. Rejection

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

- Initiating or Partnering PI(s) application is missing.
- 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 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. ET 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/09lcrppanel
- Submission of the same research project to different award mechanisms within the same program or to other CDMRP programs.
- 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 form exceed the maximum allowed by the award mechanism.
- Inclusion of URLs, with the exception of links to published references.

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. ET.

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. ET. The deadline for application submission is 11:59 p.m. ET 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.