



59th Medical Wing



Research Overview: A Model Platform for Medical Innovations



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59MDW/ST

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210-292-2097/3355

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PEOPLE

MISSION

INNOVATION

A large military aircraft, possibly a transport plane, is parked on a tarmac at night. The aircraft's cargo door is open, and a ramp is extended. Several ground crew members in flight suits are visible around the aircraft, some standing near the ramp and others further back. The scene is illuminated by ground lights, creating a high-contrast environment against the dark sky.

Disclaimer:

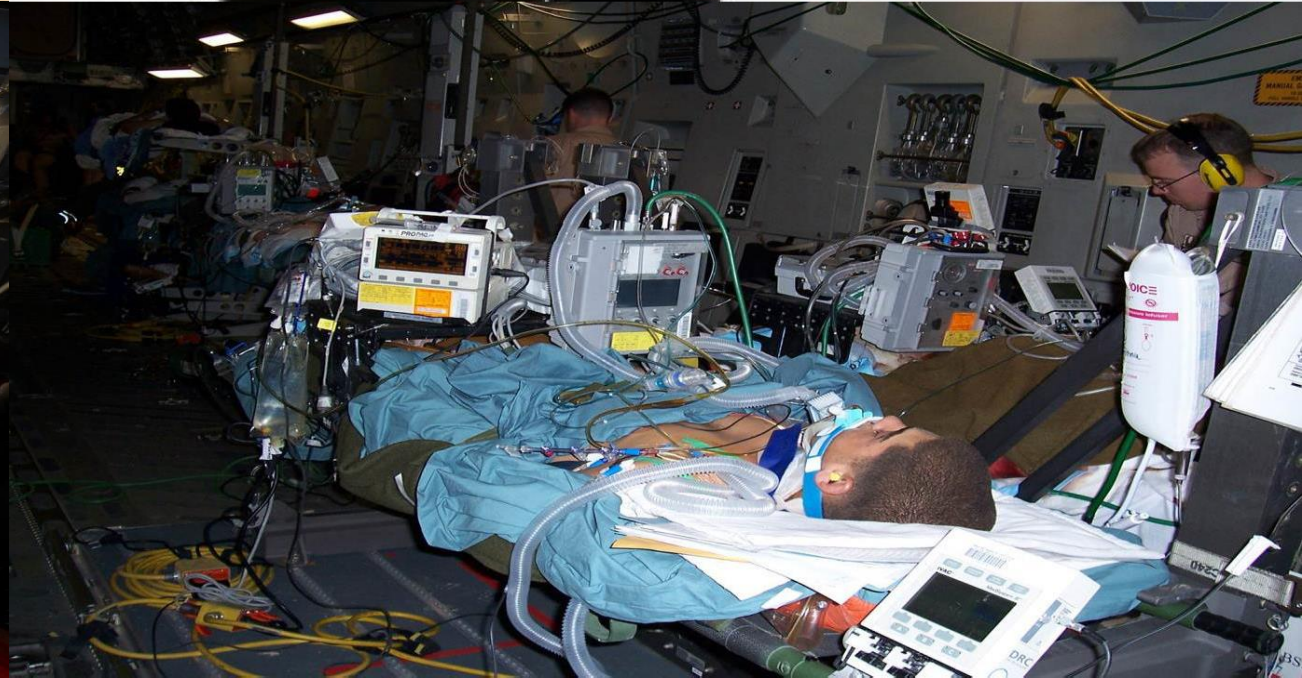
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- Overview
- San Antonio Military Health System
- Portfolio
- Major Programs and Capabilities
- Representative Research
- Summary

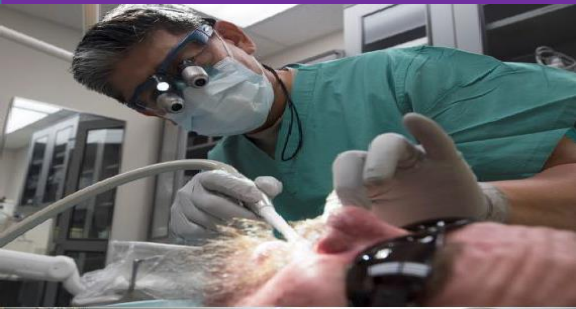
“Drive innovations in patient care and readiness”

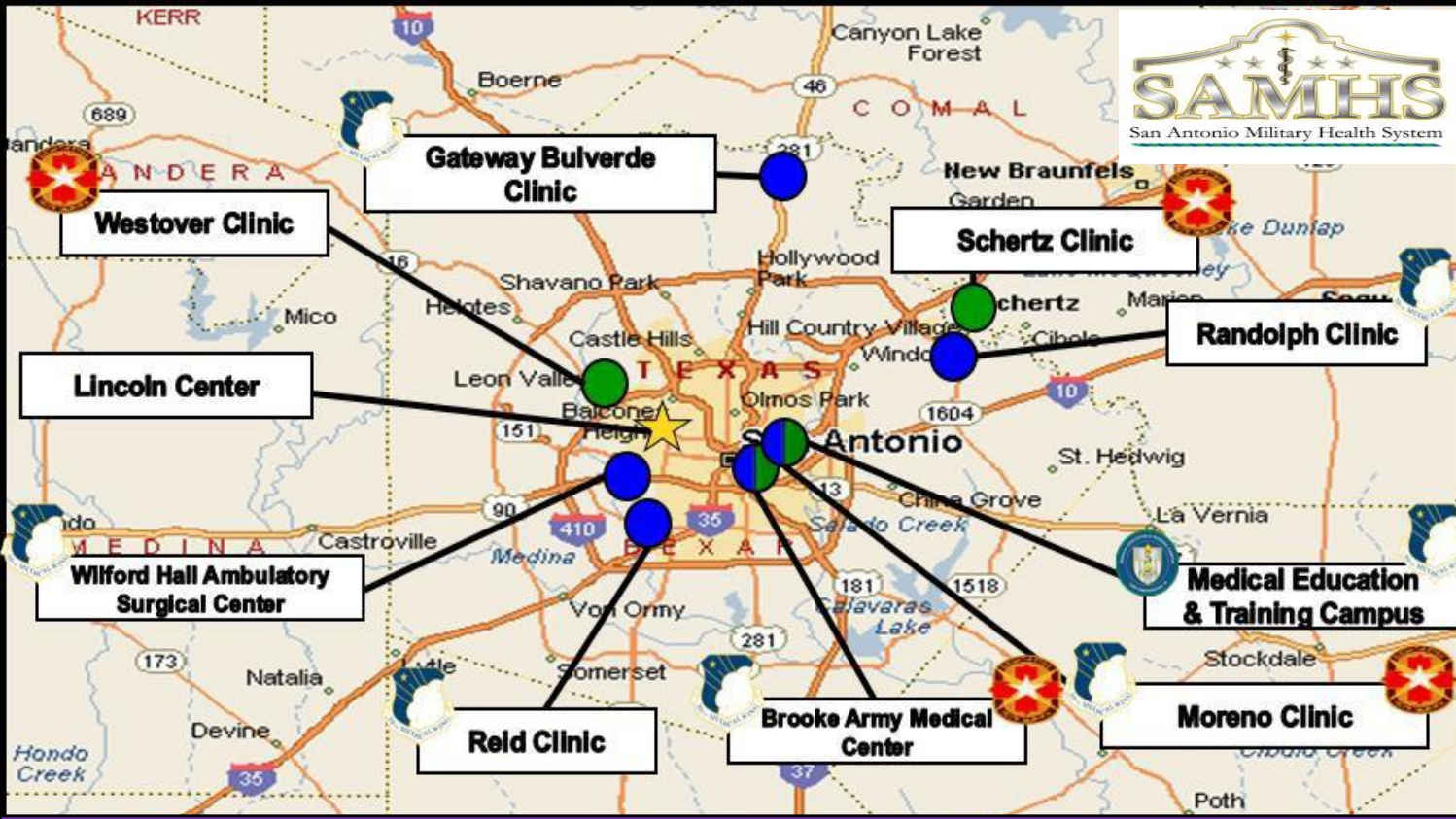


Research – Continuum of Casualty Care



Research – Continuum of In-Garrison Care





San Antonio Military Health System



Lincoln Center, SAMHS Market Office



Wilford Hall Ambulatory Surgical Center



Brooke Army Medical Center



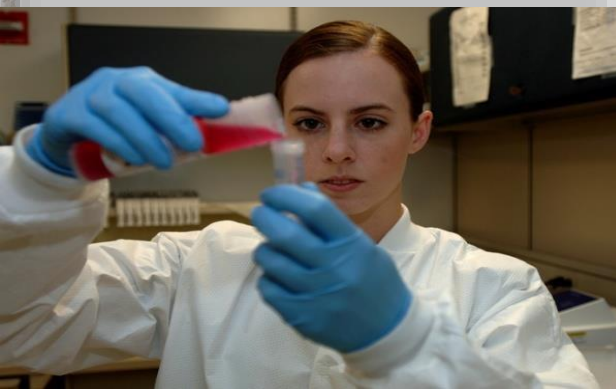
- **Strategic Asset**
 - “Home of Military Medicine”—SA Chamber of Commerce assessed \$4B direct, \$1B indirect economic impact
 - 12 MTFs/\$1.2B Budget /12,000 staff/250,000 beneficiaries
 - 37 GME programs--600 residents, 22 GHSE programs--78 residents
 - Contingency/Humanitarian response -- Teams on call 24/7; ~150 Service Members deployed
 - 425 inpatient beds and 32 operating rooms for inpatient and ambulatory surgery; providing trauma care to both DoD beneficiaries and the local community
 - **Significant Medical Innovation, Research, Education and Training**
- **Brook Army Medical Center**
 - DoD’s most productive inpatient facility
 - DoD’s only Level 1 Trauma Center and Rooftop helipad for patient transport
 - DoD’s only Bone Marrow Transplant Unit
 - DoD’s only Burn Center
- **Wilford Hall Ambulatory Surgical Center and Clinics**
 - DoD’s largest outpatient facility
 - DoD’s largest Blood Donor Center
 - DoD’s first accredited and only re-accredited HRPP
- DoD’s largest centralized appointment/referral management system



Patients First, Partners Always



ST Enables across Mission Areas, Trusted Care and Being a High Reliability Organization



- Part of the largest USAF clinical training site, innovative Joint Medical Readiness Training Platform and Medical Education & Training Campus
- Very productive Clinical Investigation Program
 - ~400 protocols (JBSA-Lackland)
 - Readiness Training
 - Regulatory Oversight/Compliance
- Accredited Programs
 - Animal Care and Use Program
 - Human Research Protection Program
- Mission/Gap Aligned Initiatives
- Major Focus Areas Include:
 - Clinical Investigations
 - Evidence-Based Practice
 - Trauma Clinical Care
 - Training Research
 - Diagnostics & Therapeutics
 - Nursing & Dental Research
 - Technology Transfer/Transition
 - Operational Training
 - Research Education

<https://www.59mdw.af.mil/>

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Science & Technology



Vision: Grow Medical Leaders, Drive Innovations in Patient Care and Readiness

Mission: Conduct clinical studies and translational research and apply knowledge gained to enhance performance, protect the force, and advance medical care and capabilities across the global health system

Lead & Support Research

Advance Modernization Efforts

Foster Collaboration

Address End User Needs

Ensure Scientific Excellence

Scientific, Technical, Programmatic Consultation



**Chief Scientist
Science and Technology
Providing mission capability through...**



**Readiness, Healthcare,
Education, Training, and
Research**

JBSA Main Office: (210) 292-2097

ST Organizational Chart



59MDW/CC
(and Human Research Protection Institutional Official)
BG JEANNINE M. RYDER



59MDW/ST SUPERINTENDENT
and NCOIC, Center for Advanced Molecular Detection
MSgt John Tyree



59MDW/ST CHIEF SCIENTIST
(and HRP AIO)
Dr Debra Niemeyer

ST



DEPUTY CHIEF SCIENTIST
Lt Col Laurie Migliore

STRATEGY (Lead Science)

MAIN OFFICE EXEC ASST / MNGR
Mr. Daniel Barrera

OPERATIONS (Lead Execution)

ST-Ops



DIRECTOR RESEARCH BUSINESS OPERATIONS & ADMINISTRATOR
Mr. Michael Dinkins

Budget, Contracts, Financial, Logistics, Medical Administration

ST-Prgm Analytics



DIRECTOR PROGRAM ANALYTICS & RESEARCH CELL
Mr. Maurice Edmondson
-Internal and External Tasks Lead; PAO Interface
-Technical Program Mgmt. & Project Analysis

TECH BASE (Lead Tech Base)

- IMAs**
- Col Vikhyat Bebartha, MC, FS
 - Col Edward Ronnebaum, NC

- Dental Liaisons: AF-Post Graduate Dental School & Clinics; GDE (Dr Kraig Vandewalle) and Dental Research & Consultative Support (DRCS) (Col Wen Lien)
- San Antonio Uniform Services Health Education Consortium, GME/GHSE (Dr Mark True)
- Centers (DHA HCE; Diabetes CoE; Sleep Ctr; Bone Marrow Trnsplnt; Sim Ctrs, Burn Ctr, etc.)



ST-T3

TECHNICAL DIRECTOR,
Dr Scott Walter

Product Transfer, Transition, Partnerships & Commercialization

- Technology Transfer Focal Point
- FDA Consultation/Support
- Extramural Outreach/Partnerships
- Military Medical Industry Days Lead
- Knowledge & Material Transition
- Advanced Development Lead
- Product Commercialization

Office of Research and Technology Applications (ORTA)



STT

DIRECTOR, TRAUMA & CLINICAL CARE RESEARCH,
Dr Amber Mallory

AF EM Research Thrust Area
Joint Austere Medicine Research

- FRONTLINE ILLNESS & EXPOSURE RECOVERY CARE EFFORTS (FIERCE)
- CLINICAL RESUSCITATION, EMERGENCY SCIENCE, TRIAGE, & TOXICOLOGY (CREST²)
- EN ROUTE CARE RESEARCH CENTER (ECRC)
- Surgical and Technological Advancements for Traumatic Injuries in Combat (STATIC)
- IMPROVEMENTS IN NEUROLOGICAL SENSORY & PERCEPTIBLE RESEARCH (INSPR)
- Provider Scientist-Investigator Opportunity Network (PSION)

Director, ECRC
En Route Care Research Center



photo coming soon

STC

Interim, **DIRECTOR, CLINICAL INVESTIGATIONS & RESEARCH SUPPORT,**
Mr. Paul Barnicott

Clinical Investigations Program Lead & DHP RDT&E Support

- Clinical Research Laboratory
- Clinical Research Operations
- Clinical Research Support

Research & Regulatory Compliance (IRB/IACUC)

Clinical Investigations Facility (CIF)
Clinical Investigations Prgm (CIP)



STH

DIRECTOR, DIAGNOSTICS, THERAPEUTICS AND 'OMICS,
Dr Carl Brinkley

AF ICM Research Thrust Area
Joint Integrative/Clinical Medicine Research

- Military Family Health and Resilience (Including Psych Health) and Readiness
- Regenerative / Restorative Medicine & Reconstruction (Restor-ICM)
- Disease Injury & Pain Management
- Trainee Health & Fitness
- Research Education Academy ("Grant Camp")

Director, CAMD
Center for Molecular Detection



STN

DIR, NURSING RESEARCH
Lt Col Laurie Migliore

Clinical Research-QI/PI-EBP

- Nursing Research
- Quality Improvement (QI)
- Process Improvement (PI)
- Evidence Based Practice (EBP)
- Consultation

Center for Clinical Inquiry (C2I)



Theater of Operations ↔ Garrison Care



Flexible to doctrinal changes



Joint Austere Medicine Research Portfolio

Role 1
Point of Injury

Role 2
Mobile Field
Surgical
Team/EMEDS

Role 3
EMEDS +25
AF Theater
Hospital

Role 4
OCONUS
Definitive Care

Role 5
US-based MTF
Full Range/
Definitive Care

Post-Acute Care
Dept of Veteran
Affairs



Joint Integrative Clinical Medicine Research Portfolio



Performing Research and Providing Deliverables to Address Service and Joint Medical Priorities across the Continuum of Care

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INNOVATION



Representative Research



Austere Medicine & Integrative Clinical Care



San Antonio -- Home of Military Medicine and Critical National Resource for Battlefield Health and Trauma Research



- En Route Care Research Center, Adult ECMO Center and Acute Lung Rescue Transport Team (ALRT)
- Regenerative Medicine and Scaffolds; Organ perfusion; Targeted Therapeutic, Monitoring/Diagnostic Strategies
- Biosensing platforms to improve Combat Medic Management and Triage
- Ocular Trauma Triage Stabilization and Telemedicine
- Non-Opioid Pain Management for Patient-Centered Medical Care
- Directed Energy Models and Clinical Diagnoses, and Interventions
- Cross-Service Readiness Research and Training for Critical Care Personnel



Busiest AF Clinical Investigations Facility supporting largest AF Clinical Training Site, DoD GHSE/GME Programs and Across-the-Continuum Translational Research

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Representative Research Education and Training Activities



Research Fundamentals Course

Training for GHSE residents/fellows and research staff in:

- Submission processes, regulatory and ethical requirements
- Post-approval monitoring and eIRB
- Statistics, database research/big data
- Requirements-driven research & tech transfer
- Funding, resources for assistance



ROI: Annual 2-day course provides a roadmap to research project approval and completion; networking forum to promote mentorship and collaboration. Supports AAHRPP accreditation, patient safety / HROs.

POC: Mr Paul Barnicott, Ms Rachel Montez and Maj Jill Raps

Research Education Academy (REA)

- Provides basic and intermediate level research training to residents, fellows, staff
- Research Grant-writing intensive
- REA Scheduled Courses (Q2 & Q3) – pilot launched Sep 2019
- Mobile Refresher Courses (On demand)
- Faculty drawn from 59MDW/ST staff and invited lecturers

ROI: Improved grant-writing, establishment of collaborations and project management; improves quality of submissions to increase awards/funding to address warfighter & beneficiary care needs..



POC: Dr Carl Brinkley and Dr Victor Sylvia

Clinician-Scientist Investigator Opportunity Network (CSION)

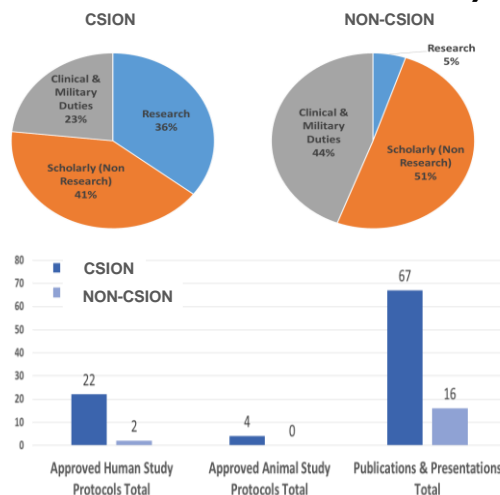
Enhance mid-career clinicians' participation in research to address military relevant needs

Program goals:

- Grow medical leaders
- Promote retention
- Increase clinician input into research
- Advance/strengthen medical research

ROI: Cultivates requirements-driven research. Graduates are expected to remain engaged with and make recommendations for program improvement and nominate future participants.

POC: Lt Col Joe Maddry and Dr Amber Mallory



Evidence-Based Practice (EBP) Course

*An **evidence-based practice** is any **practice** that relies on scientific **evidence** for guidance and decision-making.*

59MDW Evidence-Based Practice Education

- Center for Clinical Inquiry (C2I) course
- 59MDW Newcomers' Orientation
- One Day EBP Overview Course 2 times per year
- Included in Gateway Academy curricula

ROI: Enculturate EBP within 59MDW. Promote participation of EBP councils and development of prioritized initiatives.

POC: Mr. Lance McGinnis and Dr. Rebecca Heyne





Major Programs/Capabilities



- **Clinical Investigations and Research Support**
 - Clinical Investigations Program, Readiness and Certification Training
- **Nursing Research / Center of Clinical Inquiry**
 - Chief Nurses consultation/24 MTFs; Research and Evidence Based Practice
- **Dental Education, Research and Consultation**
 - USAF Post Graduate Dental School and Clinics, JBSA-Lackland
 - Dental Research and Consultation Service, JBSA-Fort Sam Houston
- **Integrated Clinical Medicine / Center for Molecular Detection**
 - Rapid Pathogen Detection/Analysis, Precision Medicine Research, Musculoskeletal Research
- **En Route Care Research Center**
 - Co-located at US Army Institute of Surgical Research (USAISR); AE-En Route Care research
- **Clinical Resuscitation, Emergency Science, Triage and Toxicology Program**
 - Animal research conducted at Clinical Investigations and Research Support facility, JBSA-Lackland
 - Emergency Medicine Residents participate to fulfill graduation requirements
- **Trauma and Regenerative Medicine Research, Training and Education**
 - Clinical Investigations, JBSA-Lackland; USAISR & Tri-Service Research Laboratory JBSA Fort Sam Houston



Clinical Investigations and Research Support



- 59th Clinical Investigations & Research Support (CIRS) provides centralized administrative, technical, and scientific support and regulatory oversight and guidance to researchers in the development, performance and dissemination of clinical investigations internal to the Wing, SAMHS and regionally.
- Manage the Clinical Investigations Program, and supports organizational readiness and certification training requirements for residents, fellows, nurses, allied healthcare professionals and providers.

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Research Surgical Capabilities

Clinical Investigations & Research Support



Three operating room suites:

- General and vascular surgery
- Orthopedic
- Ophthalmic
- Maxillofacial/dental
- Microsurgery



DaVinci robotic surgical system

Radiology (digital)

C-Arms

Fluoroscopy

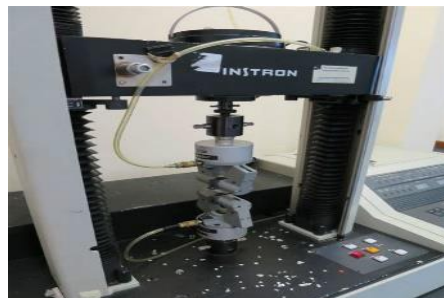
Ultrasound





Research Capabilities

Clinical Investigations & Research Support



Clinical Research Laboratory

- Immunology
- Hematology/Chemistry

Instron Testing

- Determine fatigue, impact, and/or resistance of materials

Hyperbaric/Hypobaric Medicine

- Study effects of altitude

Fully capable laboratory facilities

Expanded Toxicology Capabilities

- Highly specific
- Medical Toxicology studies
- Tandem Mass Spectrometer

Molecular Biology/Genomics

- Next Generation Sequencing
- Real Time PCR
- Multi-Plex Assays

Cell Biology

- Flow Cytometry

Microbiology

Coagulation and Hematology

Scanning Electron Microscope



Nursing Research



Nursing Research Center for Clinical Inquiry (C2I)

- One of four Air Force (AF) nursing C2Is conducting research, Evidence-based practice (EBP) and promoting clinical inquiry.
- Three PhD prepared active duty nurse scientists, one civilian EBP nurse consultant and an EBP facilitator.
- Research is strategically focused to address AF Nurse Corps, AF Major Command, AFMS, DHA and Joint Military Health System capability gaps and requirements.
- Nurse scientists lead their research efforts and foster military-civilian academic research partnerships to conduct interdisciplinary and multi-service branch research.



Oral Rehydration Solutions in Readiness Training



Tai chi as Adjunct to Treatment for Chronic Lower Back Pain

C2I construct aligns with the AFMS & DHA journey as a High Reliability Organization





GDE & Dental Research



- The 59 Dental Training Squadron (DTS) is the flagship for dental education in the AFMS; Dental research in the 59 DTS is primarily conducted by residents and their teaching staff as part of the educational training process.
 - Five dental residency programs (Orthodontics, Prosthodontics, Advanced Education in General Dentistry, Periodontics, and Endodontics) require the completion of a research project as partial fulfillment of a M.Sc. Degree through USUHS or UTHSC.
 - Oral Surgery residency requires research scholarly activity.
- The USAF Dental Research and Consultative Service (DRCS) provides evaluations, investigations, and research to enhance the strategic goals of Better Care and Best Value in the Air Force Medical Service.



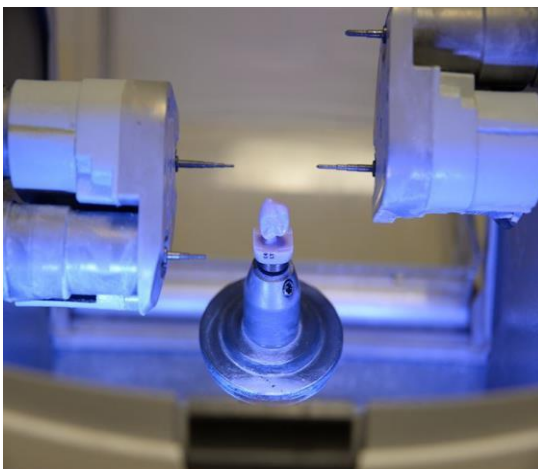
Dunn Dental Clinic



59 DTS / AF Post Graduate School & Clinics



Dental Research & Consultative Support



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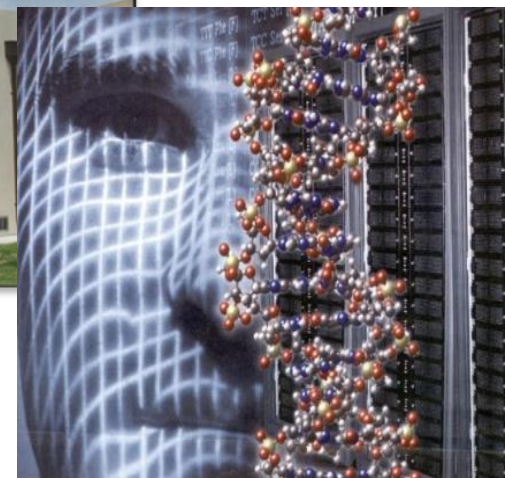
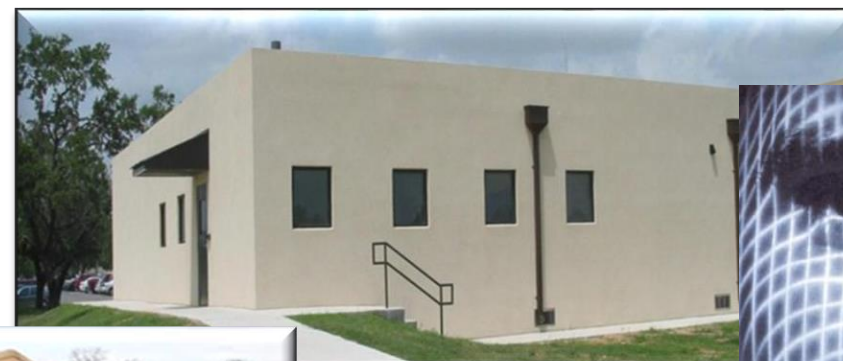
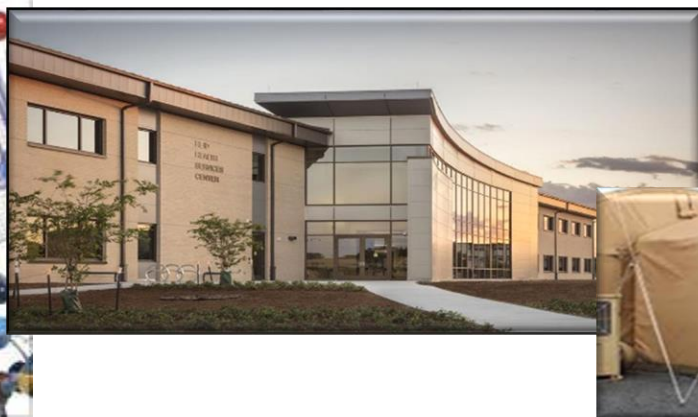
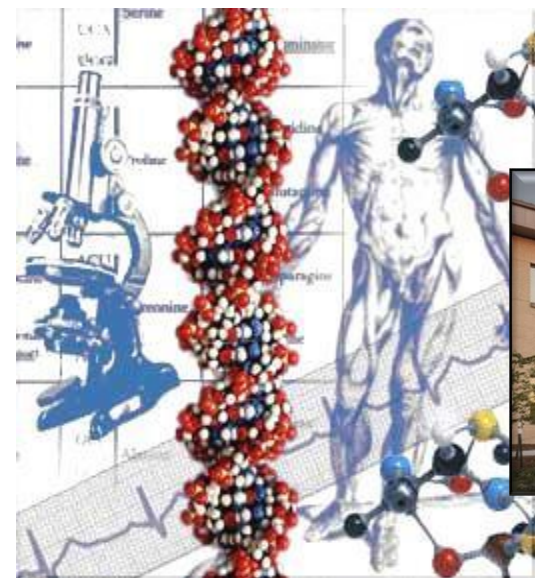


Center for Advanced Molecular Detection

Real World
Testbed

The CAMD conducts medical research to address critical capability gaps:

- Respiratory Pathogen Rapid Detection & Analysis Research
 - New and re-emerging pathogens; prevalence and persistence
 - Trainee (~120,000 in San Antonio/year), Warfighter, Beneficiary
- Precision Medicine
 - Discerning causal relationships between genetic variations and diseases of military relevance



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CAMD (specialty laboratory)



Molecular Biology/Genomics*

- Next Generation Sequencing
- Real Time PCR
- Multi-Plex Assays



Molecular Biology/Proteomics*

- Protein Detection/Immunoanalysis
- Western Blot/Immunogenetics



Microbiology

Laminar flow biosafety level-2 cabinet

*Multiple instruments





En Route Care Research Center



- The En Route Care Research Center (ECRC) co-located at the US Army Institute of Surgical Research.
- Conducts translational research across the continuum of care from POI to Level 5 facilities to advance knowledge and improve treatment of injury & disease.
- A collaborative effort between the 59MDW, 711HPW, Army and Navy medical research organizations; ERC portfolio managed in collaboration the Joint Program for Combat Casualty Care (JPC-6) and other organizations.
- Collaborations with Uniformed Services University, Walter Reed Nat'l Military Medical Center and others.

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Trauma and Regenerative Medicine Research



Tri-Service Research Laboratory



Battlefield Health & Trauma Research Institute



Clinical Investigations and Research Support

- Trauma Clinical Care and Regenerative/Restorative Research programs innovate Techniques and Technologies, Pre-hospital and Hospital interventions for Warrior injury care and rehabilitation to advance Best Practice.
- Multiple Service, DoD, other Gov't, Coalition, Academia and Industry partners.
- Research managed in coordination with Joint Programs, other Service, Academia and Industry partners.

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Trauma Research

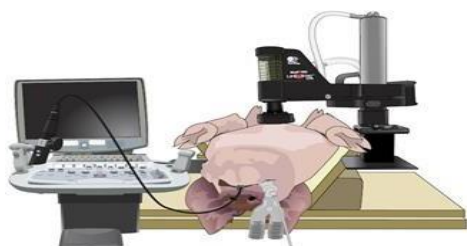


- Haemonetics TEG Hemostasis Analyzer System (x2)
- BioTek ELx808 Absorbance Plate Reader
- Leica CM1520 Cryostat
- Biorad Chemidoc Imaging System
- Applied Biosystems QuantStudio3 Real-Time PCR System
- MagPix Multiplexing Immunoassay System
- Attune NxT Flow Cytometer 3-laser system (*4th laser pending)
- ABL90 Flex Plus Blood Gas Analyzer
- Heska Element DC5X Chemistry Analyzer (*purchase pending)
- Sysmex CS-2500 Coagulation Analyzer (*purchase pending)



CREST² Research

Clinical Resuscitation, Emergency Science Toxicology & Trauma



- The CREST² Research Team is located within the 59th Medical Wing/Science and Technology dept with all animal projects currently performed at the Clinical Investigations and Research Support Facility.
- Hemorrhagic shock and toxicology research has been at the forefront of the mission with recently added focus of traumatic brain injury.
- Emergency Medicine Residents have participated in multiple CRESTTT Research projects, fulfilling their graduation requirements.

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San Antonio Military Medical Research

Strong DoD-Federal-Academia-Industry Synergy



Healthcare & Bioscience Industry Action Plan *Doing Well by Doing Good*

[Media Coverage](#) [Phase One](#) [Breakfast Phone 12/11/17](#)



Doing Well by Doing Good: Leveraging San Antonio's Unique Biomedical Strengths to Fuel Economic Growth and Become a Resource to the World



San Antonio Military Medical Center



Center for the Intrepid



Wilford Hall Ambulatory Surgical Center



Center for Molecular Detection



Clinical Research Support



Audie L. Murphy VA Memorial Hospital



Battlefield Health & Trauma Research Institute



UT Health Science Center San Antonio



AF Post-Graduate Dental School & Clinic



Tri-Service Research Laboratory NAMRU/SA, 711th HPW



UT San Antonio

Representative Local Research Laboratory Collaborations



1
Clinical Investigation Research Support



2
Center for Advanced Molecular Detection (CAMD)



3
Wilford Hall Ambulatory Surgical Center (WHASC)
Eye Center, Sleep Center Diabetes COE, Sim Center



4
59DTS / AF Post Graduate School & Clinics



5
USAF Dental Evaluation & Consultative Service (DECS)



14
Tri-Service Research Laboratory-711HPW



13
Battlefield Health & Trauma Research Institute; USAISR, NAMRU-SA



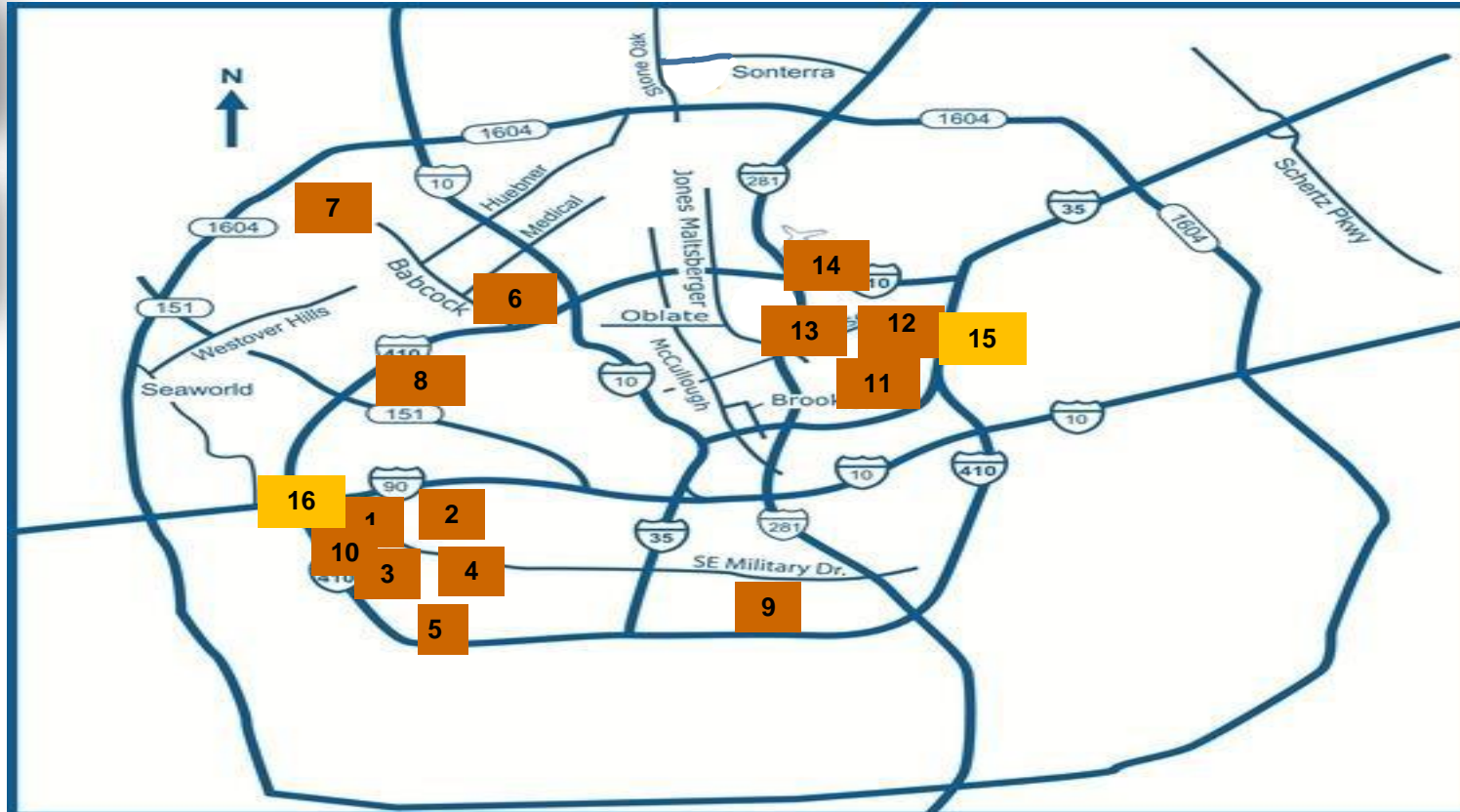
12
BAMC AMC Dept of Clinical Inquiry; BAMC Centers



11
Audie L. Murphy VA Hospital



10
DHA Hearing Center of Excellence



= Wet Laboratory Facilities

= Clinical Trials Facilities



6
UT Health Science Center San Antonio



7
UT San Antonio Depts and Laboratory Animal Resources Center



8
Texas Biomedical Research Institute



9
Bridge Preclinical Test SVS/Geneva Foundation



15
16
OWS JBSA Clinical Trials Sites - BAMC & WHASC



San Antonio Uniformed Services Health Education Consortium (SAUSHEC)



Residency Programs (15)

- Anesthesiology
- ✓ Dermatology
- ✓ Diagnostic Radiology
- ✓ Emergency Medicine
- ✓ General Surgery
- Internal Medicine
- ✓ Neurology
- OB/GYN
- ✓ Ophthalmology
- ✓ Orthopedic Surgery
- ✓ Otolaryngology
- Pathology
- Pediatrics
- ✓ Psychiatry
- Urology

Fellowship Programs (21)

- Adolescent Medicine
- Allergy & Immunology
- ✓ Cardiovascular Diseases
- ✓ Clinical Research
- Cytopathology
- ✓ Emergency Medicine & Critical Care Ultrasound
- ✓ Emergency Medical Services
- ✓ Endocrinology
- Gastroenterology
- ✓ Hematology/Oncology
- ✓ Infectious Disease
- Musculoskeletal Radiology
- Neonatology
- Nephrology
- Nuclear Medicine
- ✓ Pain Medicine
- ✓ Pulmonary/CCM
- Rheumatology
- ✓ Sleep Medicine
- ✓ Surgical Critical Care
- Undersea & Hyperbaric Medicine

Allied Health Programs (13)

- BAMC Behavioral Medicine Education
- Clinical Pastoral
- Clinical Psychology Internship 59 MDW
- Clinical Psychology Internship Program
- Emergency Medicine Physician Assistant (EMPA)
- Graduate Program in Nutrition
- Occupational Therapy
- Orthopedic Physician Assistant
- Primary Eye Care
- Pharmacy Residency
- Physical Rehabilitation/Physical Therapy
- Point-of-care Ultrasound Physician Assistant Fellowship Program
- Social Work Internship Program (SWIP)

✓ Representative Active R&D Studies





Product Pipeline and Stakeholders



Examples/NOT all inclusive

**Forward Operating Base Ocular Trauma
Telemedicine Triage and Stabilization**

Stakeholder: ACC
Transition Type: Knowledge
Transition Timeframe: 3 yrs



**Biomeme Sample Prep and Assay
Panel Vector-Borne Disease**

Stakeholder: ACC, JPEO-CBD
Transition Type: Industry / Materiel
Transition Time: 12 months



**Strategies to Treat Occult Non-Compressible
Torso Hemorrhage**

Stakeholder: AFSOC, ACC
Transition Type: Knowledge / Material
Transition Timeframe: 3 yrs



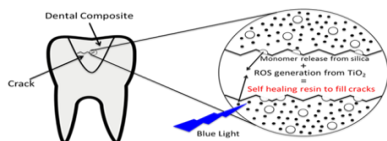
**Assessment of Military Nurse Practitioner
Role Transition (TSNRP)**

Stakeholder: AETC, USAF NC
Transition Type: Knowledge
Transition Timeframe: 2 yrs



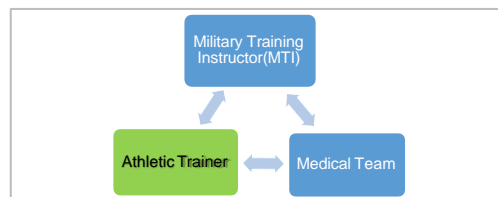
**Silica Encapsulated Monomers for Self-
Healing Dental Materials**

Stakeholder: USAF DC
Transition Type: Knowledge / Materiel
Transition Timeframe: 2 yrs



**Athletic Trainer Integration in U.S. Air Force
Basic Training**

Stakeholder: 2d AF/AETC/USAF Basic Military
Trainees (All six Basic Trainee Sq)
Transition Type: Knowledge / Training Practices
Transition Timeframe: 12 months



**An Integrative Approach to Non-Opioid Pain Management
in Air Force Patient-Centered Medical Homes**

Stakeholder: AETC, AFDW, ACC
Transition Type: Knowledge / Training
Transition Timeframe: 2 yrs



First study to validate and quantify the extent of clinical improvement of PTSD patients receiving the Battlefield Acupuncture technique; clinical training in progress. A follow-on clinical trial is in preparation for a compressed PTSD acupuncture regimen

COVID-19 Representative Research



- Participated in the Nation's first Clinical Trial to evaluate an Experimental Treatment, Remdesivir, for COVID-19, The Adaptive Treatment Trial (ACTT-1, <https://www.nejm.org/doi/full/10.1056/NEJMoa2007764>)
- Intermediate-Size Patient Population Expanded Access Protocol for Treatment of Coronavirus Disease 2019 (COVID-19) with Remdesivir
- Expanded Access Protocol for Treatment of Coronavirus Disease 2019 (COVID-19) with Anti-SARS-CoV-2 Convalescent Plasma
- Epidemiology, Immunology and Clinical Characteristics of Emerging Infectious Diseases with Pandemic Potential (EPICC): Ongoing Prospective, Longitudinal Observational Cohort Studies of COVID-19 in Military Health System beneficiaries
- Predictive modeling including Point of care Lung Ultrasound for Emergency Triage of Patients with Acute Respiratory Symptoms related to COVID-19
- Comparison of NGDS SARS-CoV-2 Testing Platforms with Sample Expansion for EUA amendment
- Wearable Diagnostics Evaluation for COVID-19 Early Detection/Mitigation
- Evaluation of Portable Air Purification and Aerosolized Disinfectants for Clinical and Austere Decontamination
- Collection and Processing of COVID-19 Convalescent Plasma (DoD Program)
- DoD OWS Phase III COVID-19 Vaccine Efficacy Trial (AstraZeneca)
- Whole-genome Sequencing of SARS-CoV-2 and Identification of Variants
- ACTIV-2 mAb Study and Active Duty Vaccine Effectiveness Study
- Assessment of Immunity Protection Against Mutating COVID-19 Strains
- Evaluation of Integrated Next Generation Diagnostic System (NGDS) Platforms and Multi-Biospecimen Type Use
- Collection and Processing of COVID-19 Convalescent Plasma (DoD Program)
- Annual SAMHS-Universities Research Forum (SURF) 2020 & 2021 (Virtual event)
- SARS-CoV-2 Identification and Characterization on the Biomeme Franklin PCR Platform
- Trainee Health Surveillance - Gas Mask Surveillance Testing for USAF Basic Military Trainees



Biofire Respiratory Pathogen Panel



SURF 2019



Cepheid SARS-CoV-2 Test



Patients First, Partners Always



Critical Partnerships

- The 59MDW Chief Scientist in collaboration with local DoD research partners, established the San Antonio Military Medical Research Leaders (SAMMRL) Consortium.
- Membership: 59MDW/ST, AF Post-Graduate Dental School & Clinics, Dental Research & Consultative Service (DRCS), BAMC Dept of Clinical Inquiry, SAMHS GME (SAUSHEC) NAMRU-SA, USAISR, 711HPW-AFRL/RHD, METC, USU-South.
- Share information regarding on-going research, new initiatives and related efforts, and coordinate PAO materials, updates, etc.
- Affords on-going communication to minimize duplication and enhance collaboration by maximizing use of each other's expertise and capabilities.
- Co-located in San Antonio at JBSA – Lackland and Fort Sam Houston, these organizations are well experienced to address DoD requirements.
- Other members brought on board include the Southern Regional VA District; an open session was added to afford presentations by non-federal agencies.

The San Antonio Military Medical Research Leaders Consortium Charter

July 2020



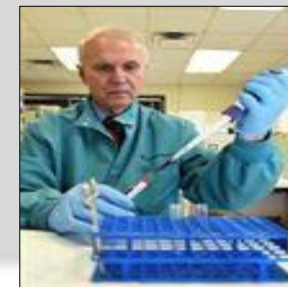
Clinical Research Innovation Center:

Focused on Increasing Readiness and Improving the Benefit

Accomplished through Clinical Studies, Translational Research, Research Education & Training



- **Broad & Deep System Capabilities, Clinical Competencies and Collaborations**
- **Unique DoD Clinical Research Platform; Large and Diverse DoD GME/GHSE/GDE Platform**
- **Jointly Integrated – Programs and Partners**
- **GME/GHSE-RDT&E Synergized, USU-affiliated Programs; largest AF Clinical Investigations Facility & Lead Translational Research Platform**
- **Specialized Research Education & Training Activities**
- **Military Readiness, Joint Force and Medical Care Requirements-aligned research**
- **First DoD accredited and only reaccredited HRPP (AAHRPP) with cited Strengths & Distinctions**
- **Long-standing AAALACi Accreditation with Merit**





59th MEDICAL WING



CAPABILITIES AND COLLABORATION GUIDE

San Antonio, Texas



Medical Innovation: Education, Training & Research

• Main Office

- 210-292-2097 (DSN 554)
- usaf.jbsa.59-mdw.mbx.59-mdw-st@mail.mil

• Websites:

- <https://www.59mdw.af.mil/Units/Chief-Scientist-ST/>
- <https://www.59mdw.af.mil/Units/Chief-Scientist-ST/Human-Research-Protection-Program/>
- <https://www.59mdw.af.mil/Units/Chief-Scientist-ST/Office-of-Research-and-Technology-Applications/>
- <https://www.59mdw.af.mil/Units/Chief-Scientist-ST/Research-Education-Training-Resources/>
- <https://biomedsa.org/>
- <https://sabioscienceresearch.org/>
- <https://www.health.mil/Military-Health-Topics/Access-Cost-Quality-and-Safety/Access-to-Healthcare/Multi-Service-Markets/San-Antonio-Military-Health-System>

• Representative Products available:

- Capabilities/Collaboration Guide, Newsletters, Brochures, etc.
- Project Synopsis Guide, Technical Reports, Literature Reviews
- FDA-EUA Products Guide

PEOPLE

MISSION

INNOVATION



59th Medical Wing



"Grow Medical Leaders Drive New Operations in Patient Care and Research"



Critical Partnerships

- The Commanding Officer of NAMRU-SA, the Commander of the USAISR and the Chief Scientist of the 59MDW established the BHT Research Institute Joint DE Trauma Research Program Charter
- This Charter focuses on a comprehensive joint medical research program to address injuries resulting from emerging DE weapons
- Co-located at the BHT Research Institute, JBSA - Fort Sam Houston, Texas, IAW with the 2005 BRAC, NAMRU-SA, USAISR, 59MDW with BAMC/SAMHS are uniquely positioned to conduct cooperative, joint battlefield trauma research to address DoD requirements
- NAMRU-SA, USAISR and the 59MDW also have close proximity to and strong working relationship with 711 HPW-AFRL (RHD), who has agreed to partner in a Joint DE Trauma Research Program
- It is expected that this will expand to include other commands based upon mutual agreement



Battlefield Health and Trauma Research Institute Joint Directed Energy Trauma Research Program Charter

December 2019