Congressionally Directed Medical Research Programs (CDMRP)

Overview of CDMRP and the Gulf War Illness Research Program (GWIRP)

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CDMRP Partnerships

Consumers
- Demonstrate need
- Participate at all levels
- Passion and perspective
- In touch with a network of other consumers

Congress
- Add funds to budget
- Targeted guidance
- Opportunity to leverage

IMPROVE HEALTH (CURE)

Researchers
- Innovation and gaps
- Risk/Benefit
- Product-oriented

DOD
- Program management
- Regulatory and budget requirements
- Institute of Medicine model

The views expressed in this presentation are those of the author and do not reflect the official policy of the Department of the Army, Department of Defense, or U.S. Government.
CDMRP Program Cycle

Congressional Appropriation

Vision Setting

Release of Program Announcement

Proposal Receipt

Peer Review

Programmatic Review

Approval of Commanding General

Negotiations

Award Execution

Scope of CDMRP Funds and Awards

Applications Received since 1992: 74,904*

Applications Funded since 1992: 10,651*

*Updated 4 October 2010
GWIRP Funding History

- Gulf War Veterans’ Illnesses Research Program (MOMRP)*
- Gulf War Illness Research Program (CDMRP)
- Amyotrophic Lateral Sclerosis Therapy Development for Gulf War Illness Research Program (MOMRP & CDMRP)
- Peer Reviewed Medical Research Program (CDMRP)

*Military Operational Medicine Research Program, USAMRMC
GWIRP Funding Synopsis

Congressional Appropriation

FY06 – FY09
$23M
- 241 Pre-Applications Received
- 115 Full Submissions
- 30 Awards

FY07 – FY09
$23M

FY10
$8M
- 84 Pre-Applications Received
- 34 Full Submissions
- 12 Awards Recommended for Funding

FY11

20 Pre-Applications Received
11 Full Submissions
3 Awards Recommended for Funding

FY12

20 Pre-Applications Received
11 Full Submissions
3 Awards Recommended for Funding

FY08 National Defense Authorization Act

HR 1585 Conferees directed the Secretary of the Army to utilize the authorized funding … to undertake research on Gulf War Illnesses. Conferees also directed that activities under the Gulf War Illnesses program include:

- Studies of treatments for the complex of symptoms known as “Gulf War Illness”
- No studies based on psychiatric illness and psychological stress as the central cause
- Competitive selection and peer review to identify research with the highest technical merit and military value
GWIRP Clinical Trials

Studies that test treatments in GWI patients to alleviate various symptoms of GWI and address possible underlying causes of these symptoms.

♦ The antioxidant coenzyme Q10 is studied to improve chronic GWI symptoms such as muscle pain and fatigue, as well as the overall quality of life.
♦ An investigation with the supplement carnosine to improve sleep problems, pain, and other symptoms; functional MRI will be used to measure brain activity.
♦ A new use for mifepristone is investigated to determine if it can improve the health of Gulf War veterans with chronic multi-symptom illness.

GWIRP Clinical Trials (cont.)

♦ A crossover clinical trial of Naltrexone and Dextromethorphan to treat neuroinflammation and relieve GWI symptoms.
♦ An investigation of acupuncture for its effectiveness in treating multi-symptom illness in GWI patients.
♦ Evaluation of an innovative detoxification treatment program using the Hubbard Regimen as a means of rehabilitative therapy.
♦ The probiotic Align® (Bifidobacterium infantis 35624) to improve global health and individual symptoms of irritable bowel syndrome.
GWIRP Clinical Studies

Studies in GWI patients to investigate biomarkers and the underlying causes of symptoms associated with GWI.

- Structural MRI and correlations with cognitive problems in pest-control personnel from the Gulf War.
- Exploring reduced blood flow and coagulation as an underlying cause of GWI and an avenue for therapeutic development.
- Extensive molecular profiling of gene expression and cytokine concentration before and after an exercise challenge to inform potential therapeutic options.
- Investigating small intestinal bacterial overgrowth (SIBO) as an underlying cause of GWI.

GWIRP Clinical Studies (cont.)

- Capsaicin inhalation challenge to test airway sensitivity as a mechanism for respiratory symptoms associated with GWI.
- Finding markers of lung inflammation through samples of exhaled gas breath samples and frequency comb spectroscopy.
- An investigation to determine if small-fiber polyneuropathy is an underlying cause of symptoms associated with GWI.
- Examining homeostatic and circadian abnormalities associated with sleep and arousal.
- Exploring promising markers of oxidative stress that correlate well with severity of GWI symptoms.
GWIRP Basic Science (Mechanistic) Studies

Studies in animals and other models that explore treatments and the underlying causes of GWI and the associated symptoms.

♦ An investigation of the antioxidant analgesic drug Flupirtine in an animal model of GWI to treat cognition and sensorimotor deficits.
♦ A study of the pathophysiology underlying depleted uranium (DU) toxicity that examines glutamate concentration; this project will also examine the effectiveness of memantine and riluzole in an animal model of GWI.
♦ Using an animal model of sarin-induced GWI to examine heart rate variability and autonomic nervous system activity to identify potential biomarkers for GWI.

Functional indices of neuroinflammation in an animal model of GWI-chemical exposure along with stress followed with minocycline treatment as a potential therapy.

Identifying neuropathological and cognitive changes in animals exposed to Gulf War agents.

Investigating theory-driven models to correct “fight or flight” imbalance in GWI that concern the hypothalamic-pituitary-adrenal (HPA) axis.
GWIRP FY10 Award Mechanisms

- **Clinical Trial Award (CTA)**
  - Supports substantive clinical trials focusing on treatments for GWI

- **Consortium Development Award (CDA)**
  - Supports initial development of infrastructure and collaborations for a multi-institutional consortium for GWI research

- **Innovative Treatment Evaluation Award (ITEA)**
  - Supports exploratory or small-scale studies evaluating treatments not previously studied in GWI

- **Investigator-Initiated Research Award (IIRA)**
  - Supports new ideas in basic and clinical developmental research
FY10 GWIRP Awardees – ITEAs & CDAs (Recommended for Funding)

Yoshio Nakamura, Ph.D. (ITEA)
University of Utah

David Rabago, M.D. (ITEA)
University of Wisconsin, Madison

Mariana Morris, Ph.D. (CDA)
Wright State University

Jorge Serrador, Ph.D. (CDA)
Veterans Bio-Medical Research Institute, Inc.

Kimberly Sullivan, Ph.D. (CDA)
Boston University School of Public Health

FY10 GWIRP Awardees – IIRAs (Recommended for Funding)

Ghania Ait-Ghezala, Ph.D.
Roskamp Institute

Brian Cooper, Ph.D.
University of Florida

Julia Golier, Ph.D.
Bronx Veterans Medical Research Foundation, Inc.

Maxine Krengel, Ph.D.
Boston VA Research Institute, Inc.

Judy Mikovits, Ph.D.
Whittemore Peterson Institute

Lea Steele, Ph.D.
Baylor University

Richard Sutton, M.D., Ph.D.
Yale University
GWIRP FY11 Proposed Priority Areas

- Identification of effective treatments for GWI
- Improved diagnostic testing for GWI
- Improved understanding of GWI pathobiology
- Incorporation of case definitions for GWI

FY11 GWIRP Investment Strategy (Proposed)

<table>
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<tr>
<th>Mechanism</th>
<th>Award Value</th>
<th>Award Duration</th>
<th>Anticipated Number of Awards</th>
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<tr>
<td>Clinical Trial Development Award</td>
<td>$100,000</td>
<td>1 year</td>
<td>4</td>
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<tr>
<td>Investigator-Initiated Research Award</td>
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<td>3 years</td>
<td>2</td>
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<tr>
<td>Innovative Treatment Evaluation Award</td>
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<td>Clinical Trial Award</td>
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As one of tens of thousands of Gulf War Veterans afflicted with constant intense muscle pain and very debilitating fatigue, I did not hesitate for one second when asked to participate in the CDMRP for Gulf War Illness Research. I am ill, but far better off than many of my fellow warriors. As a retired officer of Marines, I feel a strong moral obligation to do whatever I can to improve the quality of life for those afflicted by Gulf War-related illnesses. All members of the military are taught to leave no one behind in war. Everyone comes home. Sick Gulf War Veterans will not truly be “home” until solutions to their daily pain and suffering are identified.
**DOD Congressionally Directed Medical Research Programs**

http://cdmrp.army.mil

**Questions?**

find and fund the BEST research