Funding Opportunity Summaries

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- DoD FY13 CRMRP VRP Hypothesis Development Award (W81XWH-13-CRMRP-VRP-HDA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Supports conceptually innovative, high-risk/high-reward research that could ultimately lead to critical discoveries or major advancements that will drive the field of vision research forward. Research projects should include a testable hypothesis based on a strong scientific rationale.

    - This award is not intended to support the continuation of existing studies or the next logical extension and/or incremental step.

    - Impact: The proposed research is expected to make an important and original contribution to advancing the understanding of visual dysfunction and lead ultimately to improved outcomes for patients.

    - Innovation: Research deemed innovative may represent a new paradigm, challenge existing paradigms, look at existing problems from new perspectives, or exhibit other uniquely creative qualities.

    - Focus Areas:

        - Mitigation and treatment of traumatic injuries, war-related injuries, and diseases to ocular structures and the visual system
        - Mitigation and treatment of visual dysfunction associated with traumatic brain injury (TBI)
        - Vision restoration following traumatic injury
        - Modeling and simulation of traumatic ocular injury

- Vision Research Program Translational Research Award (W81XWH-13-CRMRP-VRP-TRA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Supports translational research that will accelerate the movement of promising ideas in vision research into clinical applications.

    - Observations that drive a research idea may be derived from a laboratory discovery, population-based studies, or a clinician's first-hand knowledge of patients and anecdotal data.

    - Intended to promote significant improvements over current approaches and supports research projects that are likely to have a major impact by applying research findings to patient care.

    - Encourages a team approach involving collaboration among clinicians, scientists, and/or engineers.

    - Applications must include preliminary or published data relevant to one or more of the Focus Areas:

        - Mitigation and treatment of traumatic injuries, war-related injuries, and diseases to ocular structures and the visual system
        - Mitigation and treatment of visual dysfunction associated with traumatic brain injury (TBI)
        - Vision restoration following traumatic injury
        - Vision rehabilitation strategies and quality of life measures

- Clinical and Rehabilitative Medicine Research Program Regenerative Medicine Clinical Trial Award (W81XWH-14-DMRDP-CRMRP--RMCTA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Intended to support Phase I or II clinical trials focused on extremity regeneration, craniomaxillofacial regeneration, vascularized composite allografts, and/or genitourinary/lower abdomen reconstruction.

    - Funding from this award mechanism cannot be used for preclinical research studies. All clinical trials must be responsive to the health care needs of military service members and veterans, and all applications must specifically and clearly address the military relevance of the proposed research; however, the use of military populations in the proposed clinical trial(s) is not a requirement.

    - Focus areas:

        - Extremity Regeneration
        - Craniomaxillofacial Regeneration
        - Vascularized Composite Allotransplantation (VCA)-
        - Genitourinary/Lower Abdomen Reconstruction

- Vision Research Program Translational Research Award (W81XWH-13-CRMRP-VRP-TRA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Supports translational research that will accelerate the movement of promising ideas in vision research into clinical applications. Observations that drive a research idea may be derived from a laboratory discovery, population-based studies, or a clinician's first-hand knowledge of patients and anecdotal data and must involve a reciprocal flow of ideas and information between basic and clinical science.

    - Intended to promote significant improvements over current approaches and supports research projects that are likely to have a major impact by applying research findings to patient care.

    - A team approach involving collaboration among clinicians, scientists, and/or engineers is strongly encouraged.

    - Applications must include preliminary or published data relevant to one or more of the Focus Areas:

        - Mitigation and treatment of traumatic injuries, war-related injuries, and diseases to ocular structures and the visual system
        - Mitigation and treatment of visual dysfunction associated with traumatic brain injury (TBI)
        - Vision restoration following traumatic injury
        - Vision rehabilitation strategies and quality of life measures

- DoD Clinical and Rehabilitative Medicine Neuromusculoskeletal Injuries Research Award (W81XWH-14-DMRDP-CRMRP-NMSIRA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Supports preclinical research and clinical trials on the functional utility of assistive devices related to the human-device interface, secondary health effects following severe extremity injury, and optimizing rehabilitation and device prescription for patients with severe extremity trauma

    - Food and Drug Administration (FDA) approval for its investigational use, application for an Investigational New Drug (IND) exemption application, or compliance with the FDA Investigational Device Exemption (IDE) regulations is required.

    - Focus Areas:

        - Improving the functional utility of assistive devices related to the human-device interface (prostheses, orthoses, and other assistive devices)
        - Improvements in prosthetic socket comfort, residual limb health, and function
        - Providing proprioceptive and other sensory inputs to the user
        - Improving user intent control of assistive devices
        - Improving the ability to predict, identify and reduce secondary health effects that develop after severe primary neuromusculoskeletal injury
        - Determining factors that predict development and successful treatment of osteoarthritis, low back pain, or other musculoskeletal conditions
        - Intervention strategies to diminish falls and decrease fracture risk
        - Strategies to improve treatment and rehabilitation of heterotopic ossification
        - Optimizing treatment strategies and sequence of progression throughout the rehabilitation process following severe extremity trauma
        - Determining the optimal combination, dose, and timing of rehabilitative techniques to minimize impairments and maximize function and performance
        - Objectively guiding prosthetic and/or orthotic prescription to minimize impairments and maximize function and performance

- DoD Clinical and Rehabilitative Medicine Neurosensory Research Award (W81XWH-13-DMRDP-CRMRP-NSRA)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Nov 25, 2013

    - Supports both applied (preclinical) research and clinical trials

    - Focus Areas:

        - pain management
        - hearing loss/dysfunction
        - balance disorders
        - tinnitus.
        - applications focused on traumatic brain injury (TBI) are highly encouraged.

- DoD Breast Cancer Postdoctoral Fellowship Award (W81XWH-13-BCRP-POSTDOC2)

    - http://www.grants.gov/web/grants/search-grants.html
      enter CDFA # 12.420

    - Posted date: Oct 28, 2013
      Closing date for WP: Dec 19, 2013

    - Supports exceptionally talented recent doctoral or medical graduates in pursuit of innovative, high-impact breast cancer research during their postdoctoral training and allows them to obtain the necessary experience for an independent career at the forefront of breast cancer research.

    - The postdoctoral fellow is considered the Principal Investigator (PI) and, as such, should write the project narrative, training plan, and other application components with appropriate guidance from the mentor. The mentor must possess the appropriate expertise and experience in breast cancer, to include publications and active peer reviewed breast cancer funding, and clearly demonstrate a commitment to guiding the PI's research and training. Mentorship by an investigator without an established record of mentoring pre- and postdoctoral trainees may be offset by the overall strength of the training plan.

    - A description of the qualities of the training environment in which the candidate will work, details on the individualized, breast cancer-focused training plan, and how this training will facilitate the PI's career development as an independent, innovative breast cancer researcher is required.

    - A multidisciplinary research approach to breast cancer is highly encouraged but not required; however, if there are multidisciplinary aspects to the training, they should be clearly outlined in the application.

    - The research should be based on a sound scientific rationale and/or a thorough review of the literature and explain the potential impact that the proposed work will have on breast cancer.

    - Preliminary data are not required.

- FY14 U.S. Army Medical Research and Materiel Command BAA for Extramural Medical Research (W81XWH-BAA-14-1)

    - http://www.grants.gov/web/grants/search-grants.html
      Enter CFDA # 12.420

    - Posted date: Oct 1, 2013
      Closing date for WP: Oct 1, 2015 or until superseded

    - Key words and phrases:
        - Return to Duty (RTD): The DoD emphasizes having medical rehabilitation program times as short as necessary to allow service members to return to the mission.
        - Rehabilitation of Neuromusculoskeletal Injuries: Research directed toward functional outcome assessments focusing on return-to-duty and/or community reintegration. Of particular interest are rehabilitative strategies for neuromusculoskeletal injuries and conditions including, but not limited to, amputation, limb salvage, spinal cord and column injury, polytrauma, limb contractures, and other less significant injuries such as sprains and strains that can significantly add to the burden of injury.
        - Joint Service biological and chemical warfare defense requirements: Each service has input into both the listing and the prioritization of CBRNE requirements. Research dollars are allocated to meet these requirements.
        - Combat effectiveness: Service members must maintain a high degree of physical fitness to execute their jobs.
        - Vesicant agent: sulfur mustard
        - Nerve agents: organophosphorus agents (soman, sarin, etc). Note: Not the same as organophosphates (pesticides)
        - Decontamination: Removing materials from people, equipment, or the environment that is harmful or could result in an inability to conduct the mission, ie, reduce combat effectiveness.
        - Telemedicine: biosensory monitoring and communicative capabilities to include the delivery of remote care and consultation throughout the healthcare systems from the point of injury to the medical centers and throughout and between the Theater and Garrison environments.
        - Theater: also known as Theater of Operations, and is the geographic area where military operations are being conducted. Can include both peacetime and wartime operations.
        - Garrison: Home bases for service men and women

    - Provide solutions to medical problems of importance to the American Warfighter at home and abroad. The scope of this effort and the priorities attached to specific projects are influenced by changes in military and civilian medical science and technology, operational requirements,

military threat assessments, and national defense strategies.

- Important research areas and related key words:
  - The Military Infectious Diseases Research Program (MIDRP) focuses on vaccines, anti-parasitic drugs, deployable field clinical diagnostics (human and vector), prophylactics and novel therapeutics to treat multi-drug resistant organisms in combat wound infections, and vector control...all pertinent to naturally-occurring endemic diseases with demonstrated or potential capability to decrease military operational effectiveness. Diseases of principal interest to the MIDRP are malaria, dengue, diarrheal disease caused by bacteria, and norovirus. The MIDRP also has smaller research programs focused on cutaneous leishmaniasis, scrub typhus, adenovirus and hemorrhagic diseases not on the Defense Threat Reduction Agency (DTRA) biothreat list.

  - The Combat Casualty Care Research Program (CCCRP) provides integrated capabilities for far- forward medical care to reduce the mortality and morbidity associated with major battlefield wounds and injuries through the continuum of care from point of injury to discharge from the acute care hospital. A primary emphasis of the CCCRP is to identify and develop medical techniques and materiel (medical devices, drugs, and biologics) for early intervention in life-threatening battle injuries.
    - Rugged and logistically friendly: describes medical interventions that can be used within the battle area or as close to it as possible, before or during medical evacuation

  - The Military Operational Medicine Research Program (MOMRP) conducts biomedical research to deliver products and solutions to the Warrior that address health and fitness throughout the Deployment Cycle.
    - Four focus areas: Injury Prevention and Reduction, Psychological Health and Resilience, Physiological Health, and Environmental Health and Protection.

    - Deployment cycle: inclusive of the periods of time for preparation, mobilization (the act of assembling and making both troops and supplies ready for war) deployment to the combat zone, redeployment back home, post-deployment recovery, and reconstitution for the next mission
    - Blast-related injuries: inclusive of injuries occurring as a result of explosive detonations. The explosive detonation may include components of blast, overpressure, thermal, penetrating fragments and radiofrequency waves. Injuries can be singular or aggregated in an individual casualty, and

may include blunt force trauma, penetrating and overpressure injuries as well as burns. Blast lung refers to severe pulmonary contusion, bleeding or swelling with damage to alveoli and blood vessels, or a combination of these and is the most common fatal injury among initial survivors. Traumatic brain injury is noted to be a significant component in the spectrum of blast related injuries

- Environmental Health and Protection: This area of research area includes assessment and sustainment of the health and operational effectiveness of Warriors exposed to harsh operational environments including altitude, cold, heat, and exposure to environmental health hazards.

- The Clinical and Rehabilitative Medicine Research Program (CRMRP) focuses on the innovations required to support the recovery and rehabilitation of our wounded warriors, both in terms of quality of life and the potential return to duty (RTD).
  - Four four research areas: neuromusculoskeletal injury (including amputees), sensory systems (including hearing, balance, tinnitus and vision), acute and chronic pain, and regenerative medicine.
  - Regenerative medicine: involves the use of innovative technologies such as scaffolds and tissue engineering, growth factors, and cell-based treatments to restore Service members who have suffered extremity injuries, craniomaxillofacial injuries, burn injuries, or genitourinary / lower abdomen injuries.

- Medical Biological Defense Research Program
  The Medical Biological Defense Research Program provides medical countermeasures for biological warfare agents. These countermeasures include specialized medical materiel or procedures designed to enhance protection. The priorities of the program are: (a) prophylaxis or pretreatment to prevent any casualty; (b) identification and diagnosis of biological agents; and (c) treatment or supportive care regimens.
  - Examples of some of the infectious agents of interest are those causing anthrax, plague, glanders; the Ebola, Marburg, Venezuelan, western and eastern equine encephalitis viruses; and poxvirus models of variola virus. Examples of toxins of interest include those from plants (Ricin), and bacteria (Staphylococcal enterotoxins, botulinum).
  - Identification and Diagnosis: investigation and evaluation of sensitive and specific methods of identifying and diagnosing both antigens and antibodies of viruses, bacteria and rickettsia in biological materials.

- Biosurveillance (BSV): The process of gathering, integrating, analyzing and communicating a range of information that relates to health threats for people, animals and plants to help inform decisions and provide for increased global health security.

- The Medical Chemical Defense Research Program seeks to preserve combat effectiveness by timely provision of medical countermeasures in response to Joint Service chemical warfare defense requirements. The fundamental orientation of the program is to protect U.S. forces from the effects of chemical warfare agents by developing protective, pretreatment, and prophylactic products, providing products usable by the individual Service member for immediate treatment of chemical warfare agent exposures, developing antidotes/therapeutics to chemical warfare agents, defining care procedures for chemical warfare agent casualties, and advancing management of these casualties.

- Medical Training and Health Information Sciences Research Program (MTHIS) Manage research programs to explore the implications for the use of technology for medical training and for the provision, management and support of health services in the military. Two areas of research focus: improving military medical training through medical simulation, educational gaming, and objective training metrics and improving the use and sharing of health related data for better strategic planning, process development, and software applications.

- The Radiation Health Effects Research Program focuses on developing medical countermeasures for acute ionizing radiation injury. The program has interest in the following research focus areas: (a) post-exposure mitigation of radiation injury within 4 hours of exposure; (b) protection and prevention of injury from ionizing radiation exposure (prophylaxis); (c) mechanism of radiation injury; and d. development of novel biodosimetry tools.

- Special Investment Areas/Innovation Funding Initiatives of interest include, but are not limited to, cross-cutting new science and technologies that may not have an apparent place elsewhere in this announcement, non-hypothesis driven research, development of enabling technologies, and new uses of current science that have not been considered in the past for a given application. May support proposals/applications that offer proof of concept, proto-type development, and other activities that initiate or enhance potentially "game-changing" technologies and systems. Innovation funds generally range from $100,000 to $500,000 for a limited period of performance, generally ≤ months.

- DTRA Fundamental Research to Counter Weapons of Mass Destruction (C-WMD) (HDTRA1-09-14-FRCWMD-BAA): Amendment 16

    - CFDA # 12.351

    - Posted date: October 17, 2013
      Closing date: September 30, 2014
      WP submission dates: 1 November 2013, 3 March 2014

    - http://www.grants.gov/web/grants/viewopportunity.html?oppId=49658

    - Important words and phrases:
        - CBRNE: Chemical, Biological, Radiological, Nuclear, and High Explosive
        - Sensing and recognition: fundamental understanding of materials that demonstrate measurable changes when stimulated by radiation or particles from WMD in the environment.
        - Cognitive, Information and Network Science: convergence of computer, information, mathematical, network, cognitive and social science. May include analytical, computational or numerical, or experimental means to integrate knowledge across disciplines, and improve rapid processing of intelligence and dissemination of information.
        - Protection: involves advancing knowledge in physical, biological, and engineering sciences to protect life and life-sustaining resources and systems. Protection includes both passive and active defense against threats.
        - Active defense: technologies to protect infrastructure, facilities, robotics, detectors
        - Passive defense: understanding mechanisms of action and biological responses
        - Science to Defeat: countering exposure or contamination of equipment or facilities, people and biological effects
        - Science to Secure: neutralize or dispose of CBRNE materials and component. Can include development of more robust nuclear security practices; treaty monitoring, compliance and verification technologies; nuclear test detection and analysis; forensics; and novel physical methods to disrupt WMD proliferation pathways.
        - Select agents or toxins: under United States law, select agents are biological agents or biological toxins which have been declared by the U.S. Department of Health and Human Services or by the U.S. Department of Agriculture to have the "potential to pose a severe threat to public health and safety". The Centers for Disease Control administers the select agent program (SAP). The active use of select agents in biomedical research prompts concerns about dual use, a term often used in politics and diplomacy to refer to technology

which can be used for both peaceful and military aims. (see Select Agent Program under Federal Law (7 C.F.R. part 331, 9 C.F.R. part 121, and 42 C.F.R. part 73.)

- Biosafety and Biosecurity: **Biosafety** level refers to the stringency of biocontainment precautions deemed necessary by the Centers for Disease Control and Prevention (CDC) for laboratory work with infectious materials. **Biosecurity** is a set of preventive measures designed to reduce the risk of transmission of infectious diseases, quarantined pests, invasive alien species, living modified organisms. These preventative measures are a combination of systems and practices put into its place at legitimate bioscience laboratories to prevent the use of dangerous pathogens and toxins for malicious use. Can also be used by customs agents and agricultural and natural resource managers to prevent the spread of these biological agents in both natural and managed venues.
- Nanostructured Active Therapeutic Vehicles (NATV): nanostructured materials designed to transport, identify, and release therapeutic payloads for prophylactic or pre-symptomatic enabling prophylactic or pre-symptomatic administration of targeted therapies

- The original BAA is an extramural endeavor that combines the fundamental research, educational program to meet military requirements. DTRA's focus is to safeguard America and its allies from weapons of mass destruction (WMD) and provide capabilities to reduce, eliminate and counter the threat and effects from chemical, biological, radiological, nuclear, and high yield explosives. DTRA seeks to identify, adopt, and adapt emerging, existing and revolutionary sciences that may demonstrate high payoff potential to Counter-WMD (C-WMD) threats.
  - WMD: The most widely used definition of "weapons of mass destruction" is that of nuclear, biological, or chemical weapons (NBC) although there is no treaty or customary international law that contains an authoritative definition.
  - Technology Readiness Levels: (TRLs) provide a systematic metric/measurement system that supports assessments of the maturity of a particular technology and the consistent comparison of maturity between different types of technology. DTRA typically funds TRL levels 1 through 4, with emphasis on 3 & 4. Note: TRL 1 is most basic with higher levels more advanced or "ready". Theoretically can go to TRL 9.

  - The most recent update: Cooperative Biological Engagement Program
    - Task 1: Visiting Scientists and Mentors
    - Task 2: Trainers
    - Task 3: Subject Matter Experts in the following areas:

      - Epidemiology
      - Infectious Disease Medicine with Select Agents

- Public Health
- Health Informatics
- Laboratory Diagnostics
- Veterinary Medicine
- Quality Control (QC) and Quality Assurance (QA)
- International Capacity Building in Health Care
- Biosafety and Biosecurity
- Geographical Information System (GIS)
- Emergency Disease Response

- Task 4: Research Collaborators
- Task 5: Research Grant and Proposal Assistance

- Research Interests of the Air Force Office of Scientific Research (AFOSR) (BAA-AFOSR-2013-0001)

    - http://www.grants.gov/web/grants/search-grants.html?keywords=air force

    - Posted date: Jan 29, 2013

Closing date for WP: until superseded

    - AFOSR plans, coordinates, and executes the Air Force Research Laboratory's (AFRL) basic research program in response to technical guidance from AFRL and requirements of the Air Force; fosters, supports, and conducts research within Air Force, university, and industry laboratories; and ensures transition of research results to support USAF needs. The focus of AFOSR is on research areas that offer significant and comprehensive benefits to our national warfighting and peacekeeping capabilities.

    - Research areas are organized and managed in five scientific directorates:

        - Dynamical Systems and Control (RTA)
        - Quantum & Non-Equilibrium Processes (RTB)
        - Information, Decision, and Complex Networks (RTC)
        - Complex materials and Devices (RTD)
        - Energy, Power, and Propulsion (RTE)

- Air Force FY 2014 Young Investigator Research Program (YIP) (BAA-AFOSR-2013-0005)

    - http://www.grants.gov/web/grants/search-grants.html?keywords=air force

    - Posted date: Jul 9, 2013

Closing date for WP: Sep 15, 2013

    - Supports young scientists and engineers in Air Force relevant disciplines and is designed to promote innovative research in fields such as: energy, power and propulsion, materials interactions in extreme environments, aero-structure interactions and control, hierarchical design and characterization of materials, space architecture and protection, thermal control, mathematical, information and computer sciences, biology, behavioral sciences, plasma and quantum physics, theoretical and experimental physics, microwave and photonic systems, information and signal process, and materials-processing techniques.

    - Foster creative basic research, enhance early career development of outstanding young investigators, and increase opportunities to recognize Air Force mission and challenges in science and engineering.

- BARDA: Advanced Research and Development of Chemical, Biological, Radiological, and Nuclear Medical Countermeasures (BAA-13-100-SOL-00013)

    - https://www.fbo.gov/index?s=opportunity&mode=form&id=53f858046f20978542fe145800cf49a7&tab=core&_cview=1

    - Posted date: Jul 9, 2013
      Closing date for WP: Depends on area of interest, starting Oct13 (see solicitation)

    - Research Areas of Interest:

1. Vaccines
2. Antitoxins and therapeutics
3. Antimicrobial Drugs
4. Radiological and Nuclear Threat Countermeasures
5. Chemical Threat Countermeasures
6. Diagnostics

- BARDA: Advanced Development of Medical Countermeasures for Pandemic Influenza (BAA-13-100-SOL-00019)

    - https://www.fbo.gov/index?s=opportunity&mode=form&id=986a47da81c19a4de4dac9e07e5f7197&tab=core&_cview=1

    - Posted date: Aug 9, 2013
      Closing date for WP: October 30, 2013; January 30, 2014; April 30, 2014; July 30, 2014

- Development Areas of Interest:

    1. Personal Protective Equipment (Masks and Respirators) for Influenza Infection
    & All-Hazards
    2. Full-Featured Continuous Ventilators for Influenza Infection and All-Hazards
    3. Clinical Influenza Test Systems and Diagnostic Tools
    4. Influenza Therapeutics
    5. Influenza Vaccines
    6. Influenza Vaccine Manufacturing Improvement

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- BARDA: Science and Technology Platforms Applied to Medical Countermeasure Development (Innovations) (BAA-13-100-SOL-00014)

    - https://www.fbo.gov/index?s=opportunity&mode=form&id=59a8bee92eb32ebd33098ec29dacc4c2&tab=core&_cview=1

    - Posted date: Jul 31, 2013
      Closing date for WP: October 30, 2013; January 30, 2014; April 30, 2014; July 30, 2014

    - Seeking products, technologies, or capabilities that will advance effective medical countermeasure emergency response.

    - Specifically interested in supporting the advancement of tools that can demonstrate an impact on the design, development, or use of a medical countermeasure for use in a public health emergency, but additional information that indicates the potential to be applied more broadly is welcomed.

    - Technology platforms within this Strategic Science and Technology (SST) AOI may be applicable to vaccines, therapeutics, or diagnostics across the PHEMCE threat space.

- US Army Research Institute for the Behavioral and Social Sciences (ARI) Improvement of Army Readiness and Performance via Research Advances and Applications of the Behavioral and Social Sciences (Personnel, Organization, Training, and Leader Development Issues) (W911NF-13-R-0001)

  - https://www.fbo.gov/index?s=opportunity&mode=form&id=102faad5082fa9d2881ec483fe166c2b&tab=core&_cview=1

    - Posted date: Feb 6, 2013
      Closing date for WP: Feb 5, 2018

    - Programs funded under this BAA include basic research, applied research, and advanced technology development that can improve human performance and Army readiness.

    - The funding opportunity is divided into two sections- (1) Basic Research and (2) Applied Research and Advanced Technology Development.

    - The four major topic areas of research interest include the following:

      (1) Training

      (2) Leader Development

      (3) Team and Inter-Organizational Performance in Complex Environments

      (4) Solider/Personnel Issues.

- Defense Sciences Research and Technology (DARPA-BAA-13-20)

    - https://www.fbo.gov/index?s=opportunity&mode=form&id=41e0808f4554dd7ff9cd3f6409aa5e56&tab=core&_cview=0

    - Posted date: May 2, 2013
      Closing date for WP: March 25, 2014

    - DARPA is soliciting innovative research proposals of interest to the Defense Sciences Office. Proposed research should investigate innovative approaches that enable revolutionary advances in science and technology. Specifically excluded is research that results primarily in evolutionary improvements to the existing state of the art.

    - Areas of interest include, but are not limited to:

        - Biomedical research
        - Rapid response protective or therapeutic treatments for biological and chemical threats
        - Preventing and countering effects of nuclear and radiological weapons
        - WMD remediation and neutralization techniques
        - Neuro-technology and neuroscience research, tools and applications
        - Modeling of biological systems; biomimetic and bio-inspired technologies
        - New ways to assess, optimize, and restore human performance
        - Bioelectronic and biophotonic interfaces
        - New methods for direct manipulation and control of biomaterials
        - Combat casualty care techniques
        - Advanced training technologies
        - Robotic and autonomous technologies
        - Materials science research
        - Quantum science and technologies
        - Power and energy research
        - Applied mathematics
        - Advanced technologies for manufacturing
        - Radically new ways of conducting scientific research

- Air Force Medical Support Agency (AFMSA/SG9) Modernization Directorate Research/Development and Innovations (BAA-11-03-HPW)

    - http://www.grants.gov/web/grants/search-grants.html

      enter BAA-11-03-HPW into solicitation #

    - Posted date: July 18, 2011
      Closing date: July 17, 2016

    - Key words:
        - Force Health Protection: Protecting and sustaining the health of the individual and units (populations) within the armed forces; emphasis is on prevention of disease states and injuries

        - Expeditionary/ In-Garrison: Refers to mission related activities while deployed forward. Could be in the field in very austere conditions, or could be on base at forward deployed locations (also austere in terms of limited assets on hand and long logistic lines of resupply). Mission activities could be combat related, or could be humanitarian support, e.g.

        - Operational Medicine: In-garrison in this area refers to care provided on permanent military installations, mostly in the US, but could also be established installations overseas, Landstuhl Regional Medical Center in Germany, or Yokota Air Base in Japan, e.g.

    - The medical modernization areas:

        - Force Health Protection – Focus is on prevention of injury and illness and the early recognition or detection of emerging threats. Key areas include: Bio-Surveillance; Bio agents of military relevance/Infectious Disease surveillance and identification; Occupational Toxicology, emerging threats (pandemic response, other environmental threats); and protective countermeasures.

        - Operational Medicine – Focus is on definitive patient care/treatment in-garrison. Key focus areas include: clinical medicine enhancements; personalized diagnosis and treatment; traumatic brain injury; psychological health/post traumatic stress disorder; regenerative medicine; clinical patient safety; autism; and definitive care.

- Expeditionary Medicine/In Garrison - Focus is on improving expeditionary medical care during contingency operations including medical countermeasures against combat and operational stressors to maximize warrior health, performance and well-being. Key focus areas include: expeditionary logistics enhancements and requirements (energy, supplies and materials) miniaturization to reduce logistics footprint; critical humanitarian/disaster relief equipment/material sets identification; deployed combat casualty care optimization and improvements in methods and techniques of remote monitoring and triage systems; Field identification, diagnosis and treatment of emerging threat Directed Energy Weapons (DEW)) injuries; infectious disease prevention, diagnosis and treatment in austere environments.

- Human Performance: Focus is on operational human performance in aerospace environments - fit and healthy force; performance sustainment; occupational standards/selection; environmental and occupational health; environmental and metabolic stressors; nutrition; diagnosis of cognitive performance degradation, and applied countermeasures; assessment of cognitive demands in complex aerospace environments; fatigue management; sensory protection and sustainment (audio, tactile, visual); vision enhancement; medical team performance; medical modeling and simulation; and medical currency and competency.

- DTRA FY 2011-2016 Basic research for combating WMD (HDTRA1-11-16-BRCWMD-BAA): latest version Amendment 2 Dec12

    - http://www.grants.gov/search/search.do;jsessionid=D2JCR2qFvpL5Z3B9P0HH4lSDSnJCyC3KLj1tQTpRNLhGDsfmbGfl!1171473476?oppId=75633&mode=VIEW

    - Posted date: March 1, 2011
      Closing date: Period C: January 14, 2013
      Period D: TBD

- Thrust areas:

    - Thrust Area 1—Science of WMD Sensing and Recognition: The basic science of WMD sensing and recognition is the fundamental understanding of materials that demonstrate measurable changes when stimulated by energy, molecules, or particles from WMD in the environment. This research thrust involves exploration and exploitation of interactions between materials and various electromagnetic frequencies, molecules, nuclear radiation or particles. These interactions and the specific form of recognition they provide are used for subsequent generation of information that provides knowledge of the presence, identity, and/or quantity of material or energy in the environment that may be significant.

    - Thrust Area 2—Cognitive and Information Science: The basic science of cognitive and information science is the convergence of computer, information, mathematical, networks, natural, and social science. This research thrust expands our understanding of social networks and advances knowledge of adversarial intent with respect to the acquisition, proliferation, and potential use of WMD. The methods may include analytical, computational or numerical, or experimental means to integrate knowledge across disciplines and improve rapid processing of intelligence and dissemination of information.

    - Thrust Area 3—Science for Protection: Basic science for protection involves advancing knowledge to protect life and life-sustaining resources and networks. Protection includes threat containment, decontamination, threat filtering, and shielding of systems. The concept is generalized to include fundamental investigations that reduce consequences of WMD, assist in the restoration of life-sustaining functions, and support forensic science.

    - Thrust Area 4—Science to Defeat WMD: Basic science to defeat WMD involves furthering the understanding of explosives, their detonation, and problems associated with accessing target WMDs.

This research thrust includes the creation of new energetic materials or physical approaches that enhance the defeat of WMDs by orders of magnitude, the improvement of modeling and simulation of these materials and various phenomena that affect success and estimate the impact (lethality) of defeat actions, including the assessment of event characteristics using various dynamic analytical methods.

- Thrust Area 5—Science to Secure WMD: Basic science to support securing WMD includes: (a) environmentally responsible innovative processes to neutralize chemical, biological, radiological, nuclear, or explosive (CBRNE) materials and components; (b) discovery of revolutionary means to secure components and weapons; and (c) studies of scientific principles that lead to novel physical or other tags and methods to monitor compliance and disrupt proliferation pathways. The identification of basic phenomena that provide verifiable controls on materials and systems also helps arms control.

- Period D topics TBD

- ONR Long Range Broad Agency Announcement (BAA) for Navy and Marine Corps Science and Technology (ONRBAA13-001)

    - http://www07.grants.gov/search/search.do;jsessionid=n20wQ6JQbQdgH1Ln6wWWR4QhKZyYcNYZC1yh5YzpNpqr4vpHFgwp!-1679864363?oppId=202854&mode=VIEW

    - Posting date: September 27, 2012
      Closing date: September 30, 2013

    - Important words and phrases:
        - Joint operating environment: conducting military missions with more than one service army, navy, air, and special forces working together on a mission or in a theater of operations.

- Solicitations of Long-Range Science and Technology (S&T) Projects, which offer potential for advancement and improvement of Navy and Marine Corps operations. The following are key areas of interest.

    - Human, Social, Culture and Behavior Modeling, which seeks to build capability through development of a knowledge base, building models and training capacity in order to understand, predict and shape human behavior cross-culturally.
    - Human Performance Training and Education (HPT&E), seeks to understand the science of improving human performance in order to prepare warfighters for the complex and often chaotic joint operating environment.
    - Human and Bioengineered Systems covers cognitive science, computational neuroscience, bioscience and bio-mimetic technology, social/organizational science, training, human factors, and decision making.
    - Warfighter Protection and Applications covers bioscience and bio-mimetic technology; biomaterials; biomedical technologies; expeditionary and undersea medicine; physiology and biophysics; immunology; applied manpower, personnel, training, and education; and noise induced hearing loss.

- Department of Homeland Security: -DHS S&T Long Range Broad Agency Announcement (DHSS-TLRBAA12-07)

    - https://baa2.st.dhs.gov/portal/public/processRequest.action?eurl=AAAAAAEytBoAAAE7s7ga1AAUQUVTL0NCQy9QS0NTNVBhZGRpbmcAgAAQABAAAQIDBAUGBwgJCgsMDQ4PAAAAYKyTkJd2Ycrv7CKJ9DsMe16RY9Xo8M2xrXWf2iHXQ0DrWiwt99/POvfsoZDvwdulXHULo+cvz/Q+SB6tIAYB1eA8F4obTYaWSnJp5YeHRNsL2o+I/SSf66R81gzGryNYEQAUuIWNFZVt8BkA2s3aRrE53eIgam4=

    - Posting date: January 26, 2012
      Closing date for white paper: December 31, 2013

    - Important words and phrases:
        - Decontamination: reduction or removal of chemical, biological, or radiological agents
        - Restoration: bringing back to a former position or condition, in the context of communities, communications systems
        - Platform technologies: the creation of products and processes that support present or future development; a structural or technological form from which various products can emerge without the expense of a new process/technology introduction; increases the ease of future design or manufacture
        - Prototype: early sample or model built to test a concept or process; can be hardware, model, proof of principal

    - DHS' S&T's mission is to "support basic and applied homeland security research to promote revolutionary changes in technologies; advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities." DHS seeks R&D projects for revolutionary, evolving, and maturing technologies that demonstrate the potential for significant improvement in homeland security missions and operations. Projects selected are restricted to work relating to basic and applied research and that portion of advanced technology development *not* related to a specific system or hardware procurement. This announcement does *not* cover support services, such as technical services, engineering services, or other types of support services.

    - There are a number of focus areas:
        - Borders and Maritime Security: development and evaluation of security technologies and pilot testing new surveillance, tracking, and response capabilities that cover vast expanses of remote border territories.
        - The Chemical and Biological Division: characterization and prioritization of threats, innovative or revolutionary methods for

surveillance and detection for early attack warning that minimize exposure and speed treatment of victims, new forensic methods to support attribution, and novel concepts for decontamination and restoration, agro-defense, and food defense. Does not fund research on human clinical applications.

- Threat characterization and Attribution: Bioforensics; Prototype and pilot demonstration applications related to sharing of WMD sensor data; next generation and novel technologies to characterize biological threat agents (BTAs); next generation and novel methodological approaches to terrorism risk analysis, intentional attack analysis, scenario modeling and simulation
- Agrodefense: Biological-based countermeasures for foreign animal disease (FAD) and zoonotic pathogens affecting major domestic livestock species. Product candidates based on molecular vaccine platforms previously shown to be safe and effective against other infectious or human biodefense disease targets, and novel biological-derived agents with an established immune-based mechanism of action. Influenza countermeasure proposals will not be considered
- Cyber Security: advanced cyber security and information assurance solutions to secure the Nation's current and future cyber and critical infrastructures against persistent threats and dynamic attacks
- Explosives Countermeasures: detection, mitigation, and response to explosive threats including: all modes of transportation within the Transportation Systems Sector (Aviation, Maritime, Mass Transit, Highway, Freight Rail, and Pipeline)
- First Responder Group: (1) developing tools, technologies, methodologies, standards, protocols, and guidance to enable improved communications interoperability; (2) solutions for high-priority capability gaps through rapid prototyping; (3) maintaining a Web portal that enables easily access and leverage Federal web services; and (4) overseeing the National Urban Security Technology Laboratory, which provides a test and evaluation capability for DHS-developed technologies and systems.
- Public Alerts and Warnings: Develops, evaluates, and establishes processes for the development of alert and warning systems to transfer a message from its origination point through the Federal government to the public on various devices.
- Infrastructure Protection and Disaster Management
- Human Factors/Behavioral Sciences: detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; supports the preparedness, response, and recovery of communities impacted by catastrophic events including support for first responders; integrating human factors and public perceptions data into homeland security technologies.