

Appendix B

Project List by Research Focus Areas

Department of Veterans Affairs Gulf War Research Funding

Brain and Nervous System Function

Clinical

Research Focus	Project Focus	Project	Project Title
	Diagnosis	DoD-165	Biomarkers for Amyotrophic Lateral Sclerosis in Active Duty Military – BALSAM
	Diagnosis	DoD-230	An in Vivo Investigation of Brain Inflammation in Gulf War Illness with Integrated PET/MR Imaging
	Diagnosis	DoD-232	Characterizing Treatable Causes of Small Fiber Polyneuropathy in Gulf War Veterans
	Diagnosis	DoD-233	Assessment of MRI-Based Markers of Dopaminergic Integrity as a Biological Indicator of Gulf War Illness
	Diagnosis	DoD-237	Direct Test for Neuroinflammation with [11C]DAP713-PET Scanning
	Symptoms	VA-142	VA Gulf War Biorepository Trust
	Treatment	VA-157	A Clinical Demonstration of an EEG Brain-Computer Interface for ALS Patients (CSP 567)
	Treatment	VA-188	Complementary Neurosteroid Intervention in Gulf War Veterans' Illnesses
	Treatment	VA-190	Cognitive Rehabilitation for Gulf War Illness
	Treatment	DoD-228	A Multimodal Evaluation of the Comparative Efficacy of Yoga versus a Patient-Centered Support Group for Treating Chronic Pain in Gulf War Illness
	Treatment; Symptoms	DoD-166	A Placebo-Controlled Trial of Prazosin vs. Paroxetine in Combat Stress-Induced PTSD Nightmares and Sleep Disturbance
Environmental Toxicology	Treatment	DoD-311	The Role of Oxidative Stress and Mitochondrial Dysfunction in Cognitive Impairments in Gulf War Illness
Environmental Toxicology	Symptoms; Exposure	VA-064 A	Functional Neuroimaging in Lead Exposed Adults
Environmental Toxicology;	Symptoms; Chemical Weapons	DoD-063	PGW Veterans: Epidemiological and Clinical Evidence for Residual Organophosphate Neurotoxicity
Immune Function; Symptoms and General Health	Symptoms	VA-005 B	Physiological and Psychological Assessments of Persian Gulf Veterans
Symptoms and General Health	Diagnosis	DoD-032	Neuropsychological Functioning in Persian Gulf Era Veterans
Symptoms and General Health	Symptoms	DoD-040	Psychological and Neurobiological Consequences of the Gulf War Experience
Symptoms and General Health	Prevention	DoD-083	Risk for Stress-related Substance Abuse: the Effects of Family History of Alcoholism
Symptoms and General Health	Symptoms	DoD-084	Psychobiologic Alterations in Persian GW Veterans with and without PTSD
Symptoms and General Health	Symptoms	DoD-086	Effects of Combat Stress on Structure and Function of the Hippocampus

Department of Veterans Affairs Gulf War Research Funding

Symptoms and General Health	Symptoms	DoD-089	Limbic Blood Flow and Opiate Receptor PET in Posttraumatic Stress Disorder
Symptoms and General Health	Diagnosis	DoD-090	SPECT Benzodiazepine Receptor and MR Imaging in PTSD
Symptoms and General Health	Symptoms	DoD-132	Impaired Auditory Sensory Gating, Acoustic Startle Response: Effects of Long and Short Deployments on Army Combat Readiness
Symptoms and General Health	Diagnosis	DoD-147	Development and Validation of the Automated Neuropsychological Assessment Metric (ANAM) for Deployment Health Monitoring Applications
Symptoms and General Health	Treatment	DoD-212	Integrative Physiology of Gulf War Illness: Role of Autonomic Function, Central Neural Processing, and Sleep
Symptoms and General Health	Symptoms	HHS-005	Cognitive Function and Symptom Patterns in Persian Gulf Veterans
Symptoms and General Health	Symptoms	VA-004	Boston Environmental Hazards Research Center Program
Symptoms and General Health	Symptoms	VA-004 A	Evaluation of Cognitive Functioning of Persian Gulf Veterans
Symptoms and General Health	Symptoms	VA-004 B	Evaluation of Neurological Functioning in Persian Gulf Veterans
Symptoms and General Health	Diagnosis	VA-004 F	Validity of Computerized Tests
Symptoms and General Health	Symptoms	VA-005	East Orange Environmental Hazards Research Center Program
Symptoms and General Health	Symptoms	VA-006 A	Psychosocial, Neuropsychological and Neurobehavioral Assessment (Project I)
Symptoms and General Health	Symptoms	VA-007	Desert Storm Reunion Survey
Symptoms and General Health	Symptoms	VA-009	Evaluation of Cognitive Functioning in Persian Gulf War Veterans Reporting War-related Health Problems
Symptoms and General Health	Symptoms	VA-010	Memory and Attention in PTSD
Symptoms and General Health	Symptoms	VA-011	Neuropsychological Functioning in Veterans
Symptoms and General Health	Symptoms	VA-012	Psychological Assessment of Operation Desert Storm Returnees
Symptoms and General Health	Symptoms	VA-013	Neurobehavioral Aspects of Persian Gulf Experiences: A Pilot Study
Symptoms and General Health	Symptoms	VA-020	Psychological Adjustment in Operation Desert Shield/Storm Veterans
Symptoms and General Health	Symptoms	VA-021	A Comparison of PTSD Symptomatology among Three Army Medical Units Involved in ODS
Symptoms and General Health	Symptoms	VA-050	Neuropsychological findings in a sample of Operation Desert Storm Veterans
Symptoms and General Health	Symptoms	VA-051	Psychobiological Assessment of Desert Storm Veterans
Symptoms and General Health	Symptoms	VA-054	Follow-up of Psychological and Neurocognitive Gulf War Outcome: Relation to Stress
Symptoms and General Health	Symptoms	VA-064	Boston Environmental Hazards Research Center
Symptoms and General Health	Symptoms	VA-066	Physiological Responding in Posttraumatic Stress Disorder
Symptoms and General Health	Symptoms	VA-072	Roles of Paraoxonase, Butyrylcholinesterase and Stress in

Department of Veterans Affairs Gulf War Research Funding

			Unexplained Illnesses
Symptoms and General Health	Symptoms	VA-076	Analysis of Hippocampal Volume in Aging Combat Veterans with PTSD
Symptoms and General Health	Symptoms	VA-077	HPA Axis Reactivity in Men and Women with Chronic PTSD
Symptoms and General Health	Symptoms	VA-083	Neuropsychological Assessment of a Population-Based Sample of Persian GW Veterans and Controls
Symptoms and General Health	Symptoms	VA-084	Neurobiology of Severe Psychological Trauma in Women
Symptoms and General Health	Symptoms	VA-085	Associative Learning in Veterans with and without Combat Experience
Symptoms and General Health	Treatment	VA-089	National Registry of Veterans with Amyotrophic Lateral Sclerosis
Symptoms and General Health	Symptoms	VA-093	HPA Axis Alterations in PTSD: A Comparison of Gulf War and Vietnam Veterans
Symptoms and General Health	Treatment	VA-112	National VA Amyotrophic Lateral Sclerosis Research Consortium
Symptoms and General Health	Diagnosis	VA-125	Effects of Gulf War Illness on Brain Structure, Function and Metabolism: MRI/MRS at 4 Tesla
Symptoms and General Health	Diagnosis	DoD-238	Restoring the Brain's Lipid Homeostasis as a Therapeutic Avenue for Treating the CNS Symptoms of Gulf War Illness
Symptoms and General Health	Treatment	VA-181	Transcranial, Light-Emitting Diode (LED) Therapy to Improve Cognition in GWVI
Symptoms and General Health	Treatment	DoD-240	Novel Therapeutic Approaches for the Treatment of Depression and Cognitive Deficits in a Rodent Model of Gulf War Veterans' Illness
Symptoms and General Health	Symptoms	DoD-243	Vascular and Skeletal Muscle Function in Gulf War Veterans Illness
Symptoms and General Health	Symptoms	DoD-246	Novel Autoantibody Serum and Cerebrospinal Fluid Biomarkers in Veterans with Gulf War Illness
Symptoms and General Health	Symptoms	DoD-247	Novel Autoantibody Serum and Cerebrospinal Fluid Biomarkers in Veterans with Gulf War Illness
Symptoms and General Health	Diagnosis	DoD-272	Examination of Neuroimaging, Cognitive Functioning, and Plasma Biomarkers in a Longitudinal Cohort: Fort Devens, Part 1
Symptoms and General Health	Diagnosis	DoD-273	Examination of Neuroimaging, Cognitive Functioning, and Plasma Markers in a Longitudinal Cohort of Gulf War Deployed Veterans: The Fort Devens Cohort, Part 2
Symptoms and General Health	Treatment	DoD-277	Treatment of Memory Disorders in Gulf War Illness with High-Definition Transcranial Direct Cortical Stimulation
Symptoms and General Health	Treatment	DoD-287	Improving Cognitive Function in Veterans with Gulf War Illness by Improving Cerebral Vascular Function
Symptoms and General Health	Symptoms; Diagnosis	DoD-065	Multi-disciplinary Pathophysiologic Studies of Neurotoxic Gulf War Related Syndromes Leading to Diagnosis and Treatment
Symptoms and General Health	Symptoms; Exposure	DoD-057	Physiologic Effects of Stress in GW Veterans
Symptoms and General Health	Symptoms; Exposure	DoD-133	Odors, Deployment Stress, and Health: A Conditioning Analysis of Gulf War Syndrome
Symptoms and General Health	Diagnosis; Symptoms	DoD-087	Measurement and Validation of Psychosocial Risk and Resilience Factors Accounting for Physical and Mental Health and Health-Related Quality of Life among PGWVs

Department of Veterans Affairs Gulf War Research Funding

Symptoms and General Health	Treatment; Symptoms	DoD-125	A Randomized Clinical Trial of Cognitive-Behavioral Treatment for PTSD in Women (See VA-74)
Symptoms and General Health	Diagnosis; Symptoms	DoD-131	Magnetic Resonance and Spectroscopy of the Human Brain in Gulf War Illnesses
Symptoms and General Health	Diagnosis; Symptoms	DoD-144	Psychological Health Screening: Methods and Metrics for Deployed Forces
Symptoms and General Health	Diagnosis; Symptoms	DoD-153	Gulf War Illness Research
Symptoms and General Health	Treatment; Symptoms	DoD-164	Efficacy of Adjunct Sleep Interventions for PTSD (EASI- PTSD)
Symptoms and General Health	Treatment; Symptoms	VA-060	Identification and Management of Sleep Disorders in Gulf War Veterans
Symptoms and General Health	Diagnosis; Symptoms	VA-064 B	Quantification and Validation of Structure-Function relationships through visuospatial test performance
Symptoms and General Health	Diagnosis; Symptoms	VA-067	Olfactory Functioning in GW Veterans
Symptoms and General Health	Treatment; Symptoms	VA-074	A Randomized Clinical Trial for Cognitive-Behavioral Treatment for PTSD in Women (See DoD-125)
Symptoms and General Health	Treatment; Symptoms	VA-086	A Clinical Trial of Magnetic Stimulation in Depression
Symptoms and General Health	Treatment Symptoms	VA-087	Improving Outcomes of Depression in Primary Care
Symptoms and General Health	Treatment; Symptoms	VA-138	Inspiratory Flow Dynamics During Sleep in GWS and the Effect of CPAP
Symptoms and General Health;	Symptoms; Environmental Toxicology	VA-008	Psychological Test Data of GW Veterans Over Time
Symptoms and General Health;	Symptoms; Diagnosis	DoD-197	Undiagnosed Small Fiber Polyneuropathy: Is It a Component of Gulf War Illness?
Symptoms and General Health	Treatment	DoD-320	Role of Vestibular Hypofunction in Exacerbating Autonomic Dysfunction in Gulf War Illness

Development

Research Focus	Project Focus	Project	Project Title
	Diagnosis	HHS-013	ALS Biomarkers in the Cerebrospinal Fluid
	Diagnosis	VA-184	Longitudinal Assessment of Gulf War Veterans with Suspected Sarin Exposure
	Diagnosis	DoD-298	Computer-Aided Decoding of Brain-Immune Interactions in Gulf War Illness (GWI): A Joint Embedding on Brain Connectomic and Immunogenomic Markers
	Treatment	DoD-189	Discovery of AMPA Receptor Potentiating Aptamers as Cognitive Enhancers
	Treatment	VA-160	Lipoic Acid Therapy for Experimental Autoimmune Encephalomyelitis
	Treatment	DoD-231	Use of a Portable Stimulator to Treat GWI

Department of Veterans Affairs Gulf War Research Funding

	Symptoms	VA-183	Examination of Cognitive Fatigue in Gulf War Illness Using fMRI
Environmental Toxicology	Treatment; Exposure; Symptoms	DoD-184	Treatment of Memory Impairment and Sensorimotor Deficits in an Animal Model for the GW Veterans' Illnesses
Environmental Toxicology	Symptoms	VA-202	Gulf War Neurotoxicants and Acquired Cognitive and Neuropsychological Dysfunction
Symptoms and General Health	Diagnosis	VA-113	Novel Cause of Motor Neuron Disease
Symptoms and General Health	Diagnosis	DoD-245	Biomarkers and Brain Mechanisms of Gulf War Illness
Symptoms and General Health	Treatment	DoD-280	Curcumin Nanoparticle Therapy for Gulf War Illness
Symptoms and General Health	Treatment; Prevention	VA-097	Improving a mM-CSF Tumor Vaccine for Established Intracranial Gliomas
Symptoms and General Health	Diagnosis; Symptoms	VA-101	Biomarkers Discovery in ALS
Symptoms and General Health	Treatment; Symptoms	VA-128	MR Tracking of Stem Cells for Replacement Therapy in ALS

Epidemiology

Research Focus	Project Focus	Project	Project Title
Symptoms and General Health	Symptoms	DoD-023	Acute and Long-Term Impact of Deployment to Southwest Asia on the Physical and Mental Health of Soldiers and their Families
Symptoms and General Health	Symptoms	DoD-082	Feasibility of Developing a Registry of PTSD Affected Veteran Sib Pairs
Symptoms and General Health	Symptoms	DoD-114	A Re-examination of Neuropsychological Functioning in Persian GW Veterans
Symptoms and General Health	Symptoms	DoD-118	An Epidemiological Investigation into the Occurrence of Amyotrophic Lateral Sclerosis (ALS) Among GW Veterans (See also VA-61)
Symptoms and General Health	Symptoms	HHS-006	Defining Gulf War Illness
Symptoms and General Health	Diagnosis	HHS-012	Genetic Epidemiology of ALS in Veterans
Symptoms and General Health	Symptoms	VA-036	Stress Symptoms and Their Causal Attribution in Desert Storm Veterans
Symptoms and General Health	Symptoms	VA-061	An Epidemiological Investigation into the Occurrence of Amyotrophic Lateral Sclerosis (ALS) Among GW Veterans (See also DoD-118)
Symptoms and General Health	Symptoms	VA-068	Family Study of Fibromyalgia
Symptoms and General Health	Symptoms	VA-075	ALS and Veterans: Are Veterans at Increased Risk?
Symptoms and General Health	Symptoms	VA-110	Pain Among GW Veterans: Secondary Analysis of CSP#458 Data
Symptoms and General Health	Symptoms	VA-150	GW Veterans Illnesses' Research IDIQ Contract
Symptoms and General Health	Diagnosis	VA-151	Genetic Epidemiology of ALS Veterans

Department of Veterans Affairs Gulf War Research Funding

Symptoms and General Health	Symptoms	VA-152	Multiple Sclerosis in GW Veterans
Symptoms and General Health	Symptoms	DoD-227	Monosodium Luminol for Improving Brain Function in Gulf War Illness
Symptoms and General Health	Diagnosis	DoD-271	Neuroepidemiologic Case Definition of Gulf War Illness from Neuroimaging and EEG in a Population-Representative Nested Case-Control Sample of Gulf War Veterans
Symptoms and General Health	Symptoms; Diagnosis	DoD-104	Clinical Evaluation of a Proposed New Gulf War Syndrome
Symptoms and General Health	Treatment; Prevention	DoD-145	Early Intervention Research Program to Enhance Soldier Resilience
Symptoms and General Health	Diagnosis; Symptoms	DoD-052	Female Gender and Other Potential Predictors of Functional Health Status Among Persian GW Veterans
Symptoms and General Health	Diagnosis; Symptoms	DoD-154	Prospective Assessment of Neurocognition in Future Gulf-deployed and Gulf-nondeployed Military Personnel: A Pilot Study (See also VA-088)
Symptoms and General Health	Diagnosis; Symptoms	HHS-002	Disease Cluster in a Pennsylvania Air National Guard Unit, EPI-AID 95-18
Symptoms and General Health	Diagnosis; Symptoms	VA-088	Prospective Assessment of Neurocognition in Future Gulf-deployed and Gulf-nondeployed Military Personnel: A Pilot Study (See also DoD-154)

Mechanistic

Research Focus	Project Focus	Project	Project Title
	Diagnosis	VA-174	VA GW Veterans' Illnesses Biorepository
	Diagnosis	VA-176	MEG Synchronous Neural Interactions (SNI) in GW Veterans
	Diagnosis	VA-187	Multimodal Biological Assessment of Gulf War Illness
	Diagnosis	VA-193	Neuroinflammation, Oxidative Stress, and Hippocampal Defects in Gulf War Illness
	Symptoms	VA-091	The Role of Dietary Choline in Neuroprotection
	Symptoms	VA-120	Arginase NO Synthase and Cell Death in Amyotrophic Lateral Sclerosis
	Symptoms	VA-139	Sleep Neurobiology and Circuitry
	Symptoms	VA-141	Genetic Analysis of an Invertebrate Model of Amyotrophic Lateral Sclerosis
	Symptoms	DoD-281	Exploring Mechanisms Underlying Impaired Brain Function in Gulf War Illness through Advanced Network Analysis
	Treatment	DoD-161	Glutamate Receptor Aptamers and ALS
	Treatment	VA-140	Integrated Neuroimaging and Neuropathological Analysis of the Effects of Physical Activity on Progression and Therapy in ALS
	Treatment	VA-163	Immunoregulation of Myelin Specific T Lymphocytes
	Treatment	VA-191	Novel Neurotrophic Therapies in an Optimized Mouse Model of GWVI

Department of Veterans Affairs Gulf War Research Funding

	Treatment; Symptoms	VA-161	Multiple Antigenic Peptides to Alter the Course of Autoimmune Disease
Environmental Toxicology	Exposure; Interactions; Treatment	VA-175	Memory and Mood Enhancing Therapies for Gulf War Illness
Environmental Toxicology	Symptoms	VA-126	Structural Magnetic Resonance Imaging in Gulf War-Era Veterans
Environmental Toxicology	Symptoms; Exposure	DoD-176	Studies on Axonal Transport in an Animal Model for Gulf War Syndrome
Environmental Toxicology	Exposure; Symptoms	DoD-190	Identification of Biological Pathways Implicated in Hippocampal Dysfunction and Cognitive Impairment in Gulf War Illness
Environmental Toxicology Chemical Weapons	Exposure; Symptoms	DoD-219	Organophosphate-Related Alterations in Myelin and Axonal Transport in the Living Mammalian Brain
Environmental Toxicology;	Treatment; Exposure; Immune Function	DoD-185	Neuroinflammatory Pathobiology in Gulf War Illness: Characterization with an Animal Model
Environmental Toxicology	Exposure; Symptoms	DoD-244	Neurovascular and Autonomic Dysfunction Associated with Gulf War Pain
Environmental Toxicology	Exposure	DoD-274	Stress Hormone Enhancement of OP-Induced Neuroinflammation as an Animal Model of GWI: The Role of Toll-Like Receptors and Plasticity
Environmental Toxicology	Exposure	DoD-275	Stress Hormone Enhancement of OP-Induced Neuroinflammation as an Animal Model of GWI: The Role of Toll-Like Receptors and Plasticity
Environmental Toxicology	Exposure	DoD-279	Neurodegenerative Changes after Exposure to Gulf War Insults
Environmental Toxicology; Symptoms and General Health	Symptoms; Exposure	DoD-170	Structural MRI and Cognitive Correlates in Pest-Control Personnel from Gulf War I
Environmental Toxicology; Symptoms and General Health	Symptoms; Exposure	DoD-198	Oxidative Stress
Symptoms and General Health	Symptoms	DoD-080	Molecular Regulation of Corticosteroid Receptor Expression in Stress-Responsive Cells
Symptoms and General Health	Symptoms	DoD-091	Neurological and Circadian Substrates of PTSD-like Behaviors
Symptoms and General Health	Symptoms	DoD-092	Traumatic Experiences Persistently Enhance Cue-dependent Learning: Toward an Animal Model of Chronic Stress and Posttraumatic Stress Disorder
Symptoms and General Health	Symptoms	DoD-105	Neuroplasticity and Calcium Signaling in Stressed Rat Amygdala
Symptoms and General Health	Treatment; Diagnosis	DoD-205	The HPA Axis and Metabolic Outcomes in GW Veterans
Symptoms and General Health	Symptoms	VA-081	Stress, Pro-Inflammatory Cytokines and Coping Behavior
Symptoms and General Health	Symptoms	VA-090	Differential Gene Expression in Pathologies Associated with Neuronal Hyperexcitability: Links to Gulf War Illness
Symptoms and General Health	Symptoms	VA-090A	Neuronal Hyperexcitability and Motor Neuron Regeneration
Symptoms and General Health	Symptoms	VA-090B	Gene Expression and Proteomic Strategies in Severe Psychiatric Disorders
Symptoms and General Health	Symptoms	VA-090C	Developmental Differences in Alcohol Withdrawal Sensitivity
Symptoms and General Health	Symptoms	VA-090D	Seizures and Neuroplasticity: Physiology and Biochemistry
Symptoms and General Health	Symptoms	VA-092	Acetylcholinesterase Activity in GW Veterans
Symptoms and General Health	Symptoms	VA-095	The Role of Signal Regulatory Proteins in Astrocytomas
Symptoms and General Health	Symptoms	VA-098	Post-Transcriptional Gene Regulation of VEGF in Malignant Gliomas

Department of Veterans Affairs Gulf War Research Funding

Symptoms and General Health	Symptoms	VA-103	Hypothalamic and Basal Forebrain Regulation of Sleep and Arousal
Symptoms and General Health	Symptoms	VA-109	Effects of Stress on Memory: Brain Circuits, Mechanisms and Therapeutics
Symptoms and General Health	Treatment	VA-114	Strategies in Therapeutic Development of Neurodegenerative Diseases
Symptoms and General Health	Symptoms	VA-116	Quantitative Trait Genes Controlling Circadian and Sleep Behaviors
Symptoms and General Health	Symptoms	VA-121	Genes, Environment, and Oxidative Stress in Neurodegenerative Disorders
Symptoms and General Health	Symptoms	VA-122	Role of Mitochondrial Oxidative Stress in ALS
Symptoms and General Health	Symptoms	VA-129	Glucocorticoid Responsivity in GW Veterans
Symptoms and General Health	Diagnosis; Symptoms	DoD-214	Abnormalities in Human Brain Creatine Metabolism in Gulf War Illness Probed with MRS
Symptoms and General Health	Treatment; Symptoms	VA-100	Studies of the Blood-Brain Barrier and its Manipulation
Symptoms and General Health	Prevention; Symptoms	VA-102	Cholinergic and Monoaminergic Influences on Sleep
Symptoms and General Health	Treatment	VA-167	Neuroprotection and Myelin Repair Mechanisms in Multiple Sclerosis
Symptoms and General Health	Treatment	VA-168	Sleep Neurobiology and Circuitry
Symptoms and General Health	Treatment; Prevention	VA-169	Prevention of Hippocampal Neurodegeneration Due to Age and Apnea
Symptoms and General Health	Diagnosis; Prevention	VA-170	Epigenetic Mechanisms Relevant to the Pathogenesis of ALS
Immune Function	Treatment	DoD-202	Brain-Immune Interactions as Basis of Gulf War Illness: Consortium Development
Immune Function	Diagnosis; Symptoms	DoD-222	Brain Immune Interactions as the Basis of Gulf War Illness: Gulf War Illness Consortium (GWIC)
Immune Function; Pyridostigmine	Exposure	VA-196	Immune Basis for Hippocampal Cholinergic Deficits in Pyridostigmine-Treated Rats

Environmental Toxicology

Clinical

Research Focus	Project Focus	Project	Project Title
Brain and Nervous System Function	Interactions; Exposure; Symptoms	VA-048	Cross-Sensitization as a CNS Model for Gulf War Chemical Intolerance
Brain and Nervous System Function; Symptoms and General Health	Exposure; Symptoms	VA-005 C	Effects of Exertion and Chemical Stress on Persian Gulf Veterans
Chemical Weapons	Symptoms	DoD-060	Butyrylcholinesterase Genetic Variants in Persons with Gulf War Illness
Chemical Weapons	Exposure	DoD-146	Assessment of Toxicology Assay Methods and Chemical Exposures Among a Cohort of US Marines Deployed in the Gulf War
Pyridostigmine Bromide	Exposure; Prevention	DoD-011	Male/Female Differential Tolerances to Pyridostigmine Bromide

Department of Veterans Affairs Gulf War Research Funding

Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-124	Randomized, Controlled Trial for Combination Treatment with Pyridostigmine, DEET, and Permethrin
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure Interactions	DoD-155	Neuropsychological Functioning in GW Veterans Exposed to Pesticides and Pyridostigmine Bromide Symptoms
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	DoD-064	Individual Differences in Neurobehavioral Effects of Pyridostigmine
Symptoms and General Health	Exposure; Symptoms	VA-004 D	Evaluation of Respiratory Dysfunction Among GW Veterans
Symptoms and General Health; Brain and Nervous System Function	Exposure; Symptoms	DoD-156	The Effects of Diesel Exhaust and Stress on the Acute Phase Response and Symptoms in the Chemically Intolerant

Development

Research Focus	Project Focus	Project	Project Title
	Interactions; Exposure	DoD-034	Characterization of Emissions from Heaters Burning Leaded Diesel Fuel in Unvented Tents
	Diagnosis; Exposure	DoD-134	Identification and Development of Biological Markers of Human Exposure to the Insecticide Permethrin
	Exposure; Interactions	HHS-008	Strategy to Identify Non-Additive Response to Chemical Mixtures
Brain and Nervous System Function; Symptoms and General Health	Diagnosis; Exposure; Symptoms	VA-064 C	Development of a structured neurotoxicant assessment checklist (SNAC) for clinical use in Veteran populations
Chemical Weapons	Diagnosis	DoD-049	Diagnosis and Dosimetry of Exposure to Sulfur Mustard: Development of Standard Operating Procedures and Exploratory Research on Protein Adducts
Chemical Weapons	Exposure; Diagnosis	DoD-138	Improving Blood Monitoring of Enzymes as Biomarkers of Risk from Anticholinergic Pesticides and Chemical Warfare Agents
Chemical Weapons	Diagnosis; Exposure	DoD-050	Toxicokinetics of 0-Ethyl S-(2-Diisopropylaminoethyl) Methylphosphonothioate [(+)-VX] in Rats, Hairless Guinea Pigs and Marmosets - Identification of Metabolic Pathways
Chemical Weapons	Diagnosis; Exposure	DoD-137	Low Level Exposure to Sulfur Mustard: Development of an SOP for Analysis of Albumin Adducts and of a System for Non-Invasive Diagnosis on Skin
Chemical Weapons	Diagnosis; Exposure	DoD-167	Mass Spectrometry to Identify New Biomarkers of Nerve Agent Exposure
Symptoms and General Health	Diagnosis; Exposure	DoD-018	Kuwait Oil Fires Troop Exposure Assessment Model (TEAM)
Symptoms and General Health	Diagnosis; Exposure	DoD-019	Persian Gulf Veterans Health Tracking System
Symptoms and General Health	Diagnosis; Exposure	DoD-100	Antibodies to Squalene
Symptoms and General Health	Diagnosis; Exposure; Symptoms	DoD-016	Kuwait Oil Fire Health Risk Assessment
Symptoms and General Health	Diagnosis	DoD-221	Role of microRNAs in the Pathobiology of Gulf War Illness:

Department of Veterans Affairs Gulf War Research Funding

Identification of Potential Novel Therapeutic Targets

Epidemiology

Research Focus	Project Focus	Project	Project Title
Chemical Weapons	Exposure; Symptoms	DoD-116 A	Follow-Up Investigation of Troops Exposed to Nerve Agents at Aberdeen Proving Ground (Pilot Study) (See also VA-63A; formerly VA/DoD-2DA)
Chemical Weapons	Exposure; Symptoms	VA-063 A	Follow-Up Investigation of troops exposed to nerve agents at Aberdeen Proving Ground (Pilot Study) (See also DoD-116A; formerly VA/DoD-2VA/2DA)
Chemical Weapons; Symptoms and General Health	Exposure; Symptoms	DoD-069	Five Year Follow-Up of Army Personnel Exposed to Chemical Warfare Agents
Chemical Weapons; Symptoms and General Health	Exposure; Symptoms	DoD-093	Troops Exposed to Nerve Agents at Aberdeen Proving Ground: Follow-Up
Pyridostigmine Bromide	Exposure	DoD-017	Retrospective Studies Involving Military Use of Pyridostigmine as a Pretreatment for Nerve Agent
Pyridostigmine Bromide	Prevention; Exposure	DoD-021	Study of Variability in Pyridostigmine Inhibition of Blood Cholinesterases in Healthy Adults and Individuals with Symptoms Following Participation in Operation Desert Storm
Symptoms and General Health	Symptoms	DoD-013	Effects of Persian Gulf War Service on Military Working Dogs
Symptoms and General Health	Exposure; Symptoms	DoD-094	Combined Analysis of the VA and DoD Gulf War Clinical Registries: A Study of Clinical Findings from Systematic Medical Examinations of 100,000 U.S. GW Veterans
Symptoms and General Health	Exposure; Symptoms	DoD-099	DoD-wide Medical Surveillance for Potential Long-Term Adverse Events associated with Anthrax Immunization in Active Duty Service Members, Proposal 1: Hospitalizations
Symptoms and General Health	Exposure; Symptoms	VA-003	Use of Roster of Veterans Who Served in Persian Gulf Area
Symptoms and General Health	Exposure; Symptoms	VA-006	Core Program: Portland Environmental Hazards Research Center: Environment, Veterans Health and the Gulf War Syndrome. Core Project for Clinical and Epidemiology Research

Mechanistic

Research Focus	Project Focus	Project	Project Title
	Exposure	DoD-248	Preclinical Treatment of an Organophosphate Model of Gulf War Illness
	Exposure	DoD-269	The Role of Desert-Dust Metals in the Pathobiology of Gulf War Illness
	Exposure	DoD-270	Examination of Plasma PON1 Paraoxonase Activity and Genotype in Gulf War Veterans
	Exposure; Interactions	DoD-103	Human Metabolism and Interactions of Deployment-related Chemicals
	Exposure; Interactions	VA-145	Proteomic Analysis of Cellular Response to Biological Warfare Agents

Department of Veterans Affairs Gulf War Research Funding

	Exposure; Prevention	HHS-003	Biomarkers of Susceptibility and Polycyclic Aromatic Hydrocarbon (PAH) Exposure in Urine and blood Cell DNA from U.S. Army Soldiers Exposed to Kuwaiti Oil Well Fires
	Exposure; Prevention	VA-004 E	The Aromatic Hydrocarbon Receptor (AhR) as a Biomarker of Susceptibility
	Exposure; Prevention	VA-171	Nanoparticle Coupled Antioxidants for Respiratory Illness in Veterans
	Exposure; Symptoms	DoD-223	Persistent Neural Membrane Protein Misregulation Following Neurotoxicant Exposure
Brain and Nervous System Function	Exposure	DoD-175	Novel Pharmacological Approaches for Treatment of Neurotoxicity Induced by Chronic Exposure to Depleted Uranium
Brain and Nervous System Function	Interactions; Exposure; Symptoms	DoD-178	Analysis of Paraoxonase Status among US Navy GW Veterans with Increased Postwar Symptoms, Psychological Morbidity and Medical Conditions
Brain and Nervous System Function	Exposure; Interactions	VA-146	Direct Delivery of Neurotoxins to the Brain by an Intranasal Route
Brain and Nervous System Function	Exposure; Prevention	DoD-159	Neurotoxicity from Chronic Exposure to Depleted Uranium
Brain and Nervous System Function	Exposure; Symptoms	VA-144	Testing the Role of Permethrin on the Progression of ALS
Brain and Nervous System Function	Exposure; Symptoms	VA-149	Behavior of Neural Stem Cells in a Rat Model of GWS
Brain and Nervous System Function	Exposures; Symptoms	DoD-297	Quantitative Acute and Chronic Assessments of Gulf War Chemical Toxicity in Rats Using Neuroelectrophysiological Measurements and PBPK Models
Brain and Nervous System Function; Chemical Weapons	Exposure; Symptoms	DoD-022	Chronic Organophosphorus Exposure and Cognition
Brain and Nervous System Function; Immune Function	Exposure; Interactions; Symptoms	DoD-037	Neurobehavioral and Immunological Toxicity of Pyridostigmine, Permethrin, and DEET in Male and Female Rats
Brain and Nervous System Function;	Exposure	DoD-126	Blood-Brain Barrier Transport of Uranium
Brain and Nervous System Function;	Exposure; Symptoms	DoD-128	Multifactorial Assessment of Depleted Uranium Neurotoxicity
Brain and Nervous System Function;	Exposure; Symptoms	DoD-129	Inhalation of Uranium Oxide Aerosol: CNS Deposition, Neurotoxicity, and Role in Gulf War Illness
Brain and Nervous System Function; Pyridostigmine Bromide	Exposure; Interactions	DoD-201	Synergistic Actions of Pyridostigmine Bromide and Insecticides on Muscle and Vascular Nociceptors
Brain and Nervous System Function; Pyridostigmine Bromide	Exposure; Symptoms	VA-143	The Role of Protein Oxidation in the Progression of ALS
Brain and Nervous System Function; Symptoms and General Health	Exposure; Symptoms	DoD-007 A	Health Risk Assessment of Embedded Depleted Uranium: Behavior, Physiology, Histology, and Biokinetic Modeling
Brain and Nervous System Function	Exposure; Interactions	DoD-225	The Role of Protein Radicals in Chronic Neuroimmune Dysfunction and Neuropathology in Response to a Multiple-Hit Model of Gulf War Exposures
Chemical Weapons	Exposure; Diagnosis	DoD-136	A Mechanism-Based, Molecular Fingerprint Strategy for Detecting Biomarkers of Organophosphate Exposure

Department of Veterans Affairs Gulf War Research Funding

Chemical Weapons; Brain and Nervous System Function	Exposure	VA-006 D	DNA Damage from Chemical Agents and Its Repair (Project IV)
Chemical Weapons; Brain and Nervous System Function	Exposure; Diagnosis	DoD-135	Biochemical Markers for Exposure to Low Doses of Organophosphorus Exposure
Chemical Weapons; Brain and Nervous System Function	Prevention; Exposure	DoD-051	Transgenic Engineering of Cholinesterases: Tools for Exploring Cholinergic Responses
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-054	Assessment of Subchronic Neurobehavioral and Neuropathologic Effects in Rats Following Low-Level Sarin Exposure
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-055	Low-Level Exposure to GB Vapor in Air: Diagnosis/Dosimetry, Lowest Observable Effect Levels, Performance-Incapacitation, and Possible Delayed Effects
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-056	Low-Level Sarin Neurotoxicity and Its Modulation by Pyridostigmine
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-061	Neurophysiologic and Neuropathologic Effects in Monkeys of Low Level Exposures to Sarin, Pyridostigmine, Pesticides, and Botulinum Toxoid
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-062	Sarin and Pyridostigmine Interaction under Physical Stress: Neurotoxic Effects in Mice
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-072	Long-term Effects of Subchronic Exposure to Sarin, Alone and with Stress or Other Chemicals
Chemical Weapons; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-113	Interactions of Subsymptomatic Doses of Sarin with Pyridostigmine: Neurochemical, Behavioral, and Physiological Effects
Chemical Weapons; Brain and Nervous System Function	Exposure; Symptoms	DoD-053	Long-Term Effects of Subclinical Exposures to Sarin
Chemical Weapons; Brain and Nervous System Function	Exposure; Symptoms	DoD-152	Characterization of Intracellular Signaling Pathways Activated by Nerve Agents
Immune Function	Exposure; Interactions	HHS-007	Immunotoxicity of Dermal Permethrin and Cis-Urocanic Acid
Immune Function	Exposure; Symptoms	DoD-163	Neuroimmune Effects of Inhaling Low Dose Sarin
Immune Function and Infectious Diseases	Exposure; Symptoms	DoD-191	Neuroimmune Interactions, Low-Dose Sarin Inhalation, and Gulf War Syndrome
Immune Function	Exposure	DoD-123	Immunotoxicity of Depleted Uranium and Heavy Metal Tungsten Alloys
Immune Function Pyridostigmine Bromide	Exposure; Interactions	DoD-077	Percutaneous Absorption of Chemical Mixtures Relevant to the Gulf War
Immune Function Symptoms and General Health	Exposure; Symptoms	DoD-130	Carcinogenicity and Immunotoxicity of Embedded Depleted Uranium and Heavy-Metal Tungsten Alloys in Rodents
Pyridostigmine Bromide	Prevention; Exposure	DoD-033	Effects of Pyridostigmine in Flinders Line Rats Differing in Cholinergic Sensitivity
Pyridostigmine Bromide	Exposure; Interactions	DoD-010	Pyridostigmine Synergistic Toxicity Study
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions	DoD-002	Physiological and Neurobehavioral Effects in Rodents from Exposure to Pyridostigmine, Fuels, and DEET
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions	DoD-075	Toxic Interactions of Prophylactic Drugs and Pesticides

Department of Veterans Affairs Gulf War Research Funding

Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions	DoD-107	Stress, Organophosphates and Blood Brain Barrier Integrity
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-078	Experimental Models of Gulf War Syndrome
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-079	Time Course of Stress-induced Impairment of Blood Brain Barrier
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	DoD-139	Assessment of the Role of Stress-Activated Kinase in the Pathogenesis of Gulf War Illnesses
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	VA-006 C	Neurotoxicity of Environmental Pollutants and Warfare Agents (Project III)
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Interactions; Symptoms	VA-080	Neurochemical and Neurobehavioral Impact of Pyridostigmine Bromide Treatment and Stress
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	DoD-059	Pyridostigmine-induced Neurodegeneration: Role of Neuronal Apoptosis
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	VA-049	Sensitivity to Pyridostigmine Bromide: Persistent Neural Dysfunction
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	VA-106	Interoceptive Stressor Conditioning: A Model for Gulf War Illness
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	VA-123	Interactions Between Maternal Care, Stress and Pyridostigmine Bromide
Pyridostigmine Bromide; Brain and Nervous System Function	Exposure; Symptoms	VA-124	Early Life Determinants of Vulnerability to Pyridostigmine Bromide
Pyridostigmine Bromide; Symptoms and General Health	Exposure; Interactions; Symptoms	VA-005 D	Effects of Genetics and Stress on Responses to Environmental Toxins
Reproductive Health;	Exposure; Symptoms	DoD-121	Evaluation of the Health Risks of Embedded Depleted Uranium Shrapnel During Pregnancy and Offspring Development
Symptoms and General Health	Exposure	VA-065	San Antonio Environmental Hazards Research Center
Symptoms and General Health	Exposure	VA-065 A	Does a variant of the human SOD2 gene increase sensitivity to hazards?
Symptoms and General Health	Exposure	VA-065 B	The contribution of FEN-1 to genetic integrity subsequent to oxidative stress
Symptoms and General Health	Exposure	VA-065 C	The importance of hydrogen peroxide detoxification in cellular protection
Symptoms and General Health	Exposure	VA-065 D	Do defective Gpx1 and ALDH2 genes increase sensitivity to environmental hazards?
Symptoms and General Health	Symptoms	VA-155	Host Defense Mechanisms in Polyaromatic Hydrocarbon Carcinogenesis
Symptoms and General Health	Symptoms	DoD-296	Susceptibility of Cathepsin A to Organophosphate Pesticides and Nerve Agents
Symptoms and General Health	Exposure; Symptoms	DoD-160	Characterization of the Reproductive Toxicity of Depleted Uranium
Symptoms and General Health	Exposure; Symptoms	DoD-192	Exhaled Gas Frequency Comb Spectroscopy Distinguishing Biomarkers in Gulf War Illness Syndrome

Department of Veterans Affairs Gulf War Research Funding

Symptoms and General Health;	Exposure	DoD-007 B	Carcinogenicity of Depleted Uranium Fragments
Symptoms and General Health;	Exposure; Symptoms	DoD-122	Carcinogenic Potential of Depleted Uranium and Tungsten Alloys
Symptoms and General Health;	Exposure; Symptoms	DoD-127	Depleted Uranium Fragment Carcinogenicity: Extrapolation of Findings in Rodents to Man

Immune Function and Infectious Diseases

Clinical

Research Focus	Project Focus	Project	Project Title
	Diagnosis	DoD-047	Study of Mycoplasmal Infections in GW Veterans
	Symptoms	DoD-048	Assessment of Genomic Instability via Chromosome 7 Inversion Frequency in a Gulf-War Syndrome Cohort vs. Selected Control Groups
	Diagnosis	VA-147	The Diagnosis and Pathogenesis of Occult Leishmaniasis
	Diagnosis; Treatment	VA-006 E	Clinical and Epidemiology Leishmania Research
Brain and Nervous System Function	Symptoms	DoD-088	Clinical Relevance of Novel Immunological Markers in PTSD
Brain and Nervous System Function	Symptoms	VA-017	Immunological Evaluation of Persian Gulf Veterans
Environmental Toxicology	Exposure; Interactions; Symptoms	DoD-106	The Role of Th1/Th2 cytokine balance in Gulf War-related illness
Symptoms and General Health	Treatment; Diagnosis	DoD-067	Antibacterial Treatment Method Based Upon the Excretion of Dead and Decaying Spherical Bacteria
Symptoms and General Health	Symptoms; Exposure	VA-006 B	Clinical and Neuroendocrine Aspects of Fibromyalgia (Project II)
Symptoms and General Health	Exposure; Interactions	DoD-162	Evaluation of the Effects of Multiple Immunizations Administered in a Stressful Environment on Immunologic Function
Symptoms and General Health	Exposure; Symptoms	DoD-042	The Symptomatic Persian Gulf Veterans Protocol: An Analysis of Risk Factors with an Immunologic and Neuropsychiatric Assessment
Symptoms and General Health	Treatment; Symptoms	DoD-119	Antibiotic Treatment of GW Veterans' Illnesses (ABT) (See also VA-55)
Symptoms and General Health	Treatment; Symptoms	VA-055	Antibiotic Treatment of GW Veterans' Illnesses (ABT) (See also DoD-119)
Symptoms and General Health	Symptoms	DoD-249	Gulf War Illness as a Brain Autoimmune Disorder
Symptoms and General Health	Treatment	DoD-306	Mitochondrial Dysfunction and Aberrant Immune Activation in the Pathobiology of Gulf War Illness

Development

Research Focus	Project Focus	Project	Project Title
	Diagnosis	DoD-008 A	Serologic Diagnosis of Viscerotropic Leishmaniasis (VTL)

Department of Veterans Affairs Gulf War Research Funding

	Diagnosis	DoD-008 B	Development of a Leishmania Skin Test Antigen (LSTA)
	Diagnosis	DoD-038	Diagnostic Antigens of Leishmania tropica
	Diagnosis	DoD-066	Testing for mycoplasmal infection replicability of nucleoprotein gene tracking and forensic polymerase chain reaction
	Diagnosis; Treatment	DoD-095	Development of Diagnostic tools and alternative treatment drugs for Leishmania
Symptoms and General Health	Diagnosis	DoD-097	Surveillance of B. pertussis among Military Trainees with Respiratory Disease: Development and Validation of a Highly Sensitive PCR and Beacon Probe based Method for Diagnosis of Pertussis
Symptoms and General Health	Prevention; Symptoms	VA-099	Vaccination Against Visceral Leishmaniasis with a multi-epitope vaccine

Mechanistic

Research Focus	Project Focus	Project	Project Title
	Treatment	DoD-009	Identification of the Genetic Factors Which Control Tropism in Leishmania
	Treatment	DoD-157	Novel Leishmania and Malaria Potassium Channels: Candidate Therapeutic Targets
	Prevention	VA-015	Vaccine-Mediated Immunity Against Leishmaniasis
	Prevention	VA-016	Protective Immunity in Experimental Visceral Leishmaniasis
	Symptoms	VA-127	Interactions of the Leishmania sp. with Mammalian Cells
	Symptoms	DoD-215	Identifying Immune Drivers of Gulf War Illness Using a Novel Daily Sampling Approach
	Prevention; Treatment	VA-094	The Immunology of Chronic Cutaneous Leishmaniasis
Brain and Nervous System Function	Symptoms	DoD-195	Theory-Driven Models for Correcting "Fight or Flight" Imbalance in Gulf War Illness
Environmental Toxicology	Diagnosis	DoD-242	Epigenetic Mediation of Endocrine and Immune Response in an Animal Model for Gulf War Illness
Environmental Toxicology	Exposure	DoD-151	Mechanisms and Consequences of Vaccine Effects on Th1/Th2 Balance in GW Veterans
Environmental Toxicology	Exposure; Interactions	DoD-112	Role of Respirable Saudi Arabian Sand and Pyridostigmine in the Gulf War Syndrome: An Autoimmune Adjuvant Disease?
Environmental Toxicology; Pyridostigmine Bromide	Exposure; Interactions	DoD-076	Evaluations of Immunotoxicity due to Concurrent Exposure to DEET, Pyridostigmine, and JP-8 Jet Fuel
Environmental Toxicology; Pyridostigmine Bromide	Exposure; Interactions; Symptoms	DoD-081	Immunotoxicity due to Coexposure to DEET, Pyridostigmine, and Stress
Symptoms and General Health	Symptoms	VA-111	T Cell Responses to Multiple Immunizations and Stress
Symptoms and General Health	Treatment; Symptoms	VA-105	Expression of the Major Surface Protease of Leishmania Chagasi
Symptoms and General Health	Treatment; Symptoms	DoD-250	An Integrated Genomics and Cell Biology Approach to Correlate Novel GWI Indicators of Infectious and Neuroinflammatory Mechanisms with Targeted Drug Therapy

Department of Veterans Affairs Gulf War Research Funding

Reproductive Health

Clinical

Research Focus	Project Focus	Project	Project Title
	Exposure	VA-186	Gulf War Exposures and the Molecular Mechanisms of Paternal Reproductive Risk
	Symptoms	VA-053	Spouses and Children Program
Environmental Toxicology; Chemical Weapons	Symptoms	VA-047	Retrospective Verification of Mustard Gas Exposure
Immune Function	Symptoms	DoD-044	Investigation of Seminal Plasma Hypersensitivity Reactions

Epidemiology

Research Focus	Project Focus	Project	Project Title
	Prevention	DoD-001 C	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 3: A comparative study of pregnancy outcomes among Gulf War Veterans and other active-duty personnel
	Prevention	DoD-001 D	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 4: Infertility and Miscarriage in GW Veterans
	Symptoms	DoD-001 G	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 7: Prevalence of Congenital Anomalies Among Children of Persian GW Veterans
	Prevention; Symptoms	DoD-035	Feasibility of Investigating Whether There is a Relationship Between Birth Defects and Service in the Gulf War.
	Prevention; Symptoms	HHS-004	Suspected Increase of Birth Defects and Health Problems Among Children Born to Persian GW Veterans in Mississippi

Mechanistic

Research Focus	Project Focus	Project	Project Title
Environmental Toxicology	Exposure; Symptoms	DoD-158	Preconceptional Paternal Exposure to Embedded Depleted Uranium Fragments: Transmission of Genetic Damage to Offspring

Symptoms and General Health

Clinical

Research Focus	Project Focus	Project	Project Title
	Symptoms	DoD-001 A	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; A Study of Symptoms Among 1500 Seabees

Department of Veterans Affairs Gulf War Research Funding

Diagnosis	DoD-109	Disordered Responses to Orthostatic Stress in the Pathogenesis of Gulf War Syndrome Symptoms
Symptoms	VA-018	Chronic Gastrointestinal Illness in Persian Gulf Veterans
Symptoms	VA-040	Musculoskeletal Symptoms in Gulf War Syndrome
Treatment; Diagnosis; Symptoms	DoD-172	CNDP1 Polymorphisms and Carnosine Therapy in GWI
Treatment; Symptoms	DoD-171	Q10 for GW Veterans
Treatment; Symptoms	DoD-181	Effectiveness of Acupuncture in the Treatment of Gulf War Illness
Treatment; Symptoms	DoD-186	Small Intestinal Microbial Community in Gulf War Illness
Treatment	DoD-204	Nasal Irrigation for Chronic Rhinosinusitis and Fatigue in Patients with Gulf War Syndrome
Treatment	VA-189	CAM in Veterans with Gulf War Illnesses
Treatment	DoD-229	Bench to Bedside: Understanding Symptom Response to Acupuncture Treatment and Designing a Successful Acupuncture Treatment Program
Treatment	DoD-234	A Prospective Open-Label Clinical Trial of Methylphenidate plus a GWI-Specific Nutrient Formula in Patients with Gulf War Illness and Concentration Disturbances
Treatment	DoD-235	Treating Gulf War Illness with Novel Anti-Inflammatories: A Screening of Botanical Microglia Modulators
Treatment	DoD-236	Development of Dietary Polyphenol Preparations for Treating Veterans with Gulf War Illness
Treatment	DoD-241	Gulf War Illness Inflammation Reduction Trial
Treatment; Symptoms	DoD-206	Investigating Clinical Benefits of a Novel Sleep-Focused, Mind-Body Program on Gulf War Illness Symptoms: An Exploratory Randomized Controlled Trial
Treatment; Symptoms	DoD-216	Intranasal Insulin: A Novel Treatment for Gulf War Multisymptom Illness
Treatment; Symptoms	VA-056	Birmingham's GW Veterans' Illness Demonstration Clinic
Treatment; Symptoms	VA-058	Implementation and Evaluation of GW Veterans' Demonstration Project
Diagnosis; Symptoms	VA-104	Characterization of Pain Processing Mechanisms in the Irritable Bowel Syndrome
Treatment; Symptoms	VA-137	Diarrhea-Predominant Irritable Bowel Syndrome in Persian Gulf Veterans
Treatment; Symptoms	VA-153	Bacterial Overgrowth Associated with Chronic Multi-Symptom Illness Complex
Treatment; Symptoms	VA-158	Testing the Feasibility of MC CBT for Veterans with IBS
Treatment	VA-165	A Pilot Study of CPAP Adherence Promotion by Peer Buddies with Sleep Apnea
Diagnosis	DoD-251	Muscle Mitochondrial Assessments in Gulf War Illness
Diagnosis	DoD-252	START and STOPP in GWI

Department of Veterans Affairs Gulf War Research Funding

Diagnosis	DoD-264	An Objective Blood Test from Stimulated Gene Expression for Classification and Outcome Assessment in Clinical Trials of Gulf War Illness
Diagnosis	DoD-265	An Objective Blood Test from Stimulated Gene Expression for Classification and Outcome Assessment in Clinical Trials of Gulf War Illness
Diagnosis	DoD-267	Diagnosis of Late-Stage, Early-Onset, Small-Fiber Polyneuropathy
Diagnosis	DoD-268	Diagnosis of Late-Stage, Early-Onset, Small-Fiber Polyneuropathy
Diagnosis	DoD-295	GWI: Molecular Analysis of Disease Endophenotypes and Response to Acupuncture Treatment
Diagnosis	VA-197	Genomics of Gulf War Illness in Veterans
Diagnosis	DoD-304	Human Leukocyte Antigen in Gulf War Veterans: Association with Symptoms and Inflammatory Markers
Diagnosis	DoD-305	Glutamate Receptor and Kynurenine Pathway Functioning in the Pathobiology of Gulf War Illness
Diagnosis	DoD-308	Genetic Basis of Individual Differences in Susceptibility to Gulf War Illness
Diagnosis	DoD-309	Gene Expression to Advance Understanding, Aid Diagnosis, and Define Treatment Targets in Gulf War Illness
Diagnosis	DoD-312	Identification of Epigenetic Signatures as Biomarkers of Gulf War Illness
Diagnosis	DoD-313	Measurement of Biomarkers in Samples Collected in a Coenzyme Q10 Treatment Trial in Gulf War Illness and Control Subjects
Diagnosis	DoD-314	Measurement of Biomarkers in Samples Collected in a Coenzyme Q10 Treatment Trial in Gulf War Illness and Control Subjects
Diagnosis	DoD-322	Tau Pathology as a Contributor to Gulf War Illness and a Basis for Potential Therapy
Diagnosis	DoD-323	Identifying Novel Immune and Radiographic CT Imaging Signatures of Chronic Bronchiolitis
Diagnosis	DoD-324	Next-Generation Biomarkers of Gulf War Illness
Treatment	DoD-253	D-Cycloserine: A Novel Treatment for Gulf War Illness
Treatment	DoD-254	Effect of Diet on Gulf War Illness: A Pilot Study
Treatment	DoD-260	Extending Benefits of Q10: Mitochondrial Cocktail for Gulf War Illness
Treatment	DoD-261	Testing the Model: A Phase I/II Randomized Double Blind Placebo Control Trial of Targeted Therapeutics: Liposomal Glutathione and Curcumin
Treatment	DoD-262	Testing the Model: A Phase I/II Randomized Double Blind Placebo Control Trial of Targeted Therapeutics: Liposomal Glutathione and Curcumin
Treatment	DoD-263	Vagus Nerve Stimulation: A Noninvasive Treatment to Improve the Health of Gulf Veterans with Gulf War Illness
Treatment	DoD-266	A Randomized, Double-Blind, Placebo-Controlled Crossover Study of the Anti-Inflammatory Compound Anatabine to Treat Pain in GWI

Department of Veterans Affairs Gulf War Research Funding

	Treatment	VA-195	RCT of Duloxetine and Pregabalin for the Treatment of Gulf War Illness in Veterans
	Treatment	VA-198	Healthcare Utilization Patterns and Associated Costs for Gulf War I Era Veterans
	Treatment	VA-201	WRIISC as a Model of Care for Chronic Multisymptom Illness
	Treatment	VA-203	Novel Interventions for Gulf War Veterans' Illnesses
	Treatment	VA-204	Pilot Test of Telephone-Delivered Cognitive Behavioral Therapy for Insomnia for Veterans with Gulf War Illness
	Treatment	VA-205	A Randomized, Double-Blind, Placebo-Controlled Phase III Trial of Coenzyme Q10 in Gulf War Illness
	Treatment	DoD-301	Growth Hormone-Releasing Hormone (GHRH) Antagonist: Evaluation of Beneficial Effects for Gulf War Illness
	Treatment	DoD-303	Direct Current Stimulation for Pain Treatment of Gulf War Illness
	Treatment	DoD-316	Treatment Strategies in a Mouse Model of Chronic Gulf War Illness
	Treatment	DoD-318	Glutamate Neuroexcitotoxicity in GWI
Brain and Nervous System Function	Diagnosis	DoD-315	Persistent Hormonal Changes in Veterans with Gulf War Illness
Brain and Nervous System Function	Symptoms	DoD-036	Fatigue in Persian Gulf Syndrome-Physiologic Mechanisms
Brain and Nervous System Function	Symptoms	DoD-041	Evaluation of Muscle Function in Persian Gulf Veterans
Brain and Nervous System Function	Symptoms	DoD-058	Illness Among Persian GW Veterans: Case Validation Studies
Brain and Nervous System Function	Symptoms	DoD-085	CNS Cytokines and CRH in GW Veterans with Multiple Unexplained Symptoms
Brain and Nervous System Function	Symptoms	DoD-101	Mechanisms in Chronic Multisymptom Illnesses
Brain and Nervous System Function	Symptoms	VA-069	Cardiovascular Hyporeactivity and Fatiguing Illness in Gulf War Veterans
Brain and Nervous System Function	Symptoms	VA-071	Central Nervous System Modulation of Visceral Pain in the Persian Gulf Syndrome
Brain and Nervous System Function	Symptoms	VA-073	Pain Sensitivity in GW Veterans with Medically Unexplained Musculoskeletal Pain
Brain and Nervous System Function	Symptoms	VA-082	Pituitary Adrenal Function in People with Fatiguing Illness
Brain and Nervous System Function	Symptoms	VA-096	Functional Imaging of Pain in Veterans with Unexplained Muscle Pain
Brain and Nervous System Function	Symptoms	VA-107	Evaluation of Stress Response Systems in GW Veterans with CMI
Brain and Nervous System Function	Symptoms	VA-134	Autonomic Functions of GW Veterans with Unexplained Illnesses
Brain and Nervous System Function	Symptoms	VA-135	Motor Neuron Function of GW Veterans with Excessive Fatigue
Brain and Nervous System Function	Symptoms	VA-154	Imaging Pain Modulation in GW Veterans with Chronic Muscle Pain
Brain and Nervous System Function	Symptoms	DoD-299	Sigma-1 Receptor Agonists as a Novel Therapeutic for Brain Mitochondrial Dysfunction in Gulf War Syndrome
Brain and Nervous System Function	Symptoms; Diagnosis	DoD-180	Exercise-Induced Cerebrospinal Fluid Proteomic Biomarkers of Fatigue
Brain and Nervous System Function	Diagnosis; Symptoms	DoD-111	Autonomic Dysfunction in GW Veterans

Department of Veterans Affairs Gulf War Research Funding

Brain and Nervous System Function	Treatment; Symptoms	DoD-115	A Randomized, Multi-Center, Controlled Trial of Multi- Modal Therapy in Veterans with Gulf War Illnesses (EBT) (See also VA-62; formerly VA/DoD 1D)
Brain and Nervous System Function	Treatment; Symptoms	DoD-173	A Randomized, Double-Blind, Placebo-Controlled, Crossover Trial of Mifepristone in GW Veterans with Chronic Multisymptom Illness
Brain and Nervous System Function	Treatment; Symptoms	DoD-182	Trial of Naltrexone and Dextromethorphan for GW Veterans' Illness
Brain and Nervous System Function	Treatment; Symptoms	VA-057	Case Management and Residential Rehabilitation for Persian Gulf War Veterans
Brain and Nervous System Function	Treatment; Symptoms	VA-059	Demonstration Treatment Program for GW Veterans With Unexplained Physical Symptoms (13)
Brain and Nervous System Function	Treatment; Symptoms	VA-062	A Randomized, Multi-Center, Controlled Trial of Multi- Modal Therapy in Veterans with Gulf War Illness (EBT) (See also DoD-115; formerly VA/DoD 1V)
Brain and Nervous System Function	Treatment; Symptoms	VA-108	Telemedicine Treatment for Veterans with Gulf War Illness
Brain and Nervous System Function	Treatment	VA-166	A Randomized Controlled Trial of a Mindfulness-Based Intervention for Gulf War Syndrome
Brain and Nervous System Function	Treatment	VA-173	Impact of Exercise Training on Pain and Brain Function in Gulf War Veterans
Brain and Nervous System Function;	Diagnosis; Symptoms	DoD-031	Dysregulation of the Stress Response in the Persian Gulf Syndrome
Brain and Nervous System Function	Treatment; Symptoms	DoD-199	Gulf War Illness: Evaluation of an Innovative Detoxification Program
Brain and Nervous System Function	Treatment	VA-178	rTMS for the Treatment of Chronic Pain in GW1 Veterans
Brain and Nervous System Function	Treatment	DoD-256	Vagus Nerve Stimulation as a Treatment Strategy for Gulf War Illness
Brain and Nervous System Function	Treatment	DoD-284	Alleviating Headache and Pain in GWI with Neuronavigation-Guided rTMS
Brain and Nervous System Function	Treatment	DoD-300	A Pilot RCT on the Effect of Resveratrol on Mood, Memory Deficits, Hippocampal Inflammation, and Neurogenesis in Veterans with Gulf War Illness (GWI)
Brain and Nervous System Function	Treatment	DoD-310	Melatonin for Reversing Brain Dysfunction in Gulf War Illness
Environmental Toxicology	Treatment	DoD-177	Randomized Trial of an Environmental Medicine Approach to Gulf War Veterans' Illness
Environmental Toxicology	Treatment	DoD-307	Identification of Causes and Treatment for Chronic Depression in a Rodent Model of Gulf War Illness
Environmental Toxicology	Treatment	DoD-321	Gender and Gulf War Illness
Immune Function	Symptoms	DoD-187	The Use of Comprehensive Molecular Profiling with Network and Control Theory to Better Understand GWI and Model Therapeutic Strategies
Immune Function	Symptoms	DoD-188	Epithelial Cell TRPV1-Mediated Airway Sensitivity as a Mechanism for Respiratory Symptoms Associated with Gulf War Illness
Immune Function	Diagnosis	DoD-319	The Use of B-Cell Depletion Therapy (BCDT) in Gulf War Illness: A Phase 1/2 Study
Other Topics	Treatment; Symptoms	DoD-196	Probiotic (<i>Bifidobacterium Infantis</i>) for Gulf War Illness

Development

Research Focus	Project Focus	Project	Project Title
----------------	---------------	---------	---------------

Department of Veterans Affairs Gulf War Research Funding

	Diagnosis	DoD-210	Assessment of Diverse Biological Indicators in Gulf War Illness: Are They Replicable? Are They Related?
	Diagnosis	VA-182	Consensus Case Definition for Chronic Multisymptom Illness in 1990-1991 Gulf War Veterans
	Diagnosis	DoD-294	Improving Diagnostics and Treatments for GWI Females by Accounting for the Effects of PTSD
	Symptoms	VA-200	A Translational Medicine Approach to Gulf War Illness: From Cells to Therapy
	Treatment; Symptoms	DoD-169	Development of Novel Therapy for Chronic Neuropathic Pain
	Treatment; Symptoms	DoD-257	Designing a Successful Acupuncture Treatment Program for Gulf War Illness
	Treatment	DoD-258	High-Fidelity Design of Multimodal Restorative Interventions in Gulf War Illness
	Treatment	DoD-259	High-Fidelity Design of Multimodal Restorative Interventions in Gulf War Illness
Brain and Nervous System Function	Diagnosis; Symptoms	DoD-168	Developing Biomarkers for Fibromyalgia
Brain and Nervous System Function	Diagnosis; Treatment	DoD-209	Proteomic Immune Profiling for the Therapeutic Modulation of Cognitive Impairment in a Novel GWI Mouse Model
Brain and Nervous System Function	Treatment	DoD-283	Therapeutic Inhibition of microRNA-124 for the Treatment of Gulf War Illness
Immune Function	Symptoms; Diagnosis	DoD-183	Biomarkers of GW Veterans' Illnesses: Tissue Factor, Chronic Coagulopathy, and Inflammation

Epidemiology

Research Focus	Project Focus	Project	Project Title
	Symptoms	DoD-001 B	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 2: A Comparative Study of Hospitalizations among Active-Duty Personnel Who Participated in the Gulf War and Similar Personnel Who Did Not.
	Symptoms	DoD-001 E	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 5: Seabee Health Study
	Symptoms	DoD-001 F	Epidemiologic Studies of Morbidity Among GW Veterans: A Search for Etiologic Agents and Risk Factors; Study 6: A Comparison of Nonfederal Hospitalization Experience Among Veterans in California who have separated from active service: GWV vs. NDV
	Symptoms	DoD-004	The General Well-Being of Gulf War Era Service Personnel from the States of Pennsylvania and Hawaii: A Survey
	Symptoms	DoD-014	Risk Factors Among US Army Soldiers for Enrolling on the Department of Veterans Affairs Gulf War Registry

Department of Veterans Affairs Gulf War Research Funding

Symptoms	DoD-046	Exploratory Data Analysis with the CCEP Database
Symptoms	DoD-070	War Syndromes from 1900 to the Present: Symptom Patterns and Long-term Health Outcomes
Symptoms	DoD-071	A Comparison of Post Deployment Hospitalization between Vietnam and GW Veterans
Symptoms	DoD-098	Investigation of a Baseline Medical Database to Evaluate the Health of Military Forces and Veterans
Prevention	DoD-110	Predictors of Career and Family Dysfunction in Young Adults Enlisting in the United States Navy
Symptoms	DoD-116 B	Patterns of Pre-Persian Gulf War Illness and Health Care Seeking, Pilot Study (See also VA-63B; formerly VA/DoD-2DB)
Symptoms	DoD-120	Assessing the Potential Health Impact of the Gulf War on Saudi Arabia National Guard Members and Their Dependents
Diagnosis	DoD-140	US DOD Surveillance for Neoplasms in Infancy
Symptoms	DoD-148	Predicting Operational Readiness for Deployed Army National Guard and Army Reserve Soldiers and Families
Symptoms	DoD-150	Validation Study of Gulf War Deployment Files
Symptoms	DoD-203	Redefining Gulf War Illness Using Longitudinal Health Data: The Devens Cohort
Symptoms	HHS-001	Health Assessment of Persian GW Veterans from Iowa
Prevention	HHS-009	Improving Health Risk Communications to Prevent Unexplained Illnesses Related to Military Deployments
Symptoms	HHS-011	Deployment to the Gulf War and the Subsequent Development of Cancer
Symptoms	VA-002	National Health Survey of Persian Gulf Veterans
Symptoms	VA-002 A	VA National Survey of Persian Gulf Veterans - Phase I
Symptoms	VA-002 B	VA National Survey of Persian Gulf Veterans - Phase II
Symptoms	VA-004 C	Gulf War and Vietnam Veterans Cancer Incidence Surveillance
Symptoms	VA-046	Diarrhea in Persian Gulf Veterans: An Irritable Bowel-Like Disorder
Symptoms	VA-063 B	Patterns of Pre-Persian Gulf War Illness and Health Care Seeking Pilot Study (See also DoD-116B; previously VA/DoD-2VB)
Symptoms	VA-070	A Clinical Evaluation of the Health Status of Persian Gulf War Veterans in VISN 8
Symptoms	VA-117	Estimates of Cancer Prevalence in Gulf Veterans Using State Registries
Symptoms	DoD-218	Establishing a 1991 Veterans Research Network To Improve Characterization of Gulf War Illness and Provide a National Resource for Veterans and Investigators
Diagnosis	DoD-286	Persistently Elevated Somatic Mutation as a Biomarker for Clinically Relevant Exposures in GWI

Department of Veterans Affairs Gulf War Research Funding

	Symptoms; Exposure	DoD-073	Post-deployment Morbid Stress, Behavior and Health: Developing a Model for Predicting Morbidity, Mortality, and other Adverse Outcomes
	Diagnosis; Exposure	DoD-208	Genome-Wide Association Study of a Validated Case Definition of Gulf War Illness in a Population-Representative Sample
	Prevention; Symptoms	DoD-108	Health Status of Current National Guard Members
	Prevention; Symptoms	DoD-117	Patterns of Pre-Persian Gulf War Illness and Health Care Seeking
	Prevention; Treatment	HHS-010	Health-e Voice: Optimized Implementation of a Stepped Clinical Risk Communications Guideline
	Symptoms	DoD-015	Comparative Mortality Among US Military Personnel Worldwide During Operations Desert Shield and Desert Storm
	Prevention	DoD-102	Case-Control Study of Fatal Motor Vehicle Crashes Among Gulf War and Non-Deployed Veterans
	Symptoms	VA-001	Mortality Follow-up Study of Persian Gulf Veterans
	Symptoms	VA-148	Profile of GW Veterans Who Applied for Undiagnosed Illness Compensation
	Symptoms	DoD-217	Efficacy of Treatments Tried: A Survey of GW Veterans
	Symptoms	VA-194	National Health Survey of Veterans and Family Members: Secondary Analysis of CSP #458 Data
Brain and Nervous System Function	Symptoms	DoD-039	A Controlled Epidemiological and Clinical Study into the Effect of Gulf War Service on Servicemen and Women of the United Kingdom Armed Forces
Brain and Nervous System Function	Symptoms	DoD-141	Physical, Mental, Social, and Family Health Outcomes of Gulf War Veterans
Brain and Nervous System Function	Symptoms	DoD-142	Illnesses Among Persian GW Veterans: Case Validation Studies (Iowa / Great Britain)
Brain and Nervous System Function	Symptoms	DoD-143	Millennium Cohort Study
Brain and Nervous System Function	Symptoms	DoD-149	Longitudinal Health Study of GW Veterans
Brain and Nervous System Function	Symptoms	VA-002 C	VA National Survey of Persian Gulf Veterans - Phase III
Brain and Nervous System Function	Symptoms	VA-005 A	Health and Exposure Survey of Persian Gulf Veterans
Brain and Nervous System Function	Symptoms	VA-078	Millennium Cohort Study
Brain and Nervous System Function	Symptoms	VA-118	Post War Mortality from Neurologic Diseases in Gulf Veterans, 1991-2004
Brain and Nervous System Function	Symptoms; Exposure	VA-156	Gulf War Era Cohort and Biorepository (CSP 585)
Brain and Nervous System Function; Reproductive Health	Symptoms	DoD-045	Air Force Women's Health Surveillance Study
Environmental Toxicology	Diagnosis	DoD-302	Investigating Gene-Environment Interactions in Multiple Cohorts of 1990-1991 Gulf War Veterans
Environmental Toxicology	Symptoms	VA-156	Gulf War Era Cohort and Biorepository (CSP 585)
Environmental Toxicology	Symptoms; Exposure	DoD-074	Relationship of Stress Exposures to Health in GW Veterans

Department of Veterans Affairs Gulf War Research Funding

Environmental Toxicology; Chemical Weapons	Exposure; Symptoms	DoD-116	VA/DoD Core Funding of the Medical Follow-Up Agency (See also VA-63; formerly VA-DoD-2D/2V)
Environmental Toxicology; Chemical Weapons	Exposure; Symptoms	VA-063	VA/DoD Core funding of the Medical Follow-Up Agency (See also DoD-116; formerly VA/DoD-2V/2D)
Reproductive Health	Symptoms	DoD-030	Epidemiological Studies Persian Gulf War Illnesses, PG Women's Health Linkage Study
Reproductive Health	Symptoms	DoD-282	Gulf War Women's Health Cohort
Reproductive Health	Symptoms; Diagnosis; Prevention	DoD-096	Deployment Health Center
Reproductive Health	Symptoms; Prevention	DoD-001	Naval Health Study Program

Mechanistic

Research Focus	Project Focus	Project	Project Title
	Diagnosis	DoD-193	Genome Instability: A Common Link in Gulf War Illness Patients
	Diagnosis	DoD-220	Biomarker Discovery in GW Veterans: Development of a War Illness Diagnostic Panel
	Diagnosis	VA-185	Identification of Plasma Biomarkers of Gulf War Illness Using “omic” Technology
	Diagnosis	DoD-239	Mitochondrial and Nuclear Genetics in Gulf War Illness
	Diagnosis	DoD-255	Microtubule Abnormalities Underlying Gulf War Illness in Neurons from Human-Induced Pluripotent Cells
	Diagnosis	DoD-276	Identification of Lipid Biomarkers of Inflammation and Metabolic Disturbances in GWI
	Diagnosis	DoD-278	Metabolomics Distinguish Veterans with Gulf War Illness: Replicating and Expanding Promising Results
	Diagnosis	DoD-285	Disentangling the Effects of PTSD from GWI for Improved Diagnostics and Treatments
	Diagnosis	DoD-317	Genomic Approach to Find Female-Specific Mechanisms of GWI Pathobiology
	Diagnosis; Symptoms	VA-179	Vascular and Skeletal Muscle Function in Gulf War Veterans Illness
	Diagnosis; Symptoms	VA-180	Diagnostic Utility of mtDNA Content and Exercise Challenge in Veterans with GWI
	Diagnosis; Treatment	DoD-224	Understanding Gulf War Illness: An Integrative Modeling Approach
	Symptoms	DoD-179	Mechanisms of Mitochondrial Defects in Gulf War Syndrome
	Symptoms	VA-130	Tissue Factor and Gulf War-Associated Chronic Coagulopathies
	Symptoms	VA-131	Neuroendocrine Regulators and Proteomics in GW Veterans with CMI
	Symptoms	VA-136	Central Mechanisms Modulating Visceral Sensitivity
	Symptoms	VA-159	Somatic hypersensitivity in Veterans with IBS
	Symptoms	VA-162	Transcription factors regulating sensory gene expression and pain pathways

Department of Veterans Affairs Gulf War Research Funding

	Symptoms	VA-177	Somatic hypersensitivity in Veterans with IBS
	Symptoms	VA-199	Post Exertion Malaise in GWI – Brain Autonomic and Behavioral Interactions
	Symptoms; Treatment	VA-164	Central Mechanisms Modulating Visceral Sensitivity (renewal of VA-136)
	Symptoms; Treatment	VA-172	Understanding Pain of Gastrointestinal Origin in Women that Serve in OEF/OIF
	Treatment	VA-192	Women vs. Men with GWI: Differences in Computational Models and Therapeutic Targets
	Treatment	DoD-290	Mitochondrial Dysfunction and Gulf War Illness
	Treatment	DoD-291	Identification of Causes and Treatments for Chronic Pain in a Model of Gulf War Illness
Brain and Nervous System Function	Symptoms	VA-115	Autonomic System Changes Cause Intestinal Symptoms in Gulf War Veterans
Brain and Nervous System Function	Symptoms	VA-119	Patterns of Microarray Gene Expression in Gulf War Illness
Brain and Nervous System Function	Symptoms	DoD-194	Homeostatic and Circadian Abnormalities in Sleep and Arousal in Gulf War Syndrome
Brain and Nervous System Function	Symptoms; Treatment	DoD-213	Effectiveness of Accupressure Treatment for Pain Management and Fatigue Relief in GW Veterans
Brain and Nervous System Function	Treatment	DoD-207	Gulf War Illness Research Development Consortium (GWIC)
Brain and Nervous System Function	Treatment	DoD-289	Investigating Increased Glutamate Transporter EAAT2 Function as a Potential Therapeutic Approach for Gulf War Illness
Brain and Nervous System Function	Treatment	DoD-292	Therapeutic Intervention of Glial-Mediated Enhancement of Neuroinflammation in an Established Model of GWI
Brain and Nervous System Function	Diagnosis; Symptoms	DoD-226	Gulf War Illness: Assessment of Bioenergetics in Brain and Muscle
Brain and Nervous System Function: Pyridostigmine	Treatment	DoD-288	Pyridostigmine Bromide, the Enteric Nervous System, and Functional Gastrointestinal Disorders in Gulf War Illness
Environmental Toxicology	Exposure; Symptoms	DoD-174	Autonomic Biomarkers and Treatment for Gulf War Illness
Immune Function	Diagnosis	DoD-200	XMRV and GWI: Is There an Association?
Immune Function	Diagnosis Symptoms	DoD-211	Detection of Xenotropic Murine Leukemia Virus-Related Virus (XMRV) in Gulf War Illness: Role in Pathogenesis or Biomarker?
Immune Function	Symptoms	VA-132	Immunologic Mechanisms and Biomarkers in Gulf War Illness
Immune Function	Symptoms	VA-133	Longitudinal Study of Gene Expression and Gene Products in Veterans with Gulf War Illness
Immune Function	Treatment	DoD-293	Evaluation of Treatment Efficacy with a Potent Novel Immunomodulatory Glycan Conjugate in Gulf War Illness