

Military Health Research Forum

Background

The Military Health Research Forum (MHRF) is a scientific conference for presenting research studies funded by the Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Medical, Gulf War Illness, and Psychological Health and Traumatic Brain Injury Research Programs. Research supported by these programs addresses the healthcare needs of the Armed Forces and their families, veterans, and the American public.

The MHRF brings together scientists, clinicians, consumer advocates, policymakers, and the military to learn about research and product development advancements supported by the host programs. The conference includes invited presentations by noted scientists, educational sessions on topics of general interest, and poster and symposium presentations by CDMRP-funded investigators across programs. The MHRF is designed to promote the exchange of ideas to facilitate research progress, the development of new partnerships, and the translation of research findings into field-ready methods and products.

Congressionally Directed Medical Research Programs

Backgrounder

In the early 1990s, the breast cancer advocacy community launched a grassroots effort to raise public awareness of the crucial need for increased funding of breast cancer research. Beginning in fiscal year 1992 (FY92), Congress appropriated \$25 million (M) for breast cancer research to be managed by the Department of Defense (DOD). The following year, Congress continued to respond to the advocacy movement and appropriated \$210M for breast cancer research, marking the beginning of the Congressionally Directed Medical Research Programs (CDMRP). The CDMRP represents a unique partnership among the public, Congress, and the military. Because of continued and expanded advocacy efforts, the CDMRP has grown to encompass multiple targeted programs and has received more than \$5.3 billion in appropriations from its inception in fiscal year 1993 (FY93) through FY09. Through FY08, over 9,000 awards have been made across 26 different programs. Through monies added by Congress to the DOD budget, the CDMRP funds high-risk/potentially high-gain research designed to produce preliminary data needed to obtain further funding; innovative research that can accelerate advancements; and high-impact projects aimed at increasing knowledge and advancing patient care. The CDMRP provides funds for support of targeted research programs including:

Cancer Research Programs

Breast Cancer
Chronic Myelogenous Leukemia
Lung Cancer
Ovarian Cancer
Peer Reviewed Cancer
Prostate Cancer

Military Relevant Research Programs

Amyotrophic Lateral Sclerosis
Deployment Related Medical Research
Gulf War Illness
Peer Reviewed Medical Research
Psychological Health and Traumatic
Brain Injury

Biomedical Research Programs

Autism
Bone Marrow Failure
Food Allergies
Multiple Sclerosis
Neurofibromatosis
Orthopaedic Research
Spinal Cord Injury
Tuberous Sclerosis

Under the auspices of the U.S. Army Medical Research and Materiel Command (USAMRMC), the CDMRP manages these programs from receipt of funds and competitive selection of applications, through individual project performance, to award closeout. Annually, as members of an Integration Panel, renowned scientists, clinicians, and disease (“consumer”) advocates recommend programmatic priorities and identify research gaps for the various programs. Investigators have the opportunity to compete for awards by submitting research proposals that address programmatic priorities and gaps. Applications are reviewed through a two-tier review process including scientific peer review, conducted by scientific and clinical experts in the field of interest and consumer advocates, followed by programmatic review, conducted by the Integration Panel. The two tiers of review ensure that scientifically meritorious research applications that most completely address the programmatic priorities and contribute to a broad portfolio are funded.

Recognizing the importance of consumer advocate contributions, the CDMRP engages consumers in many key phases of each program’s annual cycle as shown below. Consumers may be disease survivors, patients, family members, or persons affected by or at risk for a disease.

- **Peer Review:** Consumers participate in the application review processes as community representatives of the disease that has touched their lives bringing a sense of urgency and focus to the review process. Consumer reviewers are nominated by advocacy organizations.
- **Integration Panel:** Consumers provide recommendations for programmatic priorities and funding by voicing the research needs of the consumer community.
- **Consumer Working Group:** Consumers contribute to development of consumer outreach materials and recruitment activities, and promote benefits of consumer involvement.

Through CDMRP’s commitment to finding and funding the best research and supporting the warfighter for the benefit of the American public, the CDMRP has positively affected the lives of those living with disease through increased understanding of disease initiation and progression, and the development of new diagnostic and therapeutic strategies.

Peer Reviewed Medical Research Program

Background

The Peer Reviewed Medical Research Program (PRMRP) was established in fiscal year 1999 with the mission to provide support for military health-related research of exceptional scientific merit. As we move through the 21st century, health and welfare issues facing the American people continue to evolve. While some important medical issues remain constant, many may differ from those faced by previous generations. In pursuit of its vision, the PRMRP strives to continually address new challenges affecting the health of the Armed Forces, their families, and the U.S. veteran population, with medical research that ultimately benefits the American public as a whole. With each congressional appropriation, the PRMRP solicits proposals, under topic areas directed by Congress, which address research covering a wide range of fields, including combat casualty care, cancer, infectious disease, metabolic disease, and social issues. The PRMRP funds proposals in a variety of topic areas with relevance to military medical issues and is committed to funding research that will have a strong impact on the development and implementation of devices, drugs, or clinical guidance that will change the face of diagnosis and treatment for a wide range of clinical applications.

Congress appropriated \$50 million in fiscal year 2009 to the PRMRP to support scientifically meritorious research in the following areas:

- Alcoholism
- Autoimmune Diseases
- Blood Cancer
- Childhood Asthma
- Drug Abuse
- Epilepsy
- Kidney Cancer
- Listeria Vaccine for Infectious Diseases and Cancer
- Lupus
- Mesothelioma
- Molecular Signatures in Tumors
- Neuroblastoma
- Osteoporosis and Related Bone Disease
- Paget's Disease
- Pediatric Cancer
- Polycystic Kidney Disease
- Social Work Research
- Tinnitus
- West Nile Virus Vaccine

PRMRP congressional appropriations, which totaled \$394.5 million through fiscal year 2008 have provided funding for 247 research projects in more than 79 unique topic areas. Whether addressing newly relevant challenges such as traumatic brain injury and tinnitus, or longstanding problems such as cancer and infectious diseases, the supported studies are advancing the field of medical research. The CDMRP has acted as the program management office for the PRMRP since its inception. Program oversight is through a Tri-Service/Interagency Joint Programmatic Review Panel (JPRP) as required by the Assistant Secretary of Defense for Health Affairs (ASD/HA).

Psychological Health and Traumatic Brain Injury Research Program

Background

The Psychological Health and Traumatic Brain Injury (PH/TBI) Research Program was established in the 2007 War Supplement and administered by the Congressionally Directed Medical Research Programs (CDMRP) office. This program was established in response to the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, which provided \$150 million for research on Post-Traumatic Stress Disorder (PTSD) and \$150 million for research on TBI.

With priorities set by a June 2007 stakeholders meeting, PTSD and TBI gaps in research and, therefore, gaps in comprehensive treatments for both PH and TBI were identified in order to drive additional research supporting the program's mission. A Joint Program Integration Panel prioritized the research gaps identified by the stakeholders as shown below:

Post-Traumatic Stress Disorder Research Gaps:

- Treatment and Intervention
- Prevention
- Measures in Screening Tools, Detection, and Diagnosis
- Epidemiology Studies
- Families/Caregivers Projects

Traumatic Brain Injury Research Gaps:

- Treatment and Clinical Management
- Neuroprotection and Repair Strategy
- Rehabilitation/Reintegration Strategies
- Field Epidemiology
- Physics of Blast as It Relates to Brain Injury

The vision of the Program was subsequently expanded beyond PTSD to include all combat-relevant Psychological Health (PH) challenges. The primary focus continues to be to prevent, mitigate, and treat the effects of traumatic stress and TBI on function, wellness, and overall quality of life for the warriors, veterans, families, caregivers, and communities impacted by PH issues and/or TBI. Emphasis was also placed on complementing ongoing Department of Defense efforts to ensure the health and readiness of our military forces, including support for the Department of Defense Centers of Excellence (DCoE) for PH and TBI, which aims to advance and spread PH/TBI knowledge, enhance clinical and management approaches, and facilitate other vital services to best serve the needs of warrior families impacted by PH/TBI. The program was continued with approximately \$40.6 million available from a fiscal year 2009 Defense Appropriation to the DCoE for PH and TBI to continue to promote research that will advance the prevention, detection, diagnosis, and treatment of military-relevant PH issues and TBI, with emphasis on near-term impact on improving the function, wellness, and overall quality of life for warriors, veterans, families, caregivers, and communities impacted by PH issues and/or TBI.

Gulf War Illness Research Program

Background

The Gulf War Illness Research Program (GWIRP) strives to improve the health and lives of veterans who have Gulf War Illness by funding innovative research to improve its diagnosis, better understand its pathobiology, and identify effective treatments for its array of symptoms.

In the GWIRP, Gulf War veterans participate equally with research professionals on review panels and play a pivotal role in maintaining an appropriate focus within the program. For the 2008 fiscal year, the program offered three award mechanisms to support research in the pathobiology, detection and treatment of GWI. In 2009, the program is offering two award mechanisms focusing on development of treatments and one award mechanism focusing on pathobiology and improved diagnostics. To date, the GWIRP has funded 9 awards from 2006 with approximately 12 more approved for funding from 2008 that are still in negotiations.

Nearly 700,000 men and women served in the 1990–1991 Gulf War. Population-based studies consistently indicate that as many as 225,000 of these veterans experience a variety of symptoms including chronic headaches, widespread pain, persistent fatigue, gastrointestinal difficulties, respiratory conditions, skin irritations, and cognitive problems. These symptoms are potentially a result of exposure to neurotoxins including pesticides and anti-nerve agents. Gulf War veterans are also twice as likely to develop amyotrophic lateral sclerosis (ALS, also known as 'Lou Gehrig's Disease') than the general population, though the reasons for this incidence are not yet understood. Although the research community has answered some medical questions pertaining to Gulf War veterans' experiences, more extensive knowledge of GWI pathophysiology and effective treatments for these various symptoms are still needed.

Department of Defense-funded GWI research began in fiscal year 1994 with the establishment of a Gulf War Veterans' Illnesses Research Program (GWVIRP) to study the health effects of service members deployed in the 1991 Persian Gulf War. From the mid-1990s to 2005, the United States Army Medical Research and Materiel Command's Military Operational Medicine Research Program (MOMRP) managed the GWVIRP. Research pertaining to GWI was also funded intermittently through the Congressionally Directed Medical Research Program's (CDMRP) Peer Reviewed Medical Research Program. The MOMRP shared management responsibility for the GWVIRP with the CDMRP in fiscal year 2006 with separate \$5 million appropriations. Although the GWVIRP did not receive funding in fiscal year 2007, a \$10 million appropriation in fiscal year 2008 renewed the program, under the new name GWIRP, for full management by the CDMRP. In fiscal year 2009, a congressional appropriation of \$8 million continued the GWIRP. Congress also directed separate funding for ALS research through the CDMRP in 2007 and again in 2009.