

VA



U.S. Department
of Veterans Affairs

Karen Block, Ph.D.
Gulf War Research Program Update
Office of Research and Development
Department of Veterans Affairs
January 27, 2022



VA-ORD Funding - Gulf War Research (2011-2021)

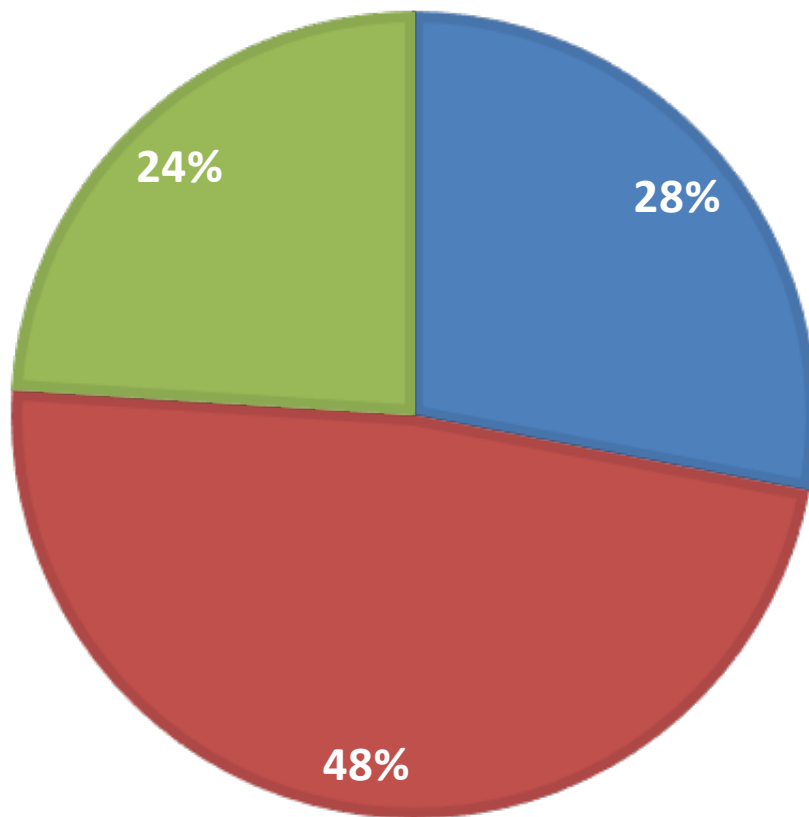
FY	Proposals Received	Projects Funded	% Funded	Funds Approved
2011	26	3	11.50%	\$4.0M
2012	32	7	21.80%	\$11.4M
2013	35	7	20.00%	\$12.6M
2014	40	5	12.50%	\$ 7.5M
2015	33	8	24.20%	\$13.2M
2016	26	4	15.30%	\$2.5M
2017	29	5	17%	\$5.3M
2018	27	5	19%	\$2.6M
2019	21	5	24	\$5.0M
2020	12	4	33%	\$3.4M
2021	15	3	20%	\$4.5M



VA Active Gulf War Research Projects, 2021

GULF WAR PORTFOLIO BALANCE 2021

■ Model Systems ■ Biomarkers/Mechanisms ■ Clinical Trials





Active Gulf War Research Projects, 2019-2020 (1 of 3)

Treatments/Clinical Trials (5)

Complementary Neurosteroid Intervention in Gulf War Veterans' Illnesses. *Phase II*

Intervention Clinicaltrials.gov ID: NCT01956279. PI: CE Marx

- **Allopregnanolone Levels Are Inversely Associated with Self-Reported Pain Symptoms in U.S. Iraq and Afghanistan-Era Veterans: Implications for Biomarkers and Therapeutics.** Naylor JC, Kilts JD, Szabo ST, Dunn CE, et al,. (2016) *Pain Med.* 17:25-32.
- **Self-Reported Pain in Male and Female Iraq/Afghanistan-Era Veterans: Associations with Psychiatric Symptoms and Functioning.** Naylor JC, Ryan Wagner H, Brancu M, Shepherd-Banigan M, Elbogen E, et al,. (2017) *Pain Med.* 18:1658-1667. PMID: 28122941
- **Pain Intensity and Pain Interference in Male and Female Iraq/Afghanistan-era Veterans.** Naylor JC, Wagner HR, Johnston C, Elbogen EE, Brancu M, Marx CE; VA Mid-Atlantic MIRECC Work Group; VA Mid-Atlantic MIRECC Women Veterans Work Group, Strauss JL. (2019) *Womens Health Issues.* 25;29 Suppl 1:S24-S31. PMID: 31253239

rTMS in alleviating Pain and Co-morbid symptoms in GWVI. ClinicalTrials.gov Identifier: NCT04182659. PI Leung

- **Diminished corticomotor excitability in Gulf War Illness related chronic pain symptoms; evidence from TMS study.** Karen Lei, Alphonsa Kunnel, Valerie Metzger-Smith, Shahrokh Golshan, et al., *Sci Rep.* 2020; 10: 18520. PMC7595115



Active Gulf War Research Projects, 2019-2020 (1 of 3)

Treatments/Clinical Trials (5)

Complementary and Alternative Medicine in Veterans with Gulf War Illnesses. *Phase I* Clinicaltrials.gov ID: NCT02180243. PI: Reinhard

Physical health, mental health, and utilization of complementary and alternative medicine services among Gulf War veterans. Holliday SB, Hull A, Lockwood C, Eickhoff C, Sullivan P, Reinhard M. (2014) Med Care. 52:S39-44..

Cognitive Rehabilitation Therapy for Gulf War Veterans. Clinicaltrials.gov ID: NCT02161133. PI: McAndrew, CDA

Coping with Medically Unexplained Physical Symptoms: the Role of Illness Beliefs and Behaviors. Sullivan N, Phillips LA, Pigeon WR, Quigley K, et al,. (2019) Int J Behav Med. 26:665-672.

Veterans with Gulf War Illness perceptions of management strategies. Darren M Winograd, Nicole L Sullivan, Scott R Thien, Wilfred R Pigeon, David R Litke, Drew A Helmer, Joseph F Rath, Shou-En Lu, Lisa M McAndrew. (2021) Life Sci 279:119219.

Microbiome targeted oral butyrate therapy in Gulf War multisymptom illness. PI: Chatterjee, Saurabh



Active Gulf War Research Projects, 2020-2021 (2 of 3)

Biomarkers/Mechanisms/Preclinical (12)

- Longitudinal assessment of Gulf War veterans with suspected Sarin exposure.
- Multimodal Biological Assessment of Gulf War Illness.
- Women vs. Men with GWI: Differences in Computational Models and Therapeutic Targets.
- Mechanisms of Gulf War Illness.
- Biomarker Candidates in Gulf War Veterans: A 10-year Follow-up Investigation.
- Post Exertional Malaise in GWI: Brain Autonomic and Behavioral Interactions.
- Toxicant Exposure Impacts Host-pathogen interactions within the Reproductive Tract.
- Advancing Non-Invasive Diagnostics and Treatments of Deployment-Related Chronic Lung Disease in Gulf War Veterans.
- Toxicology study of emissions from a burn pit simulator.
- PROJECT IN-DEPTH.
- Alveolar macrophage dysregulation in the pathogenesis of Gulf War respiratory illness (JIT)
- Integrating genomics and metabolomics data to identify molecular characteristics of Gulf War Veterans' illnesses (JIT)



Active Gulf War Research Projects, 2020-2021 (3 of 3)

Model Systems/Preclinical (7)

- Immune Basis for Hippocampal Cholinergic Deficits in Pyridostigmine-treated Rats.
- Acute exercise tolerance among Veterans with Gulf War Illness (CDA).
- Targeting the sphingosine-1-phosphate system in a mouse model of Gulf War Veterans' Illness.
- Gulf War Veterans' Illness: Symptom Chronicity via Interactions of Diet and Lifestyle Risk Factors with the Gut Microbiome.
- Immune/Inflammatory Priming in Exacerbating Responses to GWVI.
- VA Biorepository: Gulf War Veterans' Illnesses Biorepository.
- The role of the brain stem in GWVI pathology.



DOD CDMRP Program 2022

The Gulf War Illness Research Program (GWIRP) was Congressionally directed in FY06 to study the health effects of deployment on U.S. Warfighters during the 1990-1991 Persian Gulf War.

Department of Defense appropriations Bill, 2022: Transitioning the GWIRP (\$20M) to the Toxic Exposure Research Program (TERP) (\$30M)

The GWIRP focused heavily on research to identify effective treatments for Gulf War illness.

- Gulf War Illness Clinical Trials and Interventions Consortium (GWICTIC) to rapidly implement rigorous and innovative phase I and II clinical trials for GWI.
- Boston Biorepository, Recruitment & Integrated Network for GWI (Biospecimens and Data Management).



VA Gulf War Project Abstraction

Completed by: CSPEC Durham

GOAL	Collect information needed to build a Gulf War Data and Specimen Repository for researchers in the field.
METHOD	Researchers at the Cooperative Studies Program Epidemiology Center in Durham, NC have collected study documents (e.g. consent and HIPAA forms) from 28 studies with Veteran participants. They documented study methods and whether consent forms allowed sharing of data and/or specimens (i.e. the Veteran agreed to share data and/or specimens).
TIMELINE	Round 1: 2017-2020. VA-funded Gulf War projects. Round 2: 2010-2017. VA-funded Gulf War projects.
OUTCOME	Of the 28 studies that were examined, 17 allow sharing of data and/or specimens.
WHAT COULD BE SHARED	Types of Specimens: Blood samples, saliva, and CNS tissue Types of Data: surveys, interviews, administrative records (e.g. health records), chart abstraction, physical exams, clinical lab tests, cognitive & neuropsychological assessments, audio/video recordings, MRI/fMRI data



VA-ORD Gulf War Research

Thank-you

karen.block@va.gov



RACGWVI Committee Updates: Marsha Turner, Managing Director

- Committee Training
- Research Alerts
- 2021 RACGWVI Recommendations – Status Update
- Nominations for new members – Status Update
- Thank-you to VA's Employee Education System (EES) for marketing, meeting support, and arranging the closed caption for today's meeting