



UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

PERSONNEL AND
READINESS

APR 11 2023

The Honorable Jon Tester
Chairman
Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The Department's response to the Explanatory Statement accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116-260), "Traumatic Brain Injury/Psychological Health," is enclosed.

This report covers Fiscal Year (FY) 2021 congressional appropriations for traumatic brain injury (TBI)/psychological health (PH) (\$175 million), and summarizes the 78 projects, representing 86 awards, selected for FY 2021 funding. The FY 2021 TBI/PH funded research projects are developing knowledge and materiel solutions to improve the health and well-being of Service members, veterans, military beneficiaries, and the public.

Thank you for your continued strong support for the health and well-being of our Service members, veterans, and their families. I am sending similar letters to the other congressional defense committees.

Sincerely,

A handwritten signature in black ink, appearing to read "Gilbert R. Cisneros, Jr.", written in a cursive style.

Gilbert R. Cisneros, Jr.

Enclosure:
As stated

cc:
The Honorable Susan Collins
Ranking Member



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PERSONNEL AND
READINESS

APR 11 2023

The Honorable Ken Calvert
Chairman
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The Department's response to the Explanatory Statement accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116-260), "Traumatic Brain Injury/Psychological Health," is enclosed.

This report covers Fiscal Year (FY) 2021 congressional appropriations for traumatic brain injury (TBI)/psychological health (PH) (\$175 million), and summarizes the 78 projects, representing 86 awards, selected for FY 2021 funding. The FY 2021 TBI/PH funded research projects are developing knowledge and materiel solutions to improve the health and well-being of Service members, veterans, military beneficiaries, and the public.

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Gilbert R. Cisneros, Jr.

Enclosure:
As stated

cc:
The Honorable Betty McCollum
Ranking Member



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PERSONNEL AND
READINESS

APR 11 2023

The Honorable Jack Reed
Chairman
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The Department's response to the Explanatory Statement accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116-260), "Traumatic Brain Injury/Psychological Health," is enclosed.

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Gilbert R. Cisneros, Jr.

Enclosure:
As stated

cc:
The Honorable Roger F. Wicker
Ranking Member



UNDER SECRETARY OF DEFENSE
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WASHINGTON, D.C. 20301-4000

PERSONNEL AND
READINESS

APR 11 2023

The Honorable Mike D. Rogers
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The Department's response to the Explanatory Statement accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116-260), "Traumatic Brain Injury/Psychological Health," is enclosed.

This report covers Fiscal Year (FY) 2021 congressional appropriations for traumatic brain injury (TBI)/psychological health (PH) (\$175 million), and summarizes the 78 projects, representing 86 awards, selected for FY 2021 funding. The FY 2021 TBI/PH funded research projects are developing knowledge and materiel solutions to improve the health and well-being of Service members, veterans, military beneficiaries, and the public.

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Gilbert R. Cisneros, Jr.

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member

Report to the Congressional Defense Committees



In Response to: Explanatory Statement Accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116–260), “Traumatic Brain Injury/Psychological Health”

April 2023

The estimated cost of this report for the Department of Defense (DoD) is approximately \$1,300.00 for Fiscal Years 2022–2023. This includes \$400.00 in expenses and \$900.00 in DoD labor.

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BACKGROUND AND PURPOSE

This final report is in response to Explanatory Statement accompanying H.R. 133, the Consolidated Appropriations Act, 2021 (Public Law 116–260), “Traumatic Brain Injury/Psychological Health,” which requests that the Assistant Secretary of Defense for Health Affairs (ASD(HA)) provide a report to Congress on expenditure and obligation data of additional funding added by Congress for traumatic brain injury (TBI) and psychological health (PH).

As requested by the Office of the ASD(HA), the Defense Health Agency manages the Defense Health Program (DHP) Research, Development, Test, and Evaluation (RDT&E) appropriation, to include the TBI/PH Congressional Special Interest (CSI) funds. The U.S. Army Medical Research and Development Command (USAMRDC) Congressionally Directed Medical Research Programs (CDMRP) provides execution management for the DHP RDT&E TBI/PH CSI funds. The Fiscal Year (FY) 2021 Traumatic Brain Injury/Psychological Health Research Program (TBIPHRP) vision is to optimize PH and reduce or eliminate the effects of TBI and traumatic stress. The program seeks to fund research to understand, prevent, and treat TBI and PH conditions that accelerates solutions to improve the health, well-being, and healthcare of Service members, veterans, military beneficiaries, and the American public.

FY 2021 TBIPHRP OBLIGATIONS AND EXPENDITURES

Table 1 summarizes the FY 2021 TBI/PH CSI obligations by category.

Table 1. FY 2021 TBIPHRP Obligations Summary

FY 2021 TBI/PH Congressional Appropriation	\$175,000,000
Less: Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Withholds	\$5,837,000
Less: USAMRDC Withholds	\$3,383,260
Less: Management Costs	\$7,271,146
Amount Available for FY 2021 Research	\$158,508,594

The FY 2021 TBIPHRP received 421 applications across 6 funding opportunity announcements and recommended funding for 78 applications, representing 86 separate awards (19 percent funding rate), totaling \$158,508,594. The remaining \$16,491,406 includes USAMRDC withholds, SBIR/STTR allocation, and CDMRP management costs. Table 2 provides a list of FY 2021 TBI/PH CSI research investments.

Table 2. FY 2021 TBIPHRP Research Investments

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Approaches for preclinical to clinical translation that expedite and advance prevention and treatment.	Idea Development Award	A Human Brain Organoid Platform to Benchmark Biomarkers for Traumatic Brain Injury Severity	University of California, San Diego	\$300,000
Understand: Approaches for preclinical to clinical translation that expedite and advance prevention and treatment.	Translational Research Award	TBI Exosomal Activity in Military Personnel: Perivascular Space and Role of Indicators of Sleep Metrics TEAM PRISM	Johns Hopkins University	\$806,712
Understand: Approaches for preclinical to clinical translation that expedite and advance prevention and treatment.	Translational Research Award	TBI Exosomal Activity in Military Personnel: Perivascular Space and Role of Indicators of Sleep Metrics TEAM-PRISM	Oregon Health & Science University	\$644,570
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Advancing Precision Psychiatry for Military Service-Related PTSD [Post-Traumatic Stress Disorder] by Enhancing Knowledge of Clinical Subtypes and Their Endophenotypes	New York University School of Medicine	\$7,286,728

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Discovering Diagnostics, Subtypes, and Natural History of Traumatic Brain Injury (TBI) vs. Non-TBI Recovery to Gain Military Advantage: The D2ISENTANGLE Focused Program Award	University of North Carolina at Chapel Hill	\$7,972,370
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Psychostimulant Effects on Cognitive Flexibility and Risk-Based Decision-Making Behavior Following Repetitive Mild Traumatic Brain Injury	Rowan University	\$651,329
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Psychostimulant Effects on Cognitive Flexibility and Risk-Based Decision-Making Behavior Following Repetitive Mild Traumatic Brain Injury	Rowan University	\$98,671
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Emotional Dyscontrol in Veterans with Extended History of Mild Traumatic Brain Injury and Upright Balance Control and Auditory Sensory Processing Contributions	University of Colorado at Denver	\$750,000

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Understanding and Optimizing Warfighter Brain Health Across Services Careers Using a Digital Health Platform	University of Southern California	\$6,997,566
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	Early Life Adversity and Microglia Priming as Underlying Risk Factors for TBI-Induced Mood Dysregulation	Ohio State University	\$299,385
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	The Role of Neuroimmune-Neuroendocrine Integration and Premature Hypothalamic Aging in TBI-Related Neurodegeneration	The Roskamp Institute	\$299,998
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	Sleep Restriction and Mild Blast TBI on PTSD-Like Behavioral Outcome	Uniformed Services University of the Health Sciences	\$295,200

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Quantifying the Relationship Between Brain Biomechanics and Warfighter-Relevant Head Exposures to Guide Future Injury Prevention Technologies	University of Virginia	\$748,422
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	Artificial Intelligence-Aided Head Computed Tomography Analysis to Predict Outcome in Civilian Firearm-Inflicted Brain Injury	The University of Chicago	\$299,920
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Bioengineered 3D [Three Dimensional] Brain Systems to Investigate Risk Factors, Mechanisms, and Treatments for Traumatic Brain Injury-Induced Alzheimer's Disease	Tufts University	\$691,213
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Mitochondrial Dysfunction in PTSD and Comorbid Conditions	University of California, San Francisco	\$750,000

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	Aryl Hydrocarbon Receptor Activation in PTSD and Comorbid Psychological Disorders	University of California, San Francisco	\$300,000
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Sex Differences in Associations of Traumatic Brain Injury and Musculoskeletal Injury Among U.S. Service Members	Naval Health Research Center	\$609,000
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Idea Development Award	Identifying Mechanisms of Stress and Sex Differences That Drive Unique Pathology in Blast TBI	Virginia Polytechnic Institute and State University	\$300,000
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	The Pathogenesis of Radio Wave-Induced Brain Injury	Wayne State University	\$750,000

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Investigator-Initiated Research Award	Quantifying the Sensitivity and Specificity of Point-of-Care Biomarkers in a Large-Animal Model of Mild Traumatic Brain Injury	Lovelace Biomedical & Environmental Research Institute	\$734,613
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Leveraging Nationwide Research Infrastructure to Enrich Brain Health After TBI: The ENRICH Brain Health Study	Icahn School of Medicine at Mount Sinai	\$7,995,740
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Neuroimmuno-endocrine Interface: Exploring a Unifying Axis for Precision Care in PH and TBI (NEXUS)	University of Pittsburgh	\$7,982,344
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Focused Program Award	Elucidating the Role of Increased Neuroinflammation and Related Structural and Functional Neurological Sequelae After Exposure to Repetitive Blast	Naval Medical Research Center	\$7,497,848

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Translational Research Award	ProBIOPTIC: Protein Biomarkers to Inform Optimization of PTSD Therapeutics to Inform Clinical Trials	Walter Reed National Military Medical Center	\$738,631
Understand: Understanding of pre-exposure risk, injury, and biological factors contributing to an individual's response, recovery, and long-term outcomes following a brain injury or traumatic event.	Translational Research Award	ProBIOPTIC: Protein Biomarkers to Inform Optimization of PTSD Therapeutics to Inform Clinical Trials	Johns Hopkins University	\$681,886
Understand: Understanding sexual harassment and assault prevention, perpetration, victimization, and response.	Translational Research Award	Preventing Suicide Among Survivors of Military Sexual Violence: Identifying Critical Risk Periods and Factors That Attenuate and Exacerbate Risk	Arizona State University	\$722,815
Understand: Understanding sexual harassment and assault prevention, perpetration, victimization, and response.	Translational Research Award	Preventing Suicide Among Survivors of Military Sexual Violence: Identifying Critical Risk Periods and Factors That Attenuate and Exacerbate Risk	Denver Research Institute	\$768,919

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Understand: Understanding the intersection of risk and protective factors in long-term psychological health outcomes.	Investigator-Initiated Research Award	FITBIR [Federal Interagency Traumatic Brain Injury Research]: Accelerating Synthesis of TBI Research Using Novel Methods (FAST RUN Methods) 2.0	Veterans Affairs Medical Center, Portland, OR	\$749,648
Prevent: Approaches or tools to prevent or mitigate brain injuries or psychological health conditions and assess health status.	Idea Development Award	Developing Vaccines for Immunological Defense from Traumatic Brain Injury	Arizona State University	\$300,000
Prevent: Approaches or tools to prevent or mitigate brain injuries or psychological health conditions and assess health status.	Idea Development Award	Validation of the Millennium Cohort Traumatic Brain Injury Questionnaire - Long Version	Naval Health Research Center	\$292,000
Prevent: Approaches or tools to prevent or mitigate brain injuries or psychological health conditions and assess health status.	Investigator-Initiated Research Award	Development of a New Technology to Prevent TBI with eStim VLR (Electrical Stimulation of a Valsalva-Like Response)	University of Washington	\$475,767
Prevent: Approaches or tools to prevent or mitigate brain injuries or psychological health conditions and assess health status.	Clinical Trial Award - Research Level 1	Prediction and Prevention of Intracranial Hypertension and Tissue Hypoxia in Severe Traumatic Brain Injury	The University of Chicago	\$744,044

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Prevent: Development, evaluation, and implementation of crosscutting prevention approaches targeting upstream factors or leveraging communities and peers to address multiple adverse outcomes.	Clinical Research Development Award	Development of a Multilevel Clinical Trial to Increase Implementation Knowledge and Skills Within the Army Integrated Prevention Program	University of Texas at Austin	\$299,997
Prevent: Development, evaluation, and implementation of crosscutting prevention approaches targeting upstream factors or leveraging communities and peers to address multiple adverse outcomes.	Clinical Trial Award - Research Level 1	Harnessing the Power of Military Peers to Reduce Sexual Violence and Risky Drinking in Navy Sailors	State University of New York at Buffalo	\$557,680
Prevent: Development, evaluation, and implementation of crosscutting prevention approaches targeting upstream factors or leveraging communities and peers to address multiple adverse outcomes.	Clinical Trial Award - Research Level 2	Regulating Mood and Suicidal Ideation with Morning Light Exposure Treatment	The University of Arizona	\$2,997,638
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Focused Program Award	Gap-Based Milieu Biomarkers for Traumatic Brain Injury (GAMBIT-TBI)	State University of New York (SUNY) Downstate Medical Center	\$7,999,917

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Investigator-Initiated Research Award	Linking Brain Deformation to Environmental Sensor Data via Validating a Gyrate Human Head Phantom Under Impulsive Loading	Lackland Air Force Base Wilford Hall Medical Center	\$680,817
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Investigator-Initiated Research Award	Linking Brain Deformation to Environmental Sensor Data via Validating a Gyrate Human Head Phantom Under Impulsive Loading	Washington University in St. Louis	\$60,000
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Idea Development Award	Spatiotemporal Targeting of a Dual-Ligand K-Edge Nanoprobe for Photon Counting TBI Imaging	University of Maryland, Baltimore	\$299,995
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Investigator-Initiated Research Award	Development and Validation of Handheld Dried-Plasma Biosampling Lateral Flow (LF) Technology for TBI Protein and Metabolites Diagnostics	University of Florida	\$740,172

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Translational Research Award	Biomarker-Guided Brain CT [Computerized Tomography] Imaging in Traumatic Brain Injury	University of Michigan	\$1,499,062
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Translational Research Award	Assessment and Diagnosis of Vestibular Indicators of Soldiers' Operational Readiness-Tethered Forward Deployable (ADVISOR-TFD)	Charles River Analytics, Inc.	\$1,499,969
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Clinical Trial Award - Research Level 2	Rock Steady: A Mobile, Gamified Vestibular Rehabilitation Therapy App for Adults with Dizziness Related to Mild Traumatic Brain Injury	Mountain Home Veterans Affairs Medical Center	\$2,708,307
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Translational Research Award	Quantitative Pupillometry Combined with Blood Biomarkers for the Diagnosis and Prognosis of Mild Traumatic Brain Injury	Uniformed Services University of the Health Sciences	\$1,485,574

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Clinical Trial Award - Research Level 1	Feasibility Study of a Single-Platform Solution for Blood Testing of TBI Biomarkers	Gryphon Bio, Inc.	\$749,437
Prevent: Identification and validation of biomarkers or other objective markers for diagnosis, prognosis, or monitoring of psychological health conditions/brain injuries, repetitive exposures, and associated sequelae.	Translational Research Award	A Prospective Observational Study on Therapeutic and Adverse Effects of Medical Cannabis for Chronic Traumatic Brain Injury	Lovelace Biomedical & Environmental Research Institute	\$1,499,922
Prevent: Solutions to increase readiness and resilience in individuals, small teams, and families to ameliorate the potential negative impacts of specific military and life stressors.	Investigator-Initiated Research Award	About M-C & Me: A Digital Tool to Support Military-Connected Students Moving to a New School District	University of Arkansas at Fayetteville	\$749,996
Prevent: Solutions to increase readiness and resilience in individuals, small teams, and families to ameliorate the potential negative impacts of specific military and life stressors.	Translational Research Award	The Military Spouse Resiliency Group (MSRG) Peer Support Program: Equipping Families for Resiliency with Tools (EFFRT)	University of Texas at Austin	\$1,465,792

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Implementation, follow-up, and services research to increase provider adoption and availability of evidence-based treatments, as well as treatment engagement, follow-up care, and understanding of long-term outcomes.	Clinical Research Development Award	Supporting Improved Clinical Decision-Making in Severe Traumatic Brain Injury Through Greater Accuracy and Precision of Neurobehavioral Common Data Elements	Colorado State University	\$299,639
Treat: Implementation, follow-up, and services research to increase provider adoption and availability of evidence-based treatments, as well as treatment engagement, follow-up care, and understanding of long-term outcomes.	Translational Research Award	POSITIONED (Precision, Standardization, and Organizational Readiness in TBI Care)	Veterans Affairs Health Care System, Salt Lake City	\$1,499,863
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Idea Development Award	Engineering Glial Scar for Brain Tissue Regeneration After Traumatic Injury	Washington University in St. Louis	\$300,000
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Idea Development Award	Helping the Traumatized Brain Help Itself: A Novel Approach to the Restoration of Post-TBI Brain Energy Metabolism	Uniformed Services University of the Health Sciences	\$294,429
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Idea Development Award	Enhancement of Cellular Energy Sensor for Resuscitation from Traumatic Brain Injury with Hemorrhage	University of California, San Diego	\$300,000

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Idea Development Award	Creation of an Anesthesia Resuscitation Kit (ARK) for Prolonged Field Care of Military Casualties with Traumatic Brain Injury	Northwestern University	\$299,971
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 3	Exercise Reset for Concussion: Modifying the Buffalo Concussion Protocol for Application in a Military Environment	State University of New York at Buffalo	\$4,702,138
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Prevention/Reduction of ASRs and PTSD to Sustain Warfighter Performance with Osanetant, a Best-in-Class NK3R Antagonist	University of North Carolina at Chapel Hill	\$2,974,548
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Eye Recovery Automation for Post-Injury Dysfunctions (iRAPID)	New Jersey Institute of Technology	\$2,741,289
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Comparison of Mindfulness-Wellness Class Versus Brain Health Education in Veterans with mTBI [Mild Traumatic Brain Injury]	East Bay Institute for Research & Education	\$1,928,531

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 3	Optimizing Digital Behavioral Treatment for Co-Occurring Insomnia and Depression	University of Rochester	\$5,989,293
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 1	Building Emotional Self-Awareness Teletherapy (BEST): A Tool to Optimize Psychological Health Outcomes for Persons with Traumatic Brain Injury	Indiana University Bloomington	\$604,433
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Combined Neuromodulation and Cognitive Training for Post-mTBI Depression	University of California, San Diego	\$2,999,961
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	Portable Mixed Reality-Based Platform for Assessment of Progress in Multisensory Rehabilitation Strategies for Post-TBI Return-to-Duty (RTD) Decision-Making	Intelligent Automation, Inc.	\$1,446,754
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Enhancing Intensive Transdiagnostic Cognitive Behavioral Therapy for Veterans with PTSD and Anxiety Disorders	Michael E DeBakey Veterans Affairs Medical Center, Houston	\$2,994,327

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Glecaprevir/ Pibrentasvir for the Treatment of Post-Traumatic Stress Disorder	Veterans Education and Research Association of Northern New England, Inc.	\$2,997,407
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	Translation of Intranasal Insulin for the Treatment of Traumatic Brain Injury	Uniformed Services University of the Health Sciences	\$1,486,655
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Novel Intervention for Chronic Complex TBI in OEF/OIF/OND [Operation ENDURING FREEDOM/ Operation IRAQI FREEDOM/ Operation NEW DAWN] Veterans	Duke University	\$2,998,649
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Personalized Circuit-Based Frontoamygdala Neuromodulation for Persistent Post-Concussive Symptoms	University of California, Los Angeles	\$2,999,742
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 1	Efficacy of Virtual Warrior Renew Therapy for Veterans Who Experienced Military Sexual Trauma	Veterans Health Administration New York, NY	\$749,967

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 3	Combat Insomnia: A Randomized Controlled Trial of Cognitive-Behavioral vs. Mindfulness-Based Treatment for TBI-Related Insomnia and Post-Traumatic Stress Symptoms	Johns Hopkins University	\$5,952,550
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Clinical Trial Award - Research Level 2	Phase 2 Randomized Controlled Trial of Sildenafil Citrate for Treatment of Cerebrovascular Dysfunction in Chronic Traumatic Brain Injury	University of Pennsylvania	\$2,852,451
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	Noninvasive Diagnosis of Intracranial Hypertension with a Backpack Optical Spectroscopy System	Children's Hospital, Philadelphia	\$925,594
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	Noninvasive Diagnosis of Intracranial Hypertension with a Backpack Optical Spectroscopy System	Children's Hospital, Philadelphia	\$574,104
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	A Microfluidics Device for the Measurement of Traumatic Brain Injury Biomarkers at the Point of Care	University of Michigan	\$1,499,263

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Interventions that promote sustained functional recovery, including interventions administered acutely, during the post-acute phase, or during the chronic phase of injury.	Translational Research Award	Validation of the Treatment Outcomes of a Fixed-Dose Combination Therapeutic in a High-Fidelity Porcine Model of Traumatic Brain Injury	Inflammatory Response Research (IRR), Inc.	\$1,360,236
Treat: Treatments that promote recovery and improve long-term outcomes.	Investigator-Initiated Research Award	Cerebrovascular Degeneration Following Repetitive Mild Traumatic Brain Injury Contributes to Tau Deposition in the Brain	The Roskamp Institute	\$749,952
Treat: Treatments that promote recovery and improve long-term outcomes.	Translational Research Award	Improving Psychological and Vestibular Health Using a Novel Intervention: The Making Informed Decisions in Gaze and Postural Stability (MINDGAPS) System	University of Montana	\$1,481,363
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 2	Treatment Optimization of Brain-Injured Warfighters: A Prescribed Subsymptomatic Exercise Treatment (TOBI-SET)	General Dynamics Information Technology	\$2,991,582
Treat: Treatments that promote recovery and improve long-term outcomes.	Translational Research Award	Robust Neuroprotection with Noninvasive Near-Infrared Light: Translational Development of a Treatment for TBI	University of Michigan	\$721,867

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Treatments that promote recovery and improve long-term outcomes.	Translational Research Award	Robust Neuroprotection with Noninvasive Near-Infrared Light: Translational Development of a Treatment for TBI	University of Michigan	\$777,315
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 1	Assessment and Treatment of Chronic Anger and Aggression Following Military-Related Interpersonal and Institutional Betrayal: A Pilot Investigation	University of Texas Health Science Center at San Antonio	\$626,400
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 1	Assessment and Treatment of Chronic Anger and Aggression Following Military-Related Interpersonal and Institutional Betrayal: A Pilot Investigation	University of Texas Health Science Center at San Antonio	\$123,599
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 2	Combining Stellate Ganglion Block with Prolonged Exposure for PTSD: A Randomized Clinical Trial	University of Texas Health Science Center at San Antonio	\$2,999,996
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 2	Written Exposure Therapy for Suicide Prevention (WET-S): A Randomized Clinical Trial	Boston University Medical Campus	\$2,942,493

Research Area	Funding Opportunity Announcement	Title	Organization	FY 2021 Obligation
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 2	Randomized Controlled Trial of Intensive Multicouple Therapy for PTSD Versus Relationship Education in Military Couples	Pennsylvania State University	\$3,000,000
Treat: Treatments that promote recovery and improve long-term outcomes.	Clinical Trial Award - Research Level 2	On-TRACC: A Novel Self-Management Intervention to Improve Long-Term Outcomes in Veterans with a History of Mild Traumatic Brain Injury	Seattle Institute for Biomedical and Clinical Research	\$2,492,619

SUMMARY

The TBIPHRP focuses on developing tools for a better standard of care for psychological health and TBI. Congressional appropriations for the FY 2021 TBIPHRP totaled \$175 million (M), of which the expenditures approximated \$158.51M for research, \$5.84M for SBIR/STTR withholds, \$3.38M for USAMRDC withholds, and \$7.27M for CDMRP management costs. The FY 2021 TBIPHRP funded 78 projects, representing 86 awards, for a total investment of \$158.51M. The FY 2021 TBIPHRP-funded research projects are developing knowledge and materiel solutions to improve the health and well-being of Service members, veterans, military beneficiaries, and the American public.