Dear MHSRS Attendee,

Welcome to the 2019 Military Health Symposium! The MHSRS is the Department of Defense, and the Nation’s, premier scientific meeting completely focused on the unique medical needs of the Warfighter. This Symposium has emerged as a scientific hub for the Nation’s prominent researchers to forge and strengthen research partnerships between the Services, academia, industry, and our international allies.

Since its inception in the early 1990s as the Advanced Technology Applications to Combat Casualty Care, this meeting has experienced exponential growth. It now encompasses research related to all aspects of Warfighter-related care – from pre-deployment through to rehabilitation. The theme of the 2019 meeting is Research for Readiness and the presentations are focused in four areas – Warfighter Medical Readiness, Expeditionary Medicine, Warfighter Performance, and Return to Duty.

In 2019, 2,195 submissions were received in response to the Call for Abstracts, the highest number ever. This reflects the long-term commitment of the Department of Defense and the Congress to support Warfighter-related research and its successful translation into medical solutions that directly impact and improve Warfighter care.

Welcome to the 2019 MHSRS! Thank you for your support of this most important meeting!

Sincerely,

Tom McCaffery
Assistant Secretary of Defense
for Health Affairs
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HOW TO USE THIS BOOK

On pages 10-15 you will find the complete MHSRS 2019 Agenda, which includes ALL daily activities in chronological order from Monday, 19 August to Thursday, 22 August.

Wherever you see "BREAKOUT SESSIONS" noted within the Agenda, color coded in burgundy, you can refer to the "Breakout Sessions" section on pages 16-52, for detailed information regarding each session.

For example, if you wanted more information about the individual presentations (specifically, the presentation title, time and speaker) taking place Tuesday from 1300-1500 in the Sun C123 Ballroom, on the topic "Minimizing the Impact of Wound Infections Following Blast-Related Injuries" found on page 11 in the Agenda, you would refer to the Breakout Session pages to search in chronological order by the day, time frame, and topic:

In this example, that would bring you to page 18 in the Breakout Sessions. You would then see each of the presenters listed in order of appearance, along with their individual presentation title:
GENERAL INFORMATION

SYMPOSIUM BADGES
Symposium badges must be worn at all times. There are NO EXCEPTIONS.

FAMILY MEMBERS & GUESTS
Family members (including children) and guests are not allowed into the Symposium activities or on the shuttles unless registered as an attendee.

EXHIBITS
Join us in the Florida Exhibit Hall DEF (Lower Level) to learn about the latest equipment and services to benefit your research.

Monday, 19 August: 1800-2100 (Grand Opening Reception)
Tuesday, 20 August: 0900-1630
Wednesday, 21 August: 0900-1630

These will be held in Florida Exhibit Hall DEF (Lower Level) of the Gaylord Palms Convention Center.

POSTER SESSIONS

TUESDAY
SESSION 1: 1000-1600
Set-Up: 0900
Presenters should plan to stand by their posters between 1000 and 1200.
Removal of posters begins at 1600. Poster presenters will not be able to enter the exhibit hall after 1630.
Unclaimed posters will be removed beginning at 1630 and made available OUTSIDE the exhibit hall until 0800 the following day. If not collected by 0800, they will be discarded.

WEDNESDAY
SESSION 2: 1000-1600
Set-Up: 0900
Presenters should plan to stand by their posters between 1000 and 1200.
Removal of posters begins at 1600. Poster presenters will not be able to enter the exhibit hall after 1630.
Unclaimed posters will be removed beginning at 1630 and made available OUTSIDE the exhibit hall until 0800 the following day. If not collected by 0800, they will be discarded.

SYMPOSIUM MEALS
Meals are for registered attendees only. Breakfast will be from 0630–0830 Monday - Thursday. Lunch will be from 1130–1330 on Monday and 1130–1300 on Tuesday and Wednesday. A box lunch will be offered on Thursday from 1100–1330. All meals will be served in Florida Exhibit Hall AB–Lower Level.

A heavy hors d’oeuvre reception with cash bar will be served on Monday as part of the Opening Reception in the Florida Exhibit Hall DEF on the lower level of the Gaylord Palms Convention Center. The dress code for this event is casual.

Note: Military and GS Employees — Nine meals are paid for as part of the MHSRS registration fee. These are: breakfast, lunch and dinner on Day 1, and breakfast and lunch on Days 2-4. Do not claim per diem for these meals.

REGISTRATION
The Registration Desk is located in the City Hall Lobby of the Gaylord Palms Convention Center.

HOURS OF OPERATION

<table>
<thead>
<tr>
<th>Sunday, 18 August</th>
<th>Monday, 19 August</th>
<th>Tuesday, 20 August</th>
<th>Wednesday, 21 August</th>
<th>Thursday, 22 August</th>
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</thead>
<tbody>
<tr>
<td>1500 - 1900</td>
<td>0600 - 1930</td>
<td>0600 - 1800</td>
<td>0700 - 1630</td>
<td>0700 - 1100</td>
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</tbody>
</table>
IMPORTANT PHONE NUMBERS
Shuttle Information: (407) 843-0855 - mention MHSRS

LUGGAGE CHECK
On Thursday, there will be luggage storage available in Florida Hall C from 0630–1400.

SHUTTLE SERVICE
Shuttle service is for registered MHSRS participants and exhibitors only.

AIRPORT SHUTTLE SERVICE
Shuttle service will be provided by Mears Transportation to and from the Orlando International Airport. Buses will depart the airport approximately every 30 minutes going either to the Gaylord Palms Resort or the Marriott Village, which includes the Marriott Courtyard, Fairfield Inn & Suites and the Spring Hill Suites.

The motor coaches will be picking up/dropping off at Level 1, Terminal B. If you must pick up your luggage first, the baggage claim is located on Level 2. After claiming your luggage, proceed to Level 1, Terminal B to pick up the shuttle bus. Mears event staff will be wearing bright green conference t-shirts and holding “MHSRS” signage to direct attendees.

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<table>
<thead>
<tr>
<th>Date</th>
<th>Time Period</th>
<th>Shuttle Information</th>
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<tbody>
<tr>
<td>Sunday, 18 August</td>
<td>1000 – 2200</td>
<td>Final airport departure at 2200. 4 buses departing MCO Airport every 30 minutes, but 4 buses may not necessarily leave at the same time. MEARS staff in bright green shirts available for shuttle directions. No airport returns scheduled today – arrivals only.</td>
</tr>
<tr>
<td>Monday, 19 August</td>
<td>0800 – 2200</td>
<td>Final airport departure at 2200. 4 buses departing MCO Airport every 30 minutes, but 4 buses may not necessarily leave at the same time. MEARS staff in bright green shirts available for shuttle directions. No airport returns scheduled today – arrivals only.</td>
</tr>
<tr>
<td>Tuesday, 20 August</td>
<td>0800 – 2200</td>
<td>Buses depart MCO Airport every 30 minutes starting at 0800. Buses depart the Gaylord Palms Main Transportation Lobby to MCO starting at 0800. Final departure to the airport is at 2100. MEARS staff in bright green shirts available for shuttle directions.</td>
</tr>
<tr>
<td>Wednesday, 21 August</td>
<td>0800 – 1830</td>
<td>Departures to the airport will leave only from the Gaylord Palms Main Transportation Lobby. Final departure for the airport is 1830.</td>
</tr>
<tr>
<td>Thursday, 22 August</td>
<td>0600 – 1830</td>
<td>No airport pickups scheduled today - returns only. Departures to the airport will leave only from the Gaylord Palms Main Transportation Lobby. Final departure for the airport is 1830.</td>
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</tbody>
</table>

ALL AIRPORT RETURNS WILL BE FROM THE GAYLORD PALMS MAIN TRANSPORTATION LOBBY TO MCO.
Guests at the Marriott Village hotels will need to take a shuttle from the central meeting spot to the Gaylord Palms Resort to access the airport shuttle.

INTER-HOTEL SHUTTLE SCHEDULE:
Shuttle service will be provided between the Gaylord Palms Resort and the Marriott Village, which includes the Marriott Courtyard, Fairfield Inn & Suites and the Spring Hill Suites. Inter-hotel shuttles will operate from the Gaylord Main Transportation lobby and the Bus Depot at the Marriott Village. Buses depart every 15 minutes during designated times in the morning and evening.
MHSRS INTER-HOTEL SHUTTLE SERVICE SCHEDULE
(LOOPING SHUTTLE SERVICE BETWEEN THE GAYLORD PALMS MAIN TRANSPORTATION LOBBY AND THE MARRIOTT VILLAGE BUS DEPOT)
SHUTTLES RUN APPROXIMATELY EVERY 15 MINUTES
TRAVEL TIME IS 15-25 MINUTES BETWEEN PROPERTIES

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<tr>
<th>Sunday, 18 August</th>
<th>Monday, 19 August &amp; Tuesday, 20 August</th>
<th>Wednesday, 21 August</th>
<th>Thursday, 22 August</th>
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PARKING INFORMATION
The Gaylord Palms Resort is offering an $18.00 daily self-parking rate for all attendees.

WI-FI CONFERENCE INFORMATION
Complimentary Wi-Fi is offered to all conference attendees.

Meeting Access Location: 2019MHSRS
Meeting Password: 2019mhsrs

SPEAKER INFORMATION
All speakers should report to the Flagler Room on the upper level of the conference center as soon as they arrive at the conference to make sure that presentations are uploaded properly. Speaker ready room hours are:

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<tr>
<th>Sunday, 18 August</th>
<th>Monday, 19 August</th>
<th>Tuesday, 20 August</th>
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<td>1400 - 1900</td>
<td>0700 - 1700</td>
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<td>0700 - 1700</td>
<td>0700 - 1100</td>
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CONTINUING EDUCATION (CE)
Jointly provided by Postgraduate Institute for Medicine and the Principal Deputy Assistant Secretary of Defense (Health Affairs).

TARGET AUDIENCE
This activity has been designed to meet the educational needs of clinicians, nurses, and psychologists involved in the following areas related to military medicine: medical simulation and health information science, trauma care, infectious disease, military operational medicine to include psychological health, and clinical and rehabilitative medicine.

EDUCATIONAL OBJECTIVES
After completing this activity, the participant should be better able to:
• Promote awareness of the depth and quality of DoD sponsored medical research
• Inform on the outcomes of DoD sponsored medical research in approximately 60 research categories through oral and poster presentations
• Provide a forum for conversation and collaboration between military, academic and industry partners in order to promote advances in military medicine

PROGRAM AGENDA
Please refer to the Agenda found on pages 10-16.
JOINT ACCREDITATION STATEMENT
In support of improving patient care, this activity has been planned and implemented by the Postgraduate Institute for Medicine and the Assistant Secretary of Defense for Health Affairs. Postgraduate Institute for Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

PHYSICIAN CONTINUING MEDICAL EDUCATION
The Postgraduate Institute for Medicine designates this live activity for a maximum of 16.0 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CONTINUING NURSING EDUCATION
The maximum number of hours awarded for this Continuing Nursing Education activity is 16.0 contact hours.

CONTINUING PSYCHOLOGIST EDUCATION
Postgraduate Institute for Medicine (PIM) is approved by the American Psychological Association to sponsor continuing education for psychologists. PIM maintains responsibility for this program and its content.

CREDIT DESIGNATION
This program offers 16 continuing education credits for psychologists.

DISCLOSURE OF CONFLICTS OF INTEREST
Postgraduate Institute for Medicine (PIM) requires instructors, planners, managers, and other individuals who are in a position to control the content of this activity to disclose any real or apparent conflict of interest (COI) they may have as related to the content of this activity. All identified COI are thoroughly vetted and resolved according to PIM policy. PIM is committed to providing its learners with high quality activities and related materials that promote improvements or quality in healthcare and not a specific proprietary business interest of a commercial interest.

DISCLOSURE OF UNLABELED USE
This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. The planners of this activity do not recommend the use of any agent outside of the labeled indications. The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of the planners. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications, and warnings.

DISCLAIMER
Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested in this activity should not be used by clinicians without evaluation of their patient’s conditions and possible contraindications and/or dangers in use, review of any applicable manufacturer’s product information, and comparison with recommendations of other authorities.

REQUEST FOR CREDIT
If you wish to receive acknowledgment for completing this activity, please complete the evaluation on www.cmeuniversity.com. On the navigation menu, click on “Find Post-test/Evaluation by Course” and search by course ID 14551. Upon registering and successfully completing the activity evaluation, your certificate will be made available immediately.

PLANNERS AND MANAGERS
The PIM planners and managers have nothing to disclose. The Assistant Secretary of Defense for Health Affairs and The Bridge Group, planners and managers have nothing to disclose.

SPEAKER DISCLOSURES
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>Sunday, 18 August</td>
<td>1500-1900</td>
<td>REGISTRATION (City Hall Lobby)</td>
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<td>0600-1930</td>
<td>REGISTRATION (City Hall Lobby)</td>
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<td>0630-0830</td>
<td>BREAKFAST (Florida AB)</td>
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<td></td>
<td>0815-1130</td>
<td>PLENARY SESSION (Osceola Ballroom)</td>
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<td></td>
<td>0815-0835</td>
<td>Housekeeping Remarks Color Guard &amp; National Anthem</td>
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<td></td>
<td>0835-0845</td>
<td>Welcome Remarks RADM Mary C. Riggs, USN Deputy Assistant Director, Research &amp; Development Defense Health Agency</td>
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<tr>
<td></td>
<td>0845-0905</td>
<td>The Future of the Military Health System: Advancing the Integrated System of Readiness and Health Thomas McCaffery Assistant Secretary of Defense for Health Affairs</td>
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<td></td>
<td>0905-0925</td>
<td>Military Medical Research: Integrated Solutions for a Joint Force Vice Admiral Raquel C. Bono, USN Director, Defense Health Agency</td>
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<td></td>
<td>0925-0945</td>
<td>Scientific Collaboration is the Source of Strength We Need for the Future of our National Security Terry M. Rauch, Ph.D. Acting Deputy Assistant Secretary of Defense for Health Readiness Policy &amp; Oversight</td>
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<tr>
<td></td>
<td>0945-1000</td>
<td>Health Affairs Journal Thematic Issue on Military Health Systems: The Intersection of Military and Civilian Medicine Alan Weil, J.D., M.P.P. Editor-in-Chief, Health Affairs Journal</td>
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<td></td>
<td>1000-1030</td>
<td>BREAK (Osceola Foyer)</td>
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<td></td>
<td>1030-1050</td>
<td>2019 Award Presentation Distinguished Service Award Individual Awards Team Awards</td>
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<td>1050-1130</td>
<td>A Warrior's Story SGT Oliver Campbell (RET), USA Introduction by Col Todd Rasmussen, USAF</td>
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<td>1130-1330</td>
<td>NETWORKING LUNCH (Florida AB)</td>
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<tr>
<td>Monday, 19 August</td>
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<td>BREAKOUT SESSIONS</td>
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### 2019 Agenda

**Monday, 19 August**

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<tr>
<td></td>
<td>1330-1430</td>
<td><strong>Expeditionary Nursing</strong></td>
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<td></td>
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<td>CDR Virginia Blackman, USN COLL (RET) Elizabeth Mann-Salinas, USA COL (RET) Elizabeth Bridges, USAF LTC Christopher VanFosson, USA Moderators</td>
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<td></td>
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<td><strong>Ocular Injuries Caused by Exposure to Blast Overpressure</strong></td>
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<tr>
<td></td>
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<td>Daniel Bryden, Ph.D.</td>
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<td><strong>Managing Physiologic Events in Military Aviation</strong></td>
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<td>David Burch, Ph.D.</td>
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<td>1430-1730</td>
<td><strong>TBI Biomarkers: Diagnostic &amp; Prognostic Indicators</strong></td>
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<td>Nsini Umoh, Ph.D.</td>
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<td><strong>Management &amp; Treatment of Warfighter Neuro-musculoskeletal Injuries</strong></td>
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<td>Erik Wolf, Ph.D.</td>
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<td>Lloyd Rose, Ph.D.</td>
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<td>Arthi Amin, Ph.D.</td>
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<td>LTC Joseph Kardouni, USA</td>
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<td></td>
<td>1330-1530</td>
<td><strong>Innovative Countermeasures &amp; Diagnostics to Emerging Infectious Diseases</strong></td>
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<td></td>
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<td>CAPT David Bacon, USN</td>
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<td>LTC Jacob Johnston, USA</td>
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<td><strong>Acute Lifesaving Trauma Interventions</strong></td>
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<td>Thomas Walters, Ph.D.</td>
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<td><strong>Early Research in Total Exposure Health</strong></td>
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<td>Dirk Yamamoto, Ph.D.</td>
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<td>1530-1600</td>
<td><strong>BREAK</strong> (Osceola Foyer)</td>
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<tr>
<td></td>
<td>1600-1800</td>
<td><strong>Non-vaccine Approaches to Prevent or Treat Militarily Related Infections</strong></td>
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<td>Farrukh Rizvi, Ph.D.</td>
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<td><strong>Spinal Musculoskeletal Injury Prevention in Fixed &amp; Rotary Wing Environments (1600-1700)</strong></td>
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<td>Casey Pimstil, Ph.D.</td>
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<td><strong>Securing Warfighter Dominance in Future Air Battlespace (1700-1800)</strong></td>
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<td>CAPT Joseph Cohn, USN</td>
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<td><strong>Approaches to Prevention &amp; Treatment of High Risk Behaviors</strong></td>
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<td>MAJ Karmon Dyches, USA</td>
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<td>Fuad Issa, M.D.</td>
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<td><strong>Acute Lung Injury in Trauma &amp; Critical Illness</strong></td>
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<td></td>
<td>MAJ Sandy Snyder, USA</td>
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<tr>
<td></td>
<td>1800-2100</td>
<td><strong>EXHIBITS</strong> (Exhibit Hall - Florida DEF)</td>
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<td></td>
<td>1800-2100</td>
<td><strong>ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS RECEPTION</strong> (Exhibit Hall - Florida DEF)</td>
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## 2019 Agenda

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<tr>
<td></td>
<td>0600-1800</td>
<td>REGISTRATION (City Hall Lobby)</td>
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<td>0630-0830</td>
<td>BREAKFAST (Florida AB)</td>
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<td>0800-1000</td>
<td>PLENARY SESSION (Osceola Ballroom)</td>
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<td>Unexpected Survivors: The History &amp; the Future of Military Medicine</td>
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<td></td>
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<td>Emily Mayhew, Ph.D. Historian in Residence Imperial College, London,</td>
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<td>United Kingdom</td>
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<td>Creating Unexpected Survivors in a Real World Scenario: Decision</td>
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<td>Points in Contemporary Combat Casualty Care</td>
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<td>LTC Brian Beldowicz, USA Moderator</td>
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<td></td>
<td>0900-1630</td>
<td>EXHIBITS (Exhibit Hall - Florida DEF)</td>
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<td>1000-1030</td>
<td>BREAK (Exhibit Hall - Florida DEF)</td>
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<td></td>
<td>1000-1030</td>
<td>POSTER SESSION 1 (Exhibit Hall - Florida DEF)</td>
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<td></td>
<td></td>
<td>WARFIGHTER MEDICAL READINESS &amp; RETURN TO DUTY</td>
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<tr>
<td></td>
<td>1000-1600</td>
<td>(Poster set-up 0900)</td>
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<td></td>
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<td>(Presenters at Posters 1000-1200)</td>
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<td>(Poster Take-down by 1600)</td>
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<td></td>
<td>1130-1300</td>
<td>LUNCH (Florida AB)</td>
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### WARFIGHTER MEDICAL READINESS
- Training Effectiveness for Point of Injury Medical Care
- Innovative Countermeasures & Diagnostics to Emerging Infectious Diseases
- Non-vaccine Approaches to Prevent or Treat Militarily Related Infections
- Influenza Prevention: Optimal Strategies to Enhance Readiness
- Occupational & Environmental Exposure: Basic & Applied Research
- Early Research in Total Exposure Health Monitoring
- Enhanced Human Performance & Survivability in Extreme Environments
- Directed Energy Health Effects
- Military Family Frameworks for Readiness & Resilience Approaches to Prevention & Treatment of High Risk Behaviors
- Hitting the Target—Ensuring Optimal Human Performance, Psychological Health & Readiness Throughout Military Service
- Auditory Injury Prevention

### RETURN TO DUTY
- What's New in Antimicrobial Development to Counter Multidrug-resistant Bacterial Infections in Military Personnel
- Assessment & Treatment of Battlefield Auditory System Injuries
- How to Preserve & Restore Eyesight After Combat Trauma
- Warfighter Readiness: Impact of Trauma
- Far Forward Military Behavioral Health Innovations
- Innovations in PTSD Prophylaxis/ Prevention & Biomarker Research in Military Populations
- Cognitive Readiness: Bridging the Gap Between Neuropsychological Tests & Warfighter Readiness
- Long-Term Impairment following Concussion: Understanding Discrepancies in Reported Outcomes & Implications for Return-to-Duty
- Functional Return to Duty Decision Making Post mTBI & Musculoskeletal Injury Management & Treatment of Warfighter Neuromusculoskeletal Injuries Rehabilitation following Limb Trauma & Amputation
- Blast, Blunt, Accelerative Exposure in Training

### ANCILLARY TOPICS
- Precision Medicine for Acute & Trauma and Critical Care
- What's New in Global Health Engagement Research?
- Topics in Research Support, Compliance, & Ethics
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<td>Jennifer Winner, M.S., MBA Teresa Millwater, DNP</td>
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<td>Combat Casualty Care for the Navy: Challenges at Sea</td>
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|             | Sun A         | The Future Front Line: Supporting the Warfighter of Today with Innovation of Tomorrow 
Maj Gen Lee Payne, USAF Moderator |
|             | Naples        | Innovative Approaches to Prevent, Diagnose & Treat Sepsis During Prolonged Field Care 
CAPT David Bacon, USN LT. Jacob Johnston, USA Moderators |
|             | Sun B         | Lower & Upper Extremity Musculoskeletal Injury Prevention in the Training & Operational Dismounted Environment 
Richard Shoge, Ph.D. Pinata Sessoms, Ph.D. Moderators |
|             | Sun C123      | Military Family Frameworks for Readiness & Resilience 
CDR Abigail Yablonsky, USN Moderator |
| Wednesday, 21 August | 1300-1500   | Two-Hour Session                                                      |
|             | Sun A         | Innovations in Medical Technologies to Advance En Route Patient Care 
Christopher Dooley, M.S. Moderator |
|             | Naples        | Precision Medicine for Acute Trauma & Critical Care 
CDR Matthew Bradley, USN Moderator |
|             | Tallahassee   | Improved Occupational & Environmental Monitoring 
Valerie DiVito, Ph.D. David Schauer, ScD. Moderators |
|             | Sun C123      | Pathways to Small Business Innovation Research/Small Business Technology Transfer Research Success in the Defense Health Agency 
CDR Joseph Cohn, USN Moderator |
|             | 1530-1730     | **BREAK** (Osceola Foyer and Exhibit Hall - Florida DEF)               |
|             | Sun C123      | Long-Term Impairment following Concussion: Understanding Discrepancies in Reported Outcomes & Implications for Return-to-Duty 
Karen Schwab, Ph.D. Moderator |
|             | Naples        | Occupational & Environmental Exposure: Basic & Applied Research 
Darrin Ott, Ph.D. Lt Col Kathy Fullerton, USAF Moderators |
|             | Tallahassee   | Blast, Blunt, Accelerative Exposure in Training 
Thuvan Piehler, Ph.D. Moderator |
|             | Sun A         | Hemorrhage Control & Resuscitation 
Michael Dubick, Ph.D. Moderator |
|             | Sun B         | En Route Care Future Research Challenges Part 1 
Maj Cubby Gardner, USAF Moderator |
|             | Naples        | Rehabilitation Following Limb Trauma & Amputation 
Andrea Crunkhorn, DPT Jason Ghanmadian, M.S. Moderators |
|             | Tallahassee   | Updates on Military Women’s Health 
CAPT Lisa Braun, USN LT. Leilani Siaki, USA Moderators |
|             | Sun A         | Other Transaction Agreements: Accelerating the Transition of Technology into the Hands of the Warfighter 
Sara Langdon, MBA Moderator |
## 2019 Agenda

### Thursday, 22 August

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<td>Management of Sleep &amp; Fatigue for Maximization of Soldier Operational Readiness</td>
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<td>Delivering &amp; Applying Artificial Intelligence for Warfighter Health &amp; Readiness - A Combat Multiplier</td>
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<td>Managing Physiologic Events in Military Aviation</td>
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## Breakout Sessions

**Monday, 19 August**

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<td>TBI Biomarkers: Diagnostic &amp; Prognostic Indicators</td>
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<td>Using Blood-brain Barrier Organ-on-a-chip Technology To Investigate Biomarkers Of Neurological And Psychological Disorders</td>
<td>MHSRS-19-0246</td>
<td>Dao Ho, Ph.D.</td>
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<td>1454 - 1506</td>
<td>Can Transcranial Doppler Ultrasound Be Used To Monitor Brain Dysfunction Following Concussion?</td>
<td>MHSRS-19-01085</td>
<td>Sushmita Parkayastha, Ph.D.</td>
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<td>1506 - 1518</td>
<td>Return To Activity Assessment Based On Hemodynamic Alterations After Mild Traumatic Brain Injury Using Transcranial Doppler Ultrasound</td>
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<td>Regional Brain Saturation Oxygenation In Chronic Mild TBI: Effect Of Hypoxia As A Stress Paradigm</td>
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<td>Reliable Measures Of Reduced Brain Connectivity In Chronic Post-concussive Syndrome - A Team TBI Study</td>
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<td>Fiber Tract Asymmetry: A Novel Approach To Assessing White Matter Integrity With Diffusion Tensor Imaging In Traumatic Brain Injury</td>
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<td>Localizing Patterns Of Blast Traumatic Brain Injury From Different Blast Scenarios And Correlating To Clinical Injury Patterns</td>
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### Breakout Sessions

**Three-Hour Session**

**1430 - 1730**

**Predictive Analytics within the Military Health System**

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<td>Jesus Caban, Ph.D.</td>
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<td>Bringing The MHS Into The Future Through Advanced Analytics</td>
<td>MHSRS-19-01142</td>
<td>Terry Adirim, M.D., MPH</td>
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<td>MHSRS-19-00451</td>
<td>COL. Jenifer Meno, USA</td>
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<td>MHS And DHA Leadership Q&amp;A - Analytics Across the MHS</td>
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<td>Terry Adirim, M.D., MPH COL. Jenifer Meno, USA</td>
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<td>Sanja Avramovic, Ph.D.</td>
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<td>Enhancing Transfusable Platelets For Hemorrhage Control Using Liposomal Transfection</td>
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## Breakout Sessions

### Early Research in Total Exposure Health

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<td>Dirk Yamamoto, Ph.D.</td>
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<td>MHSRS-19-00629</td>
<td>Tanisha Hammill, Ph.D.</td>
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<td>The Los Angeles Prisms Breathe Kit: A Wearable, Sensor-based mHealth Platform For 24/7 Real-time Measurement, Integration And Analysis Of Environmental Exposure, Geolocation And Physiological Data</td>
<td>MHSRS-19-01564</td>
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<td>The Microbiome Of Occupants And The Built Environment At The United States Air Force Academy</td>
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<td>Genome-wide Polygenic Risk Scores Identify Individuals At Elevated Risk For Hearing Loss</td>
<td>MHSRS-19-01897</td>
<td>C. Scott Gallagher, Ph.D.</td>
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<tr>
<td>1450 - 1505</td>
<td></td>
<td>A Novel Subject Matter Expert-informed Approach To Assess The Likelihood Of Long-term Injury Following Acute Exposures</td>
<td>MHSRS-19-02446</td>
<td>Kevin Wegman, M.S.</td>
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<tr>
<td>1505 - 1520</td>
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<td>Development Of A Data And Analytics Infrastructure For Total Exposure Health Research</td>
<td>MHSRS-19-01802</td>
<td>Ramkiran Gouripedd, M.D.</td>
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<tr>
<td>1520 - 1530</td>
<td></td>
<td>Q&amp;A</td>
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### Far Forward Military Behavioral Health Innovations

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<tr>
<td>1330 - 1354</td>
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<td>Addressing Behavioral Health Concerns On The Far-forward Battlefield: The Army’s Current And Planned Efforts</td>
<td>MHSRS-19-02047</td>
<td>Katie Nugent, Ph.D.</td>
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<tr>
<td>1354 - 1418</td>
<td></td>
<td>The Behavioral Health Readiness Evaluation And Decision-making Instrument Study</td>
<td>MHSRS-19-02491</td>
<td>LTC Justin Curley, USA</td>
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<tr>
<td>1418 - 1442</td>
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<td>The Behavioral Health Officer: A Vital Role In Far Forward Behavioral Health Delivery</td>
<td>MHSRS-19-01841</td>
<td>MAJ James MacDonald, USA</td>
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<tr>
<td>1442 - 1506</td>
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<td>Optimizing The Scalability Of Evidence-based Behavioral Sleep Medicine Practices: From Clinics To Far Forward Operations</td>
<td>MHSRS-19-01491</td>
<td>Anne Germain, Ph.D.</td>
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### Breakout Sessions

**Monday, 19 August**

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<tr>
<td>1600 - 1800</td>
<td>Non-vaccine Approaches to Prevent or Treat Militarily Related Infections</td>
<td>1600 - 1620</td>
<td>Practice Variation And Gaps In The Deployment And Travel Medicine Knowledge Attitude, Practice And Outcomes Study</td>
<td>MHSRS-19-00649</td>
<td>CDL Patrick Hickey, USA</td>
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<td>1620 - 1640</td>
<td></td>
<td>Development Of An Innovative Differential Diagnosis Application For Tick-borne Diseases To Improve Clinical Diagnosis And Facilitate Early Treatment</td>
<td>MHSRS-19-00559</td>
<td>Corey Meyer, Ph.D.</td>
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<tr>
<td>1640 - 1700</td>
<td></td>
<td>Engineering Lactobacillus Communities With A Sense-And-Response Circuit For Pathogen Detection And Biomolecule Delivery</td>
<td>MHSRS-19-01662</td>
<td>Scott Walper, Ph.D.</td>
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<tr>
<td>1700 - 1720</td>
<td></td>
<td>Human-immune-system DRAGA Mice For Infectious Diseases Research And Generation Of Therapeutic Human Monoclonal Antibodies</td>
<td>MHSRS-19-01755</td>
<td>Sofia Casares, Ph.D.</td>
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<tr>
<td>1720 - 1740</td>
<td></td>
<td>Prevention And Treatment Of Post-burn Infections In Mice And Sheep With The Toll-like Receptor 4 Agonist Monophosphoryl Lipid A</td>
<td>MHSRS-19-02014</td>
<td>Julia Bohannon, Ph.D.</td>
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<tr>
<td>1740 - 1800</td>
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<td>An Open Label Study Of The Safety And Efficacy Of Weekly Chloroquine And Azithromycin Administered In Combination For Malaria Prophylaxis In Healthy Adults Challenged With Chloroquine-resistant P. Falciparum In A Controlled Human Malaria Infection Model</td>
<td>MHSRS-19-01361</td>
<td>LTC Jeffery Livezey, USA</td>
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<td>Spinal Musculoskeletal Injury Prevention in Fixed &amp; Rotary Wing Environments (1600-1700)</td>
<td>1600 - 1609</td>
<td>A Comparison Of Non-human Primate Injuries Documented In Horizontal Versus Vertical Sled +Gz (Head-to-foot) Impact Accelerations</td>
<td>MHSRS-19-00144</td>
<td>Alicia Abraczinskas, B.S.</td>
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<td>Pelvic Injury Risk Curves For The Military Populations From Lateral Impact</td>
<td>MHSRS-19-00482</td>
<td>Narayan YoganAndan, Ph.D.</td>
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<td>Vertebral Level-dependent Kinematics Of Female And Male Necks Under G+x Loading</td>
<td>MHSRS-19-00872</td>
<td>Jamie Baisden, M.D.</td>
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<td>Recommendations For Mitigating Aircrew Neck Pain From The NATO HFM-252 Research Task Group</td>
<td>MHSRS-19-01482</td>
<td>Barry Shender, Ph.D.</td>
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<td>Upright MRI Study Of Cervical Flexor/extensor Musculature And Cervical Lordosis In Females After Helmet Wear</td>
<td>MHSRS-19-00878</td>
<td>Hoon Choi, M.D.</td>
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<td>Measurement Of C-spine Kinematics During Simulated Work Conditions Using Dual Ultrasound</td>
<td>MHSRS-19-01533</td>
<td>Amin Mohamadi, M.D.</td>
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<td>Patient Reported Outcomes Of Treatment Based Classification And Injury Prevention Program For Addressing Low Back Pain In Helicopter Aircrew</td>
<td>MHSRS-19-02274</td>
<td>Trevor Kingsbury, M.A.</td>
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<tr>
<td>1600 - 1800</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1700 - 1705</td>
<td>Introduction</td>
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<td>CAPT Joseph Cohn, USN</td>
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<td>1705 - 1715</td>
<td>Leveraging Augmented, Virtual, And Mixed Reality for Student Naval Aviator Training</td>
<td>MHSRS-19-02251</td>
<td>LT Joseph Mercado, USN</td>
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<td>1715 - 1725</td>
<td>Machine Learning Approaches to Naval Aviation Training, Selection, And Assessment: Opportunities And Challenges</td>
<td>MHSRS-19-01530</td>
<td>LT Eric Vorm, USN</td>
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<td>1725 - 1735</td>
<td>Progress Towards the Development of an Army Aviator Risk Assessment Model</td>
<td>MHSRS-19-01243</td>
<td>Thomas Harding, Ph.D.</td>
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<td>1735 - 1745</td>
<td>Enhancing Performance through Vision: Sports Vision Training in Collegiate Baseball Hitters</td>
<td>MHSRS-19-00055</td>
<td>MAJ Lyndsay Ferris, USA</td>
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<td>1745 - 1755</td>
<td>Neuroergonomics of the Human-Machine Interface: Radiologist Image Processing as a Model of Warfighter Perceptual Error</td>
<td>MHSRS-19-00300</td>
<td>Mariya Gusman, M.D.</td>
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<td>1755 - 1800</td>
<td>Closing Remarks</td>
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<td>LT Todd Seech, USN</td>
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<tr>
<td>1600 - 1615</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1600 - 1615</td>
<td>Sexually Transmitted Infections, Sexual Risk Behavior And Alcohol Misuse Among U.S. Navy And Marine Corps Shipboard Service Members</td>
<td>MHSRS-19-00500</td>
<td>Judith Harbertson, Ph.D., MPH</td>
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<td>1615 - 1630</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1615 - 1630</td>
<td>Improving The Military Health System’s Response To Emerging At-risk Alcohol Problems</td>
<td>MHSRS-19-00763</td>
<td>Rachel Sayko Adams, Ph.D., MPH</td>
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<tr>
<td>1630 - 1645</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1630 - 1645</td>
<td>Eliminating High-cost, Low-value Care: Implementation Of A Multidisciplinary Clinical Practice Guideline Reduces Admissions For Low-risk Alcohol Withdrawal Syndrome At A Large Military Treatment Facility</td>
<td>MHSRS-19-00274</td>
<td>LT Erran Briggs, USN</td>
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<tr>
<td>1645 - 1700</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1645 - 1700</td>
<td>Alcohol Use Disorder: Clinical And Aeromedical Practice Guidelines</td>
<td>MHSRS-19-01793</td>
<td>Ryan Peirson, M.D.</td>
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<td>1700 - 1703</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1700 - 1703</td>
<td>Joint Program Committee-5/Military Operational Medicine Research Program Suicide Strategy</td>
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<td>CDR Christopher Steele, USN</td>
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<td>1703 - 1715</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1703 - 1715</td>
<td>Postinjury Mental Health And Health Behaviors Among Service Members Injured On Deployment</td>
<td>MHSRS-19-01356</td>
<td>Cameron McCabe, Ph.D.</td>
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<tr>
<td>1715 - 1730</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1715 - 1730</td>
<td>Development Of The Army's Suicide Prevention Leadership Tool</td>
<td>MHSRS-19-02444</td>
<td>LTC Justin Curley, USA</td>
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<tr>
<td>1730 - 1745</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1730 - 1745</td>
<td>Separation From Active Duty Service And Suicidality: Inaccurate Affective Forecasting?</td>
<td>MHSRS-19-01749</td>
<td>Anna Gai, M.S.</td>
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<tr>
<td>1745 - 1800</td>
<td>Approaches to Prevention &amp; Treatment of High Risk Behaviors</td>
<td>1745 - 1800</td>
<td>Military Suicide Research Consortium High-impact Findings</td>
<td>MHSRS-19-02418</td>
<td>Peter M. Gutierrez, Ph.D. Thomas Joiner, Ph.D.</td>
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# Breakout Sessions

**Two-Hour Session 1600 - 1800**

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<tr>
<td>1600</td>
<td>Acute Lung Injury in Trauma &amp; Critical Illness</td>
<td>Welcome &amp; Introduction</td>
<td></td>
<td>MAJ Sandy Snyder, USA</td>
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<tr>
<td>1600 - 1615</td>
<td></td>
<td>Early Identification of Acute Lung Injury in a Porcine Model of Hemorrhagic Shock</td>
<td>MHSRS-19-01109</td>
<td>Mackenzie Morris, M.D.</td>
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<tr>
<td>1615 - 1630</td>
<td></td>
<td>Early Phase Effects Of Resuscitation Strategy On Extravascular Lung Water And The Development Of Acute Lung Injury In An Experimental Porcine Hemorrhage-reperfusion Model</td>
<td>MHSRS-19-02616</td>
<td>CPT Robert Conrad, USA</td>
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<tr>
<td>1630 - 1645</td>
<td></td>
<td>Does Driving Pressure Matter During ECLS For Trauma With Single Lung Ventilation?</td>
<td>MHSRS-19-00053</td>
<td>Andriy Batchinsky, M.D.</td>
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<tr>
<td>1645 - 1700</td>
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<td>Minimally Invasive ECCO2R Using The Cardiohelp Permits Reductions In Ventilator Settings In Swine With Smoke Inhalation And Burns</td>
<td>MHSRS-19-00056</td>
<td>Andriy Batchinsky, M.D.</td>
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<td>1700 - 1715</td>
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<td>A Heparin-free Technique For Improving ECLS Performance</td>
<td>MHSRS-19-00272</td>
<td>Yanyi Zang, B.S.</td>
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<td>1715 - 1730</td>
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<td>Impact Of Closed Loop Control Oxygenation On Pulmonary Function, Fluid Balance And Survival In Sheep Subjected To Combined Burn And Smoke Inhalation</td>
<td>MHSRS-19-01789</td>
<td>Keibun Liu, M.D.</td>
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<tr>
<td>1730 - 1745</td>
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<td>Oxygen-on-a-chip For Real-time On-demand Intravenous Oxygen Delivery</td>
<td>MHSRS-19-02116</td>
<td>Brian Polizzotti, Ph.D.</td>
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<td>1745 - 1800</td>
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<td>Novel Nanocarriers For Lung Inflammation Therapy</td>
<td>MHSRS-19-02499</td>
<td>Natalia Higuita-Castro, Ph.D.</td>
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## Tuesday, 20 August

### Keynote
- **0800 - 0830**
  - Unexpected Survivors: The History And The Future Of Military Medicine
  - Emily Mayhew, Ph.D.

### PANEL: Creating Unexpected Survivors in a Real World Scenario: Decision Points in Contemporary Combat Casualty Care
- **0830 - 1000**
  - Panel Discussion
  - LTC Brian Baldowicz, USAF (Moderator)
  - Col Todd Rasmussen, USAF
  - Col Stacy Shackleford, USAF
  - CAPT Eric Elster, USN
  - CDR Matthew Bradley, USN
  - LTC Phu "Chuck" Nguyen, USA

### Two-Hour Session
#### 1300 - 1500
- **Training Effectiveness for Point Of Injury Medical Care**
  - **1300 - 1310**
    - Focus On Training Effectiveness
    - Jennifer Winner, M.S., MBA
  - **1310 - 1325**
    - Development Of A Joint Tactical Combat Casualty Care Curriculum
    - Matthew Hackett, Ph.D.
  - **1325 - 1340**
    - Anatomic Accuracy Of Airway Training Manikins Compared To Human Subjects
    - Stewart Wang, M.D., Ph.D.
  - **1340 - 1355**
    - Advanced Modular Manikin Phase 2 Update
    - Robert Sweet, M.D.
  - **1355 - 1410**
    - Enabling Joint Medical Modeling And Simulation Training With A Standard Data Object Model
    - Erin Honold, B.S.
  - **1410 - 1425**
    - Monitoring, Extracting, And Decoding Indicators Of Cognitive Workload, A Hardware And Software System To Accurately Assess Cognitive Workload During Ecologically Valid Tasks
    - Bethany Bracken, Ph.D.
  - **1425 - 1440**
    - EMS-TruShoC: A Quasi-experimental Trial Of Hemorrhagic Shock Training Using A Simplified Approach Of Bundled Care
    - Nee-Kofi Mould-Millman, M.D.
  - **1440 - 1455**
    - Emergency, Just-in-time Refreshing Of Combat Trauma Surgical Skills, Via Video Review Or Telementoring, Dramatically Improves Surgeon Performance Of Extremity Fasciotomies
    - Samuel Tisherman, M.D.
  - **1455 - 1500**
    - Discussion & Questions

### Two-Hour Session
#### 1300 - 1500
- **Hitting the Target—Ensuring Optimal Human Performance, Psychological Health & Readiness Throughout Military Service**
  - **1300 - 1305**
    - Session Introduction
    - CDR Christopher Steele, USN
  - **1305 - 1320**
    - Lesbian, Gay, Bisexual, And Transgender Service Members: A Mediation Analysis Explores The Relationship Between LGBT-affirming Workplace Climate, Unit-level Cohesion, And Social Support In Mental Health Outcomes
    - Capt Kathleen McNamara, USAF
  - **1320 - 1335**
    - Should We Continue To Access Marine Recruits With ADHD?
    - Diane Williams, Ph.D.
  - **1335 - 1350**
    - Increasing The Interater Reliability Of Medical Accession Waivers Granted By The Navy Bureau Of Medicine And Surgery
    - Tanya Saloom, MPH
  - **1350 - 1405**
    - Antidepressant Use In USAF Aviators And Special Operations Forces
    - Ryan Peirson, M.D.
  - **1405 - 1420**
    - Mental Skills Fitness Training For Optimal Human Performance
    - COL Vanessa Meyer, USA
  - **1420 - 1435**
    - Wingman-connect: Universal Suicide Prevention For Air Force Trainees Via Promotion Of Healthy Social Bonds
    - Peter Wyman, Ph.D.
  - **1435 - 1450**
    - Emotion Regulation: Helper Or Hindrance?
    - Ashley Marie Holland, B.A.
  - **1450 - 1500**
    - Discussion And Wrap up
    - CDR Christopher Steele, USN
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| Two-Hour Session 1300 - 1500 | Case Records Of the Joint Trauma System | 1300 - 1500 | Panel Discussion |  | Col Stacy Shackelford, USAF  
LTC Ethan Miles, MC, USA  
Moderators |
| Two-Hour Session 1300 - 1500 | What's New in Brain Health for Elite Warfighters | 1300 | Welcome |  | Col Eveline Yao, USAF  
USSOCOM Surgeon General |
<p>| 1300 - 1312 | | | Injury Characteristics, Symptom Reporting, And Neuropsychological Profiles Between Special Operations Forces And Conventional Military Forces Within A Large Military Treatment Facility | MHSRS-19-00062 | Lars Hungerford, Ph.D. |
| 1313 - 1325 | | | Dietary Ingredients Promoted For Brain Health: An Analysis Of Identified Products And Systematic Review Of Ingredients In Products | MHSRS-19-00523 | Patricia Deuster, Ph.D., MPH |
| 1326 - 1338 | | | Evidence Of Interface Astroglial Scarring In The Brains Of Military Service Members Who Have Committed Suicide | MHSRS-19-00676 | Dan Perl, M.D. |
| 1339 - 1351 | | | Beliefs About The Importance Of Rest During Concussion Recovery May Predict Activity And Symptom Progression Within An Active Duty Military Population | MHSRS-19-00843 | Rosemary Remigio-Baker, Ph.D., MPH |
| 1352 - 1404 | | | Efficacy For RTMS For Improving Cognition In Veterans With Mild TBI: Results From Pilot Clinical Trial | MHSRS-19-00846 | Maheen Adamson, Ph.D. |
| 1405 - 1417 | | | A Nutritional Supplement And Exercise Intervention Enhances Fitness And Cognition: Evidence From A 12 Week Randomized Controlled Trial With Active Duty Airmen | MHSRS-19-02207 | Christopher Zwilling, Ph.D. |
| 1418 - 1430 | | | Cerebrovascular Function Is Not Associated With Neurocognitive Testing In Special Operations Forces Soldiers | MHSRS-19-02267 | Patricia Combs, M.Ed. |
| 1431 - 1443 | | | Balance And Sensory Function Remain Stable Across Time In Special Operations Forces Soldiers Despite Altered Mild Traumatic Brain Injury Status | MHSRS-19-02316 | Cassie Ford, Ph.D. |
| 1444 - 1456 | | | The Relationship Between Neuropsychological And Visual Function Assessments In Special Operations Forces Soldiers | MHSRS-19-02369 | Jamie DeCicco, B.A. |
| 1456 - 1500 | | | Discussion &amp; Wrap up |  |  |</p>
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<td>Two-Hour Session</td>
<td>Pain Management for the Future Fight</td>
<td>Tuesday, 20 August</td>
<td>Two Decades Of Battlefield Pain Management</td>
<td>MHSRS-19-01936</td>
<td>CPT Avishai Tour, M.D., MHA</td>
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<td>1300 - 1312</td>
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<td>Effects Of Unpredictable Combat Stressors On Thermal Injury-induced Mechano- sensitivity In A Female Rodent Model</td>
<td>MHSRS-19-01044</td>
<td>Misty Malamakal, Ph.D.</td>
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<td>1312 - 1324</td>
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<td>Global Transcriptomic Analysis Of The Rat Brain During Chronic Neuropathic Pain Development</td>
<td>MHSRS-19-00391</td>
<td>John Clifford, Ph.D.</td>
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<td>1324 - 1336</td>
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<td>Repurposing The NRF2 Activator Dimethyl Fumarate For Treatment Of Pain Due To Traumatic Nerve Injury in Male Rats</td>
<td>MHSRS-19-00374</td>
<td>Peter Grace, Ph.D.</td>
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<td>1336 - 1348</td>
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<td>Novel Multifunctional Cyclic Peptide-based Analgesics Suitable for Intranasal Delivery to Brain</td>
<td>MHSRS-19-01595</td>
<td>Predrag Cudic, Ph.D.</td>
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<td>1412 - 1424</td>
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<td>Bioactive Peptides From Marine Cone Snails: A Rich Source Of Non-opioid Leads For Pain</td>
<td>MHSRS-19-02229</td>
<td>Baldomero Olivera, Ph.D.</td>
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<td>1424 - 1436</td>
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<td>Discussion &amp; Wrap-up</td>
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<tr>
<td>Two-Hour Session</td>
<td>How to Preserve &amp; Restore Eyesight After Combat Trauma</td>
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<td>Downrange Diagnostic Challenge: Miller-Fisher Syndrome Diagnosed With A Real Time Video Teleconference From A Role 3 To Multiple Role 4’s</td>
<td>MHSRS-19-00765</td>
<td>CPT Matthew Cardinale, USA</td>
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<td>1300 - 1310</td>
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<td>Characterization Of The Default Immune Pathways in Cornea Damage That Lead Scarring And Immunomodulation To Promote Healthy Repair</td>
<td>MHSRS-19-01748</td>
<td>Liam Chung, M.S.</td>
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<td>1315 - 1325</td>
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<td>Oxygenated Emulsion For The Topical Treatment Of Ocular Alkali Burn</td>
<td>MHSRS-19-02296</td>
<td>Kathryn Pate, Ph.D.</td>
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<td>1330 - 1340</td>
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<td>OcuPair: A Novel Dendrimer-hyaluronic Acid Hydrogel Sealant For Temporary Corneal Wound Stabilization</td>
<td>MHSRS-19-01422</td>
<td>Siva Kambhampani, Ph.D.</td>
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<td>1345 - 1355</td>
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<td>Inflammation In A Rabbit Model Of Penetrating Injury To The Posterior Segment</td>
<td>MHSRS-19-01209</td>
<td>Whitney Greene, Ph.D.</td>
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<td>Protection For Photoreceptors With Rock Inhibition After Injury-induced Retinal Detachment</td>
<td>MHSRS-19-00876</td>
<td>Ellen Townes-Anderson, Ph.D.</td>
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<td>Annexin A2 Mediates Development Of Proliferative Vitreoretinopathy Following Penetrating Ocular Injury</td>
<td>MHSRS-19-01563</td>
<td>Katherine Hajjar, M.D.</td>
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<td>Dexamethasone-eluting Contact Lenses Inhibit VEGF-induced Retinal Vascular Leakage In A Rabbit Model</td>
<td>MHSRS-19-00410</td>
<td>Amy Ross, M.S.</td>
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### Breakout Sessions

#### Tuesday, 20 August

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<td><strong>Aligning Readiness &amp; Research: An Educational Pipeline for Quality Provider-Scientists</strong></td>
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<td>Dylan Schmorrow, Ph.D.</td>
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<td>Establishment of the Provider Scientist Investigator Opportunity Network (PSION): A Case Study on Clinical Research Productiveness</td>
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## Breakout Sessions

### Two-Hour Session 1530 - 1730

**Influenza Prevention: Optimal Strategies to Enhance Readiness**

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<td>Influenza Surveillance And Vaccine Effectiveness Estimates For The 2018-2019 Season Within Populations Of DoD Interest And The Need For Additional Research To Inform Vaccination Policy</td>
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<td>LeeAnne Lynch, MPH</td>
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<td>Pragmatic Assessment Of Influenza Vaccine Effectiveness in The DoD: Methods</td>
<td>MHSRS-19-02178</td>
<td>Christian Coles, Ph.D.</td>
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<td>Do NSAIDS Or Executing Exercise Decrease Local Erythema, Site Swelling &amp; Pain After Inoculation: The Need Less Pain Study</td>
<td>MHSRS-19-01417</td>
<td>Laurie Housel, FNP-C, GNP-BC</td>
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<td>Reporting For Duty: Utilizing Influenza Vaccination And Laboratory Data To Report Flu Among Active Duty Sailors And Marines</td>
<td>MHSRS-19-01957</td>
<td>Kathleen Creppage, DrPH</td>
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<td>Etiology Of Infections Causing Influenza-like Illness Based on Multi-year Assessment Of Surveillance Methodology in the DoD Global Respiratory Pathogen Surveillance Program</td>
<td>MHSRS-19-02667</td>
<td>Anthony Fries, Ph.D.</td>
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<td>1700 - 1730</td>
<td>Panel Discussion: Way Ahead For influenza Prevention Strategies</td>
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### Two-Hour Session 1530 - 1730

**Innovations in PTSD Prophylaxis/Prevention & Biomarker Research in Military Populations**

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<td>Epigenetic Biotypes Of Warzone-related Post-traumatic Stress Disorder</td>
<td>MHSRS-19-00980 (MHSRS-19-01021 combined)</td>
<td>Ruoting Yang, Ph.D.</td>
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<td>Epigenetic Age In Male Combat-exposed War Veterans: Associations With Posttraumatic Stress Disorder Status</td>
<td>MHSRS-19-01394</td>
<td>Ruoting Yang, Ph.D.</td>
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<td>DNA Methylation Changes Linked To Post-traumatic Stress Disorder In Active Duty Service Members</td>
<td>MHSRS-19-00706</td>
<td>Aarti Gautam, Ph.D.</td>
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<td>Can We Identify Reproducible Sleep EEG Markers Of PTSD?</td>
<td>MHSRS-19-00693</td>
<td>Jaques Reifman, Ph.D.</td>
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<td>Innate And Adaptive Immune Signatures Of Susceptibility To PTSD And Treatment Response In Active-duty Military Personnel</td>
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<td>Doug Williamson, Ph.D.</td>
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<td>Developing A Multi-omics Next-generation Tool For Profiling Predisposition To PTSD</td>
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<td>Tshaka Cunningham, Ph.D.</td>
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<td>Cassandra Clouse, M.S.</td>
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<td>Blue Light Exposure Enhances Sleep And Fear Extinction Recall In PTSD</td>
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## Breakout Sessions

### Advances in Burn Wound Management During Prolonged Care

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<td>Visualization Of Burn Severity And Progression Using A Topical Fluorescent Liquid Bandage And DSLR Camera</td>
<td>MHSRS-19-00456</td>
<td>Haley Marks, Ph.D.</td>
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<td>Enzymatic Debridement Of Burn Wounds Via A Novel Protease, SNS514</td>
<td>MHSRS-19-02199</td>
<td>Randolph Stone, Ph.D.</td>
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<td>Limited Volume Resuscitation With 5% Albumin Exacerbates Liver Injury In A 40% TBSA Swine Burn Model</td>
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<td>David Burmeister, Ph.D.</td>
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<td>Re-engineering A Fibronectin-derived Peptide For Topical Treatment Of Burns And Chronic Wounds</td>
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<td>Cerium (Ii) Nitrate Containing Electrospun Dressing For Mitigating Infection And Burn Severity</td>
<td>MHSRS-19-01670</td>
<td>Cortes Williams, Ph.D.</td>
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<td>Exploring Nutritional Intake And Wound Healing Of Critically Ill Burn Patients</td>
<td>MHSRS-19-01329</td>
<td>LT Sarah Rupert, USA</td>
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<td>Full-thickness Skin Columns In The Treatment Of Deep Partial Thickness Burns</td>
<td>MHSRS-19-01130</td>
<td>Maria Batchinsky, B.S.</td>
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<td>Accelerated Wound Closure Of Deep Partial Thickness Burns With Acellular Fish Skin</td>
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### Assessment & Treatment Of Battlefield Auditory System Injuries

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<td>Delayed Auditory Recovery In Young Adult Mice After Traumatic Noise Damage</td>
<td>MHSRS-19-01408</td>
<td>Patricia White, Ph.D.</td>
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<td>MGLU7 Receptor Blockade: A Novel Therapeutic Approach To Prevent And Treat Noise-induced Hearing Loss And Tinnitus</td>
<td>MHSRS-19-02032</td>
<td>Guillaume Duvey, Ph.D.</td>
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<td>A Large Scale Brain Imaging Study Using FMRI To Understand Tinnitus And Its Impact In Military And Civilian Population</td>
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<td>Fatima Hussain, Ph.D.</td>
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<td>Effect Of Hyperbaric Oxygen Therapy And Corticosteroid Therapy In Military Personnel With Acute Acoustic Trauma</td>
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<td>Ahmed Bayoumy, Ph.D.</td>
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<td>The Relationship Between Subjective Reports Of Temporary Threshold Shift And The Prevalence Of Hearing Problems In Military Personnel</td>
<td>MHSRS-19-01062</td>
<td>Mary E. Barrett, AuD.</td>
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<td>Progress On Pharmaceutical Interventions For Noise Induced Hearing Loss</td>
<td>MHSRS-19-00998</td>
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<td>Functional Return to Duty Decision Making Post mTBI &amp; Musculoskeletal Injury</td>
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<td>Postconcussive Symptoms Strongly Associated With Acute Mild Traumatic Brain Injury: Suggestions For Interpreting The Neurobehavioral Symptom Inventory When Evaluating Military Service Members</td>
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**Tuesday, 20 August**

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<td>CDMRP Research Programs - Funding Process And Strategies For Success</td>
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<td>Execution Planning with DoD Funding</td>
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<td>1655 - 1705</td>
<td>Cooperative Research And Development Agreements in DoD-Funded Collaborations</td>
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<td>Robert L. Charles JD, LLM, MPH</td>
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<td>1705 - 1715</td>
<td>DoD-Funded Research And DoD Collaborations - Planning For Translation</td>
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<td>Orazio Santullo, O.D.</td>
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<td>Funding Opportunities And Programs - Individual Table Discussions/ Questions &amp; Answers</td>
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<td>Representatives from: CDMRP, SBIR/STTR Office, Human Research Protections Office, U.S. Army Medical Research Acquisition Activity, Judge Advocate General</td>
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<td>Mental And Behavioral Health Among Women Injured on Deployment</td>
<td>MHSRS-19-00268</td>
<td>Jessica Watrous, Ph.D. Naval Health Research Center, San Diego, CA Leidos, San Diego, CA</td>
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<td>0817 - 0834</td>
<td>Pre-clinical And Clinical Performance Of An Ultrathin Biodegradable Antimicrobial Microfilm Matrix</td>
<td>MHSRS-19-02241</td>
<td>Michael Schur, M.D. Mountain Area Health Education Center Asheville, NC</td>
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<td>0851 - 0908</td>
<td>Clinical Development Of Centhaquine, A Novel Resuscitative Agent, For Hemorrhagic Shock</td>
<td>MHSRS-19-00339</td>
<td>Anil Gulati, M.D., Ph.D. Pharmazz, Inc. Willowbrook, IL Midwestern University, Downers Grove, IL</td>
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<td>0908 - 0925</td>
<td>Emergency Release Blood Transfusion For Injury Resuscitation: Timing, Triggers, And Outcomes Inform Implementation Of A Pre-hospital Whole Blood Transfusion Program</td>
<td>MHSRS-19-00880</td>
<td>Caroline Zhu, B.S. University Of Texas Health Science Center at San Antonio, San Antonio, TX</td>
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<td>0925 - 0942</td>
<td>Pooled Safety Analysis Of Patients Who Were Exposed to &lt; 300 mcg vs. ≥300 mcg Of Sublingual Sufentanil in A 24-Hour Period for Treatment Of Acute Pain</td>
<td>MHSRS-19-02125</td>
<td>Pamela Palmer, M.D., Ph.D. AcetRx Pharmaceuticals Redwood City, CA</td>
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<td>0942 - 1000</td>
<td>The Gut Microbiome Is Predictive Of Clinical Outcomes Following Traumatic Injury</td>
<td>MHSRS-19-00792</td>
<td>Susannah Nicholson, M.D., M.S. University Of Texas Health San Antonio San Antonio, TX</td>
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<td>0800 - 0817</td>
<td>Health Outcomes Of Active Duty Personnel Parenting Children With Special Needs: An Epidemiological Study</td>
<td>MHSRS-19-00082</td>
<td>CDR Abigail Yablonsky, USN Naval Health Research Center San Diego, CA</td>
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<td>0817 - 0834</td>
<td>Cardi thoracic Surgical Volume Within Military Treatment Facilities - Is Volume Sufficient For Readiness?</td>
<td>MHSRS-19-00245</td>
<td>CAPT Robert Ricca, USN Walter Reed National Military Medical Center Bethesda, MD</td>
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<td>0834 - 0851</td>
<td>Assessing The Relationship Between Symptom Severity And Gait Performance In A Symptomatic, Chronic mTBI Population Before And After Vestibular Rehabilitation</td>
<td>MHSRS-19-01772</td>
<td>Douglas Martini, Ph.D. Oregon Health &amp; Science University, Portland, OR VA Portland Health Care System, Portland, OR</td>
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<td>0851 - 0908</td>
<td>Safety And Clinical Outcomes Following SB623 Stem Cell Implantation In Chronic Traumatic Brain Injury Patients: Interim Analysis Of The Phase 2 STEMTRA Trial</td>
<td>MHSRS-19-00940</td>
<td>David Okenkon, M.D., Ph.D. University Of Pittsburgh Medical Center Pittsburgh, PA</td>
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<td>0908 - 0925</td>
<td>Exosomal MicroRNAs For Diagnosis And Monitoring Of mTBI Traumatic Brain Injury: Preliminary Results From A Chronic Effects Of Neurotrauma Consortium Biomarker Discovery Project</td>
<td>MHSRS-19-01203</td>
<td>Kimbra Kenney, M.D. Uniformed Services University of the Health Sciences Bethesda, MD</td>
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<td>0925 - 0942</td>
<td>Changes In Preseason Head Impact Exposure For Football Athletes At The Military Service Academies Following 2017 And 2018 NCAA Rule Changes: A Study From The NCAA-Dx NDI Grand Alliance And The Concussion Assessment, Research And Education Consortium</td>
<td>MHSRS-19-01708</td>
<td>Brian Stemper, Ph.D. Medical College of Wisconsin Marquette University Milwaukee, WI</td>
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<td>0942 - 1000</td>
<td>Reliability And Factors Associated With False Positives On The Vestibular/ocular Motor Screening Tool In U.S. Army Special Operations Personnel</td>
<td>MHSRS-19-01460</td>
<td>Anthony Kontos, Ph.D. University of Pittsburgh Pittsburgh, PA</td>
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<td>Breakout Session Time</td>
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<td>0812 - 0824</td>
<td>Young Investigator Competition</td>
<td>0812 - 0824</td>
<td>Tele-TB: Using Telemedicine To Increase Access To LTBI Directly Observed Therapy</td>
<td>MHSRS-19-00633</td>
<td>MAJ Megan Donahue, USA Walter Reed National Military Medical Center Bethesda, MD</td>
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<td>0824 - 0836</td>
<td>Young Investigator Competition</td>
<td>0824 - 0836</td>
<td>Eating Behaviors Are Associated With Body Composition And Physical Fitness Standards Failure Among U.S. Army Soldiers</td>
<td>MHSRS-19-00968</td>
<td>MAJ Julianna Jayne, USA U.S. Army Research Institute of Environmental Medicine Natick, MA</td>
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<td>0836 - 0848</td>
<td>Young Investigator Competition</td>
<td>0836 - 0848</td>
<td>Risk And Resiliency In Female Military Medical Personnel After Deployment To A Combat Support Hospital</td>
<td>MHSRS-19-00399</td>
<td>Casey Straud, Psy.D. University of Texas Health Science Center at San Antonio San Antonio, TX</td>
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<td>0848 - 0900</td>
<td>Young Investigator Competition</td>
<td>0848 - 0900</td>
<td>Department Of Defense Immunization Practices: Cost Analysis Of MMR Titer Versus Immunization</td>
<td>MHSRS-19-00407</td>
<td>Capt Adam Dulberger, USAF Medical Center Travis AFB, CA</td>
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<td>0900 - 0912</td>
<td>Young Investigator Competition</td>
<td>0900 - 0912</td>
<td>The Use Of Photobiomodulation Therapy In Conjunction With Stretching And CryoTherapy To Treat Plantar Fasciitis</td>
<td>MHSRS-19-00750</td>
<td>LTC Ann Ketz, USA Landstuhl Regional Medical Center Landstuhl, Germany</td>
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<td>0912 - 0924</td>
<td>Young Investigator Competition</td>
<td>0912 - 0924</td>
<td>Risk Factors For Persistent Opioid Use And Clinically Recognized Opioid Abuse Following Battle Injury In United States Military Personnel</td>
<td>MHSRS-19-01406</td>
<td>Capt Carl Beyer, USAF University of California Davis Medical Center Sacramento, CA David Grant, USAF Medical Center Travis AFB, CA</td>
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<td>Young Investigator Competition</td>
<td>0924 - 0936</td>
<td>Early Outcomes Of Osseointegrated Implants In Transhumeral And Transfemoral Amputations</td>
<td>MHSRS-19-00189</td>
<td>CPT Colin Harrington, USA Walter Reed National Military Medical Center Bethesda, MD</td>
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<td>0936 - 0948</td>
<td>Young Investigator Competition</td>
<td>0936 - 0948</td>
<td>Early Outcomes Following Trauma Related To Gender: A Matched Analysis Of Military Service Members In The Department Of Defense Trauma Registry</td>
<td>MHSRS-19-01154</td>
<td>CPT Kaitlin Morte, USA Madigan Army Medical Center Tacoma, WA</td>
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<td>0948 - 1000</td>
<td>Young Investigator Competition</td>
<td>0948 - 1000</td>
<td>Impact Of Blue-wavelength Light Therapy On Cortical Volume And Simple Reaction Time Following Mild TBI</td>
<td>MHSRS-19-02227</td>
<td>Sahil Bajaj, Ph.D. University of Arizona Tucson, AZ</td>
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## Breakout Session Time

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<tr>
<td>1300 - 1500</td>
<td>The Future Front Line: Supporting the Warfighter of Today with Innovation of Tomorrow</td>
<td>1300 - 1310</td>
<td>Combat Support Overview</td>
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<td>Maj Gen Lee Payne, USAF Assistant Director, Combat Support</td>
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<td>1310 - 1325</td>
<td>Joint Trauma System: Evidence-Based Principles Of Time, Triage, And Treatment</td>
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<td>Col Stacy Shackleford, USA</td>
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<td>1325 - 1340</td>
<td>Armed Forces Medical Examiner: Operations Overview And Mortality Reviews</td>
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<td>COL Louis Finelli, USA</td>
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<td>1340 - 1355</td>
<td>Medical Logistics: Cyber Logistics Private Public Partnerships</td>
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<td>Col Randall Ivall, USA</td>
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<td>1355 - 1410</td>
<td>Armed Services Blood Program: Blood Product Advances To Support The Warfighter</td>
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<td>COL Audra Taylor, USA</td>
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<td>1410 - 1420</td>
<td>Veterinary Service Branch, Public Health: Updates In Chemical Decontamination Methods For Operational Rations And Military Working Dogs</td>
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<td>COL Chad Weddell, USA</td>
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<td>1420 - 1430</td>
<td>Armed Services Health Surveillance Branch, Public Health: Leveraging DoD Partnerships, Provide Combatant Commands And The Service Actionable Bio-Surveillance Information At The Speed of Relevance To Inform Force Health Protection And Readiness; Overview And Demonstration Of The DHA Health Surveillance Explorer</td>
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<td>CDR Mark Scheckelhoff, USPHS</td>
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<td>1430 - 1440</td>
<td>Immunization Healthcare Branch, Public Health: Clinical Investigations, Pre/Post License Consult, IHB Intramural Funding, Smallpox Vaccine</td>
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<td>Bruce McClennathan, M.D.</td>
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<td>1440 - 1500</td>
<td>Panel Q &amp; A</td>
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<tr>
<td>1300 - 1500</td>
<td>Innovative Approaches to Prevent, Diagnose &amp; Treat Sepsis During Prolonged Field Care</td>
<td>1300 - 1315</td>
<td>Mononuclear Cells Create Danger-signal Specific Neutrophil Chemoattraction By Releasing Chemokines, Leukotrienes And Mitochondria</td>
<td>MHSRS-19-02557</td>
<td>Carl Hauser, M.D.</td>
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<td>1315 - 1330</td>
<td>Diagnosis Of Burn Sepsis Using The FCBML ELISA: A Pilot Study In Critically Ill Burns Patients</td>
<td>MHSRS-19-00911</td>
<td>LTC Kevin Akers, USA</td>
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<td>1330 - 1345</td>
<td>Big Data In Sepsis: Insights From Object-oriented Programming</td>
<td>MHSRS-19-02159</td>
<td>Deborah Striegel, Ph.D.</td>
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<td>1345 - 1400</td>
<td>Biomarkers Associated With Sepsis Mortality Risk From A Combined Multicohort Analysis</td>
<td>MHSRS-19-02328</td>
<td>Gary Fogel, Ph.D.</td>
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<td>1400 - 1415</td>
<td>Longitudinal Host Gene Expression Predicts Mortality In Subjects With Suspected Sepsis</td>
<td>MHSRS-19-00829</td>
<td>Danielle Clark, Ph.D.</td>
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<td>1415 - 1430</td>
<td>Point-of-care Microfluidic Bioship For Biomarkers Monitoring For Contributing In Early Sepsis Diagnosis</td>
<td>MHSRS-19-01862</td>
<td>Enrique Valera, Ph.D.</td>
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<td>1430 - 1445</td>
<td>Prevention Of Infections Associated With Combat-related Injuries In Austere Environments: Development And Testing Of Novel Antimicrobial Materials For Additive Manufacturing</td>
<td>MHSRS-19-00738</td>
<td>Jorge Zuniga, Ph.D.</td>
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<td>1445 - 1500</td>
<td>Discussion &amp; Wrap-up</td>
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# MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

**Wednesday, 21 August**

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<th>Breakout Session Time</th>
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<td></td>
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<td>1325 - 1340</td>
<td>Gait Variability For Predicting Performance And Adaptability In Military-relevant Tasks</td>
<td>MHSRS-19-01374</td>
<td>Sophia Ulman, M.S.</td>
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<td>1340 - 1355</td>
<td>Correlations Between Longitudinal Changes In Knee Kinetics And MRI In Patients With Knee Osteoarthritis Suggest The Benefits Of Load Reduction Using Variable-stiffness Shoes</td>
<td>MHSRS-19-00550</td>
<td>Constance Chu, Ph.D.</td>
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<td>1355 - 1415</td>
<td>Computational Models To Understand Long Bone Fracture Risk In Women And Men In The Military</td>
<td>MHSRS-19-02322</td>
<td>Dan Dragomir-Daescu, Ph.D.</td>
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<td>1415 - 1435</td>
<td>Athletic Trainer Integration In U.S. Air Force Basic Training</td>
<td>MHSRS-19-02630</td>
<td>Reid Fisher, Ph.D. Shandra Esparza, Ph.D.</td>
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<td>1435 - 1455</td>
<td>Experimental And Computational Capabilities For The Biomechanical Assessment Of The Parachute Landing Fall For Field Training Exercises</td>
<td>MHSRS-19-02225</td>
<td>Eyl Bar-Kochba, Ph.D.</td>
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<td>1455 - 1500</td>
<td>Q&amp;A</td>
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<td>Richard Shoge, Ph.D.</td>
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<td>1300 - 1500 Two-Hour Session</td>
<td>Military Family Frameworks For Readiness &amp; Resilience</td>
<td>1300 - 1309</td>
<td>Building Health Military Communities</td>
<td>MHSRS-19-00389</td>
<td>CAPT Kimberly Elenberg, USPHS</td>
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<td>1310 - 1318</td>
<td>Level Of Care Provision And Health Outcomes Among Caregivers Of Service Members And Veterans Following TBI</td>
<td>MHSRS-19-01301</td>
<td>Tracey Brickell, D.Psych.</td>
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<td>1319 - 1327</td>
<td>Development Of A Videoconference-Adapted Version Of the Community Diabetes Prevention Program</td>
<td>MHSRS-19-00825</td>
<td>Susan Roberts, Ph.D.</td>
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<td>1328 - 1340</td>
<td>Questions For Community Centered Block</td>
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<td>1341 - 1349</td>
<td>The Impact Of Child Mental Health on PTSD in Injured Parents</td>
<td>MHSRS-19-02147</td>
<td>CAPT Greg Gorman, USN</td>
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<td>1350 - 1358</td>
<td>Active Duty Personnel Parenting Children With Special Needs: Military Career Outcomes</td>
<td>MHSRS-9-00934</td>
<td>Hannah Koenig, MPH</td>
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<td>1359 - 1408</td>
<td>Questions For Child-Centered Block</td>
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<td>1409 - 1417</td>
<td>Association Of Military Life Experiences And Health Behaviors Among Military Spouses</td>
<td>MHSRS-19-00343</td>
<td>Nida Corry, Ph.D.</td>
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<td>1418 - 1426</td>
<td>Mental Health Outcomes Associated with Profiles Of Risk And Resilience Among Army Spouses</td>
<td>MHSRS-19-00809</td>
<td>Kathrine Sullivan, Ph.D.</td>
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<td>1427 - 1435</td>
<td>Sexuality And Intimacy Rehabilitation For The Military Population: A Case Series</td>
<td>MHSRS-19-02090</td>
<td>Kathryn Ellis, Ph.D.</td>
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<td>1436 - 1444</td>
<td>Supporting Caregivers Of Veterans with PTSD</td>
<td>MHSRS-19-00136</td>
<td>Linda Nichols, Ph.D.</td>
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<td>1445 - 1500</td>
<td>Questions For Partner-Centered Block</td>
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## Breakout Sessions

### Wednesday, 21 August

#### Two-Hour Session 1300 - 1500

**Innovations in Medical Technologies to Advance En Route Patient Care**

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<tr>
<td>1300 - 1320</td>
<td>Hot Zone Hemorrhage Control: Technical Notes On Robotic Application Of Hemostatic Clamping For Care-under-fire</td>
<td>MHSRS-19-01038</td>
<td>Andrew W. Kirkpatrick, M.D.</td>
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<tr>
<td>1340 - 1400</td>
<td>Compensatory Reserve Measurement Following Trauma</td>
<td>MHSRS-19-02483</td>
<td>CPT Avishai Tour, M.D., MHA</td>
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<td>1400 - 1420</td>
<td>Pre-clinical Assessment Of A Water-in-Fluorocarbon Emulsion For The Treatment Of Pulmonary Vascular Diseases</td>
<td>MHSRS-19-02502</td>
<td>Thies Schroeder, Ph.D.</td>
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<td>1420 - 1440</td>
<td>Lung Function Monitoring Using EIT For Mechanically Ventilated Aeromedical Evacuation Patients</td>
<td>MHSRS-19-00485</td>
<td>Tzujen Kao, Ph.D.</td>
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<td>1440 - 1500</td>
<td>Development Of A Universal Biokinetic Technology For Multi-modality Bioprinting Compatibility And Support Of Multiple Tissue Construct Types</td>
<td>MHSRS-19-02609</td>
<td>Aleksander Skardal, Ph.D.</td>
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#### Two-Hour Session 1300 - 1500

**Precision Medicine For Acute Trauma & Critical Care**

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<tr>
<td>1300 - 1315</td>
<td>Characterization Of Cellular MicroRNA In Polytrauma Patients</td>
<td>MHSRS-19-01960</td>
<td>LCDR Diego Vicente, USN</td>
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<td>1315 - 1330</td>
<td>Comprehensive Profiling Of Invasive Immune Cell Subset Responses In Trauma Patients</td>
<td>MHSRS-19-02604</td>
<td>James A. Lederer, Ph.D.</td>
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<td>1330 - 1345</td>
<td>Augmented Reality Technology To Enable Remote Integrate Surgery: A Review Of Technical Considerations And Study Design</td>
<td>MHSRS-19-02044</td>
<td>Nadir Weibel, Ph.D.</td>
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<td>1345 - 1400</td>
<td>A Possible Role For Vascular Endothelial Growth Factor In Predicting Duration Of Mechanical Ventilation After Cardiac Surgery</td>
<td>MHSRS-19-01519</td>
<td>Felipe Lisboa, M.D.</td>
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<td>1400 - 1415</td>
<td>Promoting Tolerance With The Use Of Low-dose II/2 In Facial Transplantation – A Pilot Safety Study</td>
<td>MHSRS-19-02371</td>
<td>Thiago Borges, Ph.D.</td>
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<td>1415 - 1430</td>
<td>Clinical Risk Factors And Inflammatory Biomarkers Of Post-traumatic Acute Kidney Injury In Combat Patients</td>
<td>MHSRS-19-02247</td>
<td>Seth Schobel, Ph.D.</td>
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<td>1430 - 1445</td>
<td>Systemic Inflammation And Emergency Myelopoesis: Exploiting Species-specific Genes To Redefine Preconditioning, Disease Susceptibility And Resilience To Injury</td>
<td>MHSRS-19-01222</td>
<td>Andrew Baird, Ph.D.</td>
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<td>1445 - 1500</td>
<td>A Random Forest Model To Predict Pneumonia In Combat Trauma Patients</td>
<td>MHSRS-19-00897</td>
<td>Vivek Khatri, Ph.D.</td>
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#### Two-Hour Session 1300 - 1500

**Improved Occupational & Environmental Exposure Monitoring**

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<td>1300 - 1315</td>
<td>Integration Of DoD Efforts To Improve Exposure Monitoring And Assessment</td>
<td>MHSRS-19-2664</td>
<td>Steven Jones, MPH</td>
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<td>1315 - 1348</td>
<td>Characterization Of Byproducts Generated From Firing Lead-Free Frangible Ammunition Using Small Arms In A Controlled Chamber</td>
<td>MHSRS-19-1348</td>
<td>Jennifer Schwaneck-Ken, Ph.D.</td>
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<td>1348 - 1406</td>
<td>Non-Invasive Methods to Identify Biological Markers Of Exposures from Firing Lead-Free Frangible Ammunition</td>
<td>MHSRS-19-0810</td>
<td>Carolyn Poutasse, B.S.</td>
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<td>1406 - 1424</td>
<td>Silicone Dog Tags Examine Occupational Firefighter Chemical Exposures</td>
<td>MHSRS-19-0981</td>
<td>Girish Sinivas, Ph.D., MBA</td>
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<td>1424 - 1442</td>
<td>Ultimate Passive Dosimeter</td>
<td>MHSRS-19-1360</td>
<td>Allen Apblett, Ph.D.</td>
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<td>1442 - 1500</td>
<td>Using Personal Silicone Samplers To Evaluate Inhalation Exposure</td>
<td>MHSRS-19-1787</td>
<td>Brianna Rivera, B.S.</td>
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## Breakout Sessions

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<td>Two-Hour Session 1300 - 1500</td>
<td>Pathways to Small Business Innovation Research (SBIR)/Small Business Technology Transfer Research (STTR) Success in the Defense Health Agency</td>
<td>1300 - 1315</td>
<td>SBIR/STTR: Infusing Transformative Technologies into the National Defense Strategy</td>
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<td>Susan Celi, MPA</td>
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<td>1315 - 1330</td>
<td>SBIR/STTR: DHA R&amp;D Priorities</td>
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<td>CAPT Joseph Cohn, USN</td>
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<td>1330 - 1345</td>
<td>SBIR/STTR: Understanding and Collaborating with Product Developers</td>
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<td>Kathleen Berst, MBA</td>
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<td>1345 - 1400</td>
<td>SBIR/STTR: Program Support for Transition</td>
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<td>J.R. Myers, B.S.</td>
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<td>1400 - 1415</td>
<td>SBIR/STTR: Bringing Medical Intelligent Systems to the Tactical Edge</td>
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<td>Gary Gilbert, Ph.D.</td>
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<td>1415 - 1430</td>
<td>SBIR/STTR: Solving Prolonged Field Care Challenges</td>
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<td>Wilbur Malloy, M.S.</td>
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<td>Long-Term Impairment following Concussion: Understanding Discrepancies in Reported Outcomes &amp; Implications For Return-to-Duty</td>
<td>1530 - 1545</td>
<td>Brain Injury Beliefs And Influences Study</td>
<td>MHSRS-19-01932</td>
<td>Kendra Jorgensen-Wagers, Ph.D.</td>
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<td>1545 - 1600</td>
<td>Epidemiology Of Chronic Pain in the Post-Deployment Period: Results from the Warrior Strong Study</td>
<td>MHSRS-19-01805</td>
<td>Ann Scher, Ph.D.</td>
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<td>1600 - 1615</td>
<td>Postconcussion Symptoms Reporting Is Not Associated with Diffusion-Tensor Imaging Findings in the Sub-Acute to Chronic Phase Of Recovery in Military Service Members Following Mild Traumatic Brain Injury</td>
<td>MHSRS-19-01008</td>
<td>Rael Lange, Ph.D.</td>
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<td>Comorbidities, Health Services Utilization, And Healthcare Costs By Mild Traumatic Brain Injury Exposure: A Chronic Effects Of Neurotrauma Consortium Study</td>
<td>MHSRS-19-01384</td>
<td>Clara Dismuke-Greer, Ph.D.</td>
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<td>1630 - 1645</td>
<td>Medical Training On Progressive Return to Activity Guidelines For Management Of Concussion Alters Follow-up Care In Late Stages Of Recovery</td>
<td>MHSRS-19-00855</td>
<td>Rosemary A. Remigio-Baker, Ph.D.</td>
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<td>1645 - 1700</td>
<td>Implementation Of A Traumatic Brain Injury Guideline At A Level 1 DoD Trauma Center: Can We Effectively Reduce Resource Utilization Without Compromising Safety And Quality?</td>
<td>MHSRS-19-01346</td>
<td>MAJ Dominic Vitala, USA</td>
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<td>1700 - 1730</td>
<td>Panel Discussion: Outcome Assessments For Mild TBI: Where Do We Stand?</td>
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<td>Emma Gregory, Ph.D. Christine Mac Donald, Ph.D. CAPT Scott Pyne, USN</td>
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<td>Occupational &amp; Environmental Exposure: Basic &amp; Applied Research</td>
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<td>Exposure To Airborne Particulate Matter From Southwest Asia Induces Inflammatory, Proteolytic, And Keratinization Pathway Gene Expression In Primary Human Airway Epithelial Cells</td>
<td>MHSRS-19-01049</td>
<td>Gregory Downey, M.D.</td>
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<td>1545 - 1600</td>
<td>Sub-chronic Exposure To Aircraft Engine Oils Impacts The Reproductive OrganWeights And Alters Hematological Profiles Of Sprague Dawley Rats</td>
<td>MHSRS-19-00794</td>
<td>Isia Sibomana, Ph.D.</td>
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<td>Rapid Detection Device For ColiForm Bacteria And Escherichia Coli in Drinking Water</td>
<td>MHSRS-19-00025</td>
<td>Mark Widder, M.S.</td>
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<td>Gulf War Illness Virme Signature And Its Effect On Gastrointestinal Inflammation</td>
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<td>Diana Kimono, M.S.</td>
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<td>Clinical Evaluation Of Deployment-related Chronic Respiratory Symptoms From The Stampede III Study</td>
<td>MHSRS-19-01301</td>
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<td>1645 - 1700</td>
<td>Human Pulmonary Cellular Models Provide A Direct Approach To Evaluate Environmental Exposure Induced Pulmonary Pathologies And Diseases</td>
<td>MHSRS-19-01807</td>
<td>Melissa VonEhran, Ph.D.</td>
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<td>1700 - 1715</td>
<td>The Use Of 3D Bioprinted Models To Better Understand The Impact Of Occupational, Environmental, Or Medical Radiation Exposures To Military Personnel</td>
<td>MHSRS-19-01242</td>
<td>Alexandra Miller, Ph.D.</td>
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<td>Wednesday, 21 August</td>
<td>Blast, Blunt, Accelerative Exposure in Training</td>
<td>1530 - 1545</td>
<td>Vascular And Autoimmune Pathologies In Training-associated Repeated Exposures To Subconcussive Blasts; Relevance For Force Readiness</td>
<td>MHSRS-19-01740</td>
<td>Denes Agoston, M.D., Ph.D.</td>
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<td>1545 - 1600</td>
<td>Change In Health Related Symptoms Following Environmental Blast Exposure During Heavy Wall Breaching Training In A Military Cohort</td>
<td>MHSRS-19-02100</td>
<td>Bilal Khokhar, Ph.D.</td>
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<td>1600 - 1615</td>
<td>Neurocognitive Effects From Immediate And Acute Blast Overpressure Exposure: Insight On Using DANA To Assess Performance Change During Explosive Breaching</td>
<td>MHSRS-19-02478</td>
<td>Christina LaValle, M.S.</td>
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<td>1615 - 1630</td>
<td>Acoustic Characterization Of Military And Law Enforcement Personnel</td>
<td>MHSRS-19-02485</td>
<td>Michael Egierto, Ph.D.</td>
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<td>Comparison Of Head Impact Kinematics Collected From The Field Versus Laboratory Generated Exposures</td>
<td>MHSRS-19-00315</td>
<td>Tyler Rooks, Ph.D.</td>
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<td>On The Development Of Inter-species Mechanical Injury Thresholds In Sub-clinical Blast Exposures: A Numerical And Experimental Approach</td>
<td>MHSRS-19-01951</td>
<td>Molly Townsend, Ph.D.</td>
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<td>Behavioral Impairments And Changes In Tau Expression Following A Repetitive Combination Of Brain Injuries In The Ferret</td>
<td>MHSRS-19-00824</td>
<td>Sharon Juliano, Ph.D.</td>
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<td>Hemorrhage Control &amp; Resuscitation</td>
<td>1530 - 1545</td>
<td>They Practice What You Preach: Trends in Crystalloid Transfusion With Clinical Paractice Guidelines Updates</td>
<td>MHSRS-19-1468</td>
<td>CPT Avishai Tsuc, M.D., MHA</td>
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<td>1545 - 1600</td>
<td>Deployment Of Low Titer O-positive Whole Blood Within A Regional Trauma System</td>
<td>MHSRS-19-2085</td>
<td>Randall Schaefer, MSN</td>
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<td>1600 - 1615</td>
<td>Protecting Against Hyperkalemia in Hemorrhagic Shock: Comparison Of Resuscitation Strategies</td>
<td>MHSRS-19-2151</td>
<td>Catherine Uyehara, Ph.D.</td>
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<td>1615 - 1630</td>
<td>Shock Index as a Trigger For Pre-hospital Transfusion in Adult Trauma Patients: A 3 Group Comparison</td>
<td>MHSRS-19-881</td>
<td>Caroline Zhu, B.S.</td>
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<td>1630 - 1645</td>
<td>Shock Index And Systolic Blood Pressure As Triggers For Pediatric Massive Transfusion</td>
<td>MHSRS-19-119</td>
<td>Caroline Zhu, B.S.</td>
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<td>Prehospital Resuscitative Endovascular Balloon Occlusion Of The Aorta For Exsanguinating Pelvic Hemorrhage</td>
<td>MHSRS-19-720</td>
<td>MAJ M.E.R. Marsden, British Army</td>
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<td>Human Albumin Solution Should Be Considered As An Alternative Fluid For Prehospital Resuscitation Of Casualties In Austere Environments</td>
<td>MHSRS-19-157</td>
<td>Bijan Kheirabadi, Ph.D.</td>
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<td>1715 - 1730</td>
<td>Combination Treatment For Hemorrhagic Shock</td>
<td>MHSRS-19-2176</td>
<td>Raghavan Raju, Ph.D.</td>
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### Breakout Sessions

#### Two-Hour Session 1530 - 1730

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<td>En Route Care Future Research Challenges Part 1</td>
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<td>En Route Resuscitation – Utilization Of CCATT To Transport And Stabilize Critically Injured And Unstable Casualties</td>
<td>MHSRS-19-00175</td>
<td>Lt Col Joseph Maddry, USAF</td>
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<td>1545 - 1600</td>
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<td>1546 - 1600</td>
<td>Descriptive Analysis Of A Military Hospital Interfacility Transport Critical Care Transport Team</td>
<td>MHSRS-19-01391</td>
<td>Melissa Malavemaria, EMT</td>
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<td>1600 - 1615</td>
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<td>1600 - 1615</td>
<td>Prospective Evaluation Of Health Outcomes In Aeromedical Evacuation Casualties: A Pilot Study</td>
<td>MHSRS-19-01858</td>
<td>Lauren Walker, MSSW</td>
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<td>1615 - 1630</td>
<td>Association Between Hyperoxia, Supplemental Oxygen, And Mortality In Critically Injured Patients</td>
<td>MHSRS-19-02333</td>
<td>Adit Ginde, M.D., MPH</td>
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<td>1630 - 1645</td>
<td>Rehabilitation Following Limb Trauma &amp; Amputation</td>
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<td>Royal Danish Air Force Aeromedical Evacuation Experience With Air Transportable Medical Modules</td>
<td>MHSRS-19-01726</td>
<td>Claus Lie, M.D.</td>
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<td>1645 - 1700</td>
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<td>1645 - 1700</td>
<td>Exposure Of Rats To Air Evacuation-Relevant Hypobaria Following Traumatic Brain Injury Plus Shock Worsens Multiple Organ Injury And Mortality But Has No Effect On Mortality Following Septis</td>
<td>MHSRS-19-02055</td>
<td>Gary Fiskum, Ph.D.</td>
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<td>Incidence Of Deep Vein Thrombosis And/or Pulmonary Embolism In CoaT-evacuated Casualties Transported From Combat Operations To Landstuhl Regional Medical Center</td>
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<td>Capt Patrick Ng, USAF</td>
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<td>Critical Care Flight Paramedic Medical Task Saturation Study – Unconstrained And Constrained Environments</td>
<td>MHSRS-19-02016</td>
<td>Amy Lloyd, M.S.</td>
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<td>Rehabilitation Following Limb Trauma &amp; Amputation</td>
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<td>Leveraging Delayed Amputation Outcome To Identify Limb Salvage Population From Military Medical Databases</td>
<td>MHSRS-19-01776</td>
<td>Susan Eskridge, Ph.D.</td>
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<td>Prosthetic Socket Movement Compromises Residual Limb Health</td>
<td>MHSRS-19-00910</td>
<td>Matthew Wernke, Ph.D.</td>
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<td>Animal Studies Of The Skin And Bone Integrated Pylon With Deep Porosity For Bone-anchored Limb Prosthetics With And Without Neural Interface</td>
<td>MHSRS-19-00758</td>
<td>Mark Pitkin, Ph.D.</td>
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<td>An Osseointegrated Neural Interface For Prosthetic Control: A Chronic, Percutaneous Rabbit Model</td>
<td>MHSRS-19-01022</td>
<td>Aaron Dingle, Ph.D.</td>
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<td>Virtual Coach: Development Of A Virtual Training Tool For Upper-extremity Myoelectric Prosthesis Users</td>
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<td>Proportional Positional Control Of Multiple Degrees-of-Freedom For Individuals With Upper Extremity Limb Loss Using Sonomyography</td>
<td>MHSRS-19-02510</td>
<td>Siddhartha Sikdar, Ph.D.</td>
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<td>Biomechanical And Patient Reported Outcome Data For IDEO Patients One Year Post Rehabilitation</td>
<td>MHSRS-19-00924</td>
<td>Trevor Kingsbury, M.S.</td>
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<td>Deriving Reproducibility Indices To Facilitate Evidence-based Selection And Interpretation Of Performance-based Balance Tests For Lower Limb Prosthesis Users</td>
<td>MHSRS-19-01086</td>
<td>Andrew Sawers CPO, Ph.D.</td>
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<td>Updates on Military Women’s Health</td>
<td>1530 - 1540</td>
<td>Uniformed Services University Military Women’s Health Consortium updates</td>
<td>MHSRS-19-01570</td>
<td>Yvonne Maddox, Ph.D.</td>
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<td>The Social Ecological Model As A Framework For Scoping Reviews Of Active Duty U.S. Military Women’s Health</td>
<td>MHSRS-19-00659</td>
<td>Stacey Iobst, Ph.D., R.N.</td>
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<td>1600 - 1615</td>
<td>A Checklist For Survey Questionnaire Development: A Case Study For Military Women’s Unmet Health And Operational Readiness Through The Lens Of The IBM-WASH Model</td>
<td>MHSRS-19-00286</td>
<td>Elizabeth Kostas-Polston, Ph.D., APRN</td>
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<td>Female Resilience To Extreme Climatic Exposure And Arduous Military Training: Mitigating Risks To Optimise Performance</td>
<td>MHSRS-19-00956</td>
<td>Robert Gifford, Sqn Ldr, Royal Air Force</td>
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<td>Optimizing A Multi-modal Intervention To Reduce Health-risking Sexual Behavior: Qualitative Narratives</td>
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<td>CDR Carl Goforth, USN</td>
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<td>The Relationship Between Reported Pain, Sleep Quality, And Fatigue In Female Officers Following A 6-month Training Course</td>
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<td>Menstrual Practices In Operational Military Women</td>
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<td>Convalescent Leave Duration And Postpartum Physical Fitness Decrements In The Active Duty U.S. Army Servicewoman</td>
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<td>MAJ David DeGroat, USA</td>
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<td>Lt Col Sam Kidd, USAF</td>
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<td>Matt Goldman, M.D.</td>
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<td>U.S. Army Medical Research And Development Command</td>
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<td>Rebecca Foster, M.P.P.</td>
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<td>Kathy Zolman, M.B.A.</td>
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<td>1635 - 1650</td>
<td>Life Lens Technologies, LLC - OTA awardee</td>
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<td>Landy Toth, M.A.Sc.</td>
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<td>Design Interactive - OTA awardee</td>
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<td>Sara Dechmanowski, M.S.</td>
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<td>What’s New in Antimicrobial Development to Counter Multi-drug-resistant Bacterial Infections in Military Personnel</td>
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<td>High Throughput Screening Of Small Molecules For Combating Multi-drug Resistant Gram-negative Bacteria</td>
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<td>Lantibiotics, A Novel Class Of Antibiotics In The Pharmacopeia</td>
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<td>Biomaterial-based Immunotherapy Protects Against Drug Resistant Bacteria, Including ESRAPE Pathogens</td>
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<td>Silver-zinc REDOX-coupled Electroceutical Wound Dressing Disrupts Bacterial Biofilm In A Porcine Pre-clinical Model</td>
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<td>Warfighter Readiness: Impact Of Trauma</td>
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<td>CDR Julie Chodacki, USPHS</td>
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<td>Post-collision Support to the USS Fitzgerald And USS John S. McCain: ORION, a Novel System For Tracking Trauma And Providing Targeted Outreach</td>
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<td>Disability Status Attenuates Treatment Effects In An Intensive Outpatient Program For PTSD</td>
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<td>0940 - 1000</td>
<td>Lifetime Trauma Exposure And Suicide Risk Among Veterans Seeking Substance Use Disorder Treatment</td>
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<td>0830 - 1030</td>
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<td>Management Of Sleep &amp; Fatigue For Maximization Of Soldier Operational Readiness</td>
<td>0830 - 0850</td>
<td>Circadian-based Watchstanding Schedules For Surface Ships: Preliminary Results</td>
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<td>0850 - 0910</td>
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<td>0910 - 0930</td>
<td>Baseline GABA Levels Are Associated With Time-on-task Performance During Sleep Deprivation</td>
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<td>Resilience To Vigilant Attention Deficits Due To Sleep Deprivation: Non-additive Interaction Of TNFα Genotype And Caffeine</td>
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<td>0950 - 1010</td>
<td>Evaluation Of Electrophysiological Markers To Identify Individual Differences In Fatigue Susceptibility</td>
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<td>1010 - 1030</td>
<td>A Fieldable Wearable Neurotechnology For Sleep Enhancement</td>
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### Cellular Therapeutics For Treatment Of Trauma-Related Injuries

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<td>TSG-6 In Conditioned Media From Adipose Mesenchymal Cell Stem Cells Protects Against Visual Deficits In Mild Traumatic Brain Injury Via Modulation Of Glial Activity</td>
<td>MHSRS-19-00130</td>
<td>Rajashekhar Gangaraju, Ph.D.</td>
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<td>0843 - 0856</td>
<td>The Effects Of Cell Type And Culture Condition On The Procoagulant Activity Of Human Mesenchymal Stromal Cell-derived Extracellular Vesicles</td>
<td>MHSRS-19-00169</td>
<td>Tiffani Chance, M.S.</td>
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<td>0856 - 0909</td>
<td>Transplantation Of The Neural Stem Cell-engineered Cell Sheet For Cerebral Reconstruction</td>
<td>MHSRS-19-00301</td>
<td>Chung-Hsing Chou, M.D., Ph.D.</td>
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<td>0909 - 0922</td>
<td>Human Monocytes Educated With Exosomes From TLR4 Primed Mesenchymal Stem Cells Treat Acute Radiation Syndrome By Promoting Hematopoietic Recovery</td>
<td>MHSRS-19-00417</td>
<td>Christian Captini, M.D.</td>
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<td>0922 - 0935</td>
<td>Human Mesenchymal Stromal Cell Interactions With Innate Lymphoid Cells</td>
<td>MHSRS-19-00462</td>
<td>Barbara Christy, Ph.D.</td>
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<td>0935 - 0948</td>
<td>Systemic Application Of Bone Marrow Derived Mesenchymal Stromal Cells On Hemostasis And Acute Immune Response In Rat With Polytrauma And Hemothagic Shock</td>
<td>MHSRS-19-00552</td>
<td>Xiaowu Wu, M.D.</td>
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<td>0948 - 1001</td>
<td>A Rapid Mixed Lymphocyte Response Assay For Immunomodulation</td>
<td>MHSRS-19-01723</td>
<td>Maryanne Herzig, Ph.D.</td>
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<td>1001 - 1014</td>
<td>Use Of The Human Acellular Vessel In The Repair And Reconstruction Of Vascular Trauma</td>
<td>MHSRS-19-01967</td>
<td>Jonathan Morrison, Ph.D.</td>
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<td>1014 - 1030</td>
<td>Exogenous Angiotensin (1-7) Reduces Sequelae Of Traumatic Brain Injury In Mice</td>
<td>MHSRS-19-02088</td>
<td>Zachary J.盘点, Ph.D.</td>
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### Clinical Decision Support, Robotics & Autonomous Systems

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<td>Jose Salinas, Ph.D.</td>
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<td>0835 - 0850</td>
<td>Virtual Health: An Evolving Capability &amp; Research Discipline</td>
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<td>Gary Gilbert, Ph.D.</td>
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<td>0850 - 0905</td>
<td>Electronic Trauma Resuscitation Documentation And Decision Support Using T6 Health Systems Web-based Application: A Pilot Program</td>
<td>MHSRS-19-01921</td>
<td>Lisa Angotti, M.D.</td>
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<td>Point Of Care Collection And Transmission Of Injury Data In A Mass Casualty Simulation a Pilot Study</td>
<td>MHSRS-19-01640</td>
<td>Ryan Carney, PharmD.</td>
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<td>0917 - 0929</td>
<td>Translating Clinical Practice Guidelines For Use In A Decision Support System: Approaches And Challenges</td>
<td>MHSRS-19-01608</td>
<td>Juliane Del Toro, M.D.</td>
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<td>0929 - 0941</td>
<td>Appraise HRC: A Validated A1 Algorithm For Triage Of Life-threatening Hemorrhage</td>
<td>MHSRS-19-00979</td>
<td>Jonathan Stallings, Ph.D.</td>
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<td>Developmental Test And Evaluation Of The Medical Hands-free Unified Broadcast System For Medical Evacuation</td>
<td>MHSRS-19-02239</td>
<td>Alexandra Cholewczynski, M.S.</td>
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<td>1005 - 1017</td>
<td>Transcranial Doppler Ultrasound Measurements Of The Middle Cerebral Artery Captured With A Fully Automated Robotic System</td>
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<td>Seth Wilk, Ph.D.</td>
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<td>Ultra-wideband Based Real-time Wireless Vital Signs Transmission System Evaluation</td>
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<td>Peter Hu, Ph.D.</td>
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<td>0845 - 0900</td>
<td>Evaluation Of A Device Combining Multi-spectral Imaging And Artificial Intelligence For Assessing Burn Wounds</td>
<td>MHSRS-19-01500</td>
<td>Brian McCall, Ph.D.</td>
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<td>0900 - 0915</td>
<td>“Robots Enabled Autonomous And Closed Loop Trauma Care In A Rucksack – TRACIR”</td>
<td>MHSRS-19-00307</td>
<td>Ron Poropatich, M.D.</td>
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<td>0915 - 0930</td>
<td>Predictive Algorithms And Learning For Medics</td>
<td>MHSRS-19-01795</td>
<td>Gershon Weltman, Ph.D.</td>
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<td>0930 - 1000</td>
<td>Artificial Intelligence-based Automated Interpretation Of Lung Ultrasound Images Of Pneumothorax, Pleural Effusion And Pneumonia: Results From Human Studies</td>
<td>MHSRS-19-02523</td>
<td>Courosh Mehanian, Ph.D.</td>
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<td>0945 - 1000</td>
<td>Mammalian Endogenous Viral Element Expression Profiling In Chronic Neuropathic Pain Model Using Deep Transcriptome Survey Of Brain Regions</td>
<td>MHSRS-19-01367</td>
<td>Raina Kumar, M.S.</td>
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<td>1000 - 1015</td>
<td>Artificial Intelligence In Research: Ethical Considerations</td>
<td>MHSRS-19-01572</td>
<td>Vanessa Hernandez, MPH</td>
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<td>1015 - 1030</td>
<td>Meta-learning Of Long-term Patient Outcomes Via Electronic Medical Records</td>
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<td>LCDR Peter Walker, USN</td>
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<td>Diana del Monaco, Ph.D., MBA Col Carol Walters, USAF CDR Wendy Cook, USN</td>
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<td>0835 - 0850</td>
<td>Evolving Regulatory Oversight Of Human Subject Research In The Military Health System</td>
<td>MHSRS-19-01929</td>
<td>CAPT John Eckert, USN</td>
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<td>0850 - 1000</td>
<td>The Changing Tides Of Human Subject Research Regulations</td>
<td>MHSRS-19-01682</td>
<td>Nancy Dawood, Ed.D.</td>
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<td>Addressing Variability In Implementation Of The 2018 Common Rule: Respect For Partners</td>
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<td>0935 - 1000</td>
<td>Ethical Considerations For Research With Military Populations</td>
<td>MHSRS-19-00845</td>
<td>COL Jacqueline Killian, USA</td>
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<td>1000 - 1005</td>
<td>Genetic Data Security And Privacy Considerations Of Military Precision Medicine</td>
<td>MHSRS-19-00474</td>
<td>MAJ Jameson Voss, USA</td>
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<td>1005 - 1015</td>
<td>T2 Focal Point In The 99MDG Regional Clinical Investigation Program</td>
<td>MHSRS-19-02220</td>
<td>Jennie Moss, M.S., RN</td>
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<td>59th Medical Wing Acquiring Accreditation Acumen &amp; Lessons Learned From Research With Uniformed Military</td>
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<td>Debra Niemeyer, Ph.D. Earl Grant, Ph.D.</td>
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<td><strong>Two-Hour Session</strong></td>
<td>En Route Care Future Research Challenges Part 2</td>
<td>0830 - 0843</td>
<td>Aeromedical Transport Does Not Influence Time Of Extremity Compartment Syndrome Diagnosis In Combat Casualties</td>
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<td>Alejandra Mora, M.S.</td>
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<td>0853 - 0856</td>
<td>An Evaluation Of Critically Ill Patients With Non-traumatic Pulmonary Disease Evacuated From Theater Via Critical Care Air Transport Teams</td>
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<td>Increasing Hardiness In Military Medical Personnel Through Immersion-based Surgical Training</td>
<td>MHSRS-19-01638</td>
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<td>0910 - 0923</td>
<td>Effect Of A Supine Human’s Gender And Anthropometry On Biodynamics Response During Medical Transport</td>
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<td>Rachel Kinsler, M.S.</td>
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<td>Simulated Aeromedical Evacuation Exacerbated Histopathology And Immunomodulation in A Rat Blast Model</td>
<td>MHSRS-19-00291</td>
<td>Anke Scultetus, M.D.</td>
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<td>Patients With Traumatic Brain Injury Transported By Critical Care Air Transport Teams: The Influence Of Altitude And Oxygenation During Transport</td>
<td>MHSRS-19-01780</td>
<td>Col Vihvat Bebarta, USAFR</td>
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<td>Cognitively Ready: Bridging the Gap Between Neuropsychological Tests &amp; Warfighter Readiness</td>
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<td>Mary Vining Radomski, Ph.D.</td>
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<td>1115 - 1145</td>
<td>BIodynamically Validated Instrumented Supine Manikin For Evaluation Of Patient Transport Systems</td>
<td>MHSRS-19-02302</td>
<td>Nathalia Peixoto, Ph.D.</td>
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<td>1130 - 1135</td>
<td>Development And Equivalence Of An Alternative Form Of The Charge Of Quarters Duty Test, A Multitasking Test To Inform Duty Readiness After Concussion</td>
<td>MHSRS-19-0168</td>
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<td>Utility Of Transcranial Electrical Stimulation For Enhancing Soldier Operational Performance: A Systematic Review Of The Literature</td>
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<td>Kathryn (Salomon) Feltman, Ph.D.</td>
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<td>Transcutaneous Electrical Nerve Stimulation To Enhance The Acquisition Of Basic Marksmanship Skills By Weapons-naive Personnel</td>
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<td>A Comparison Of Two Computerized Approaches To Cognitive Rehabilitation Of Visual Attention For Mild Traumatic Brain Injury: Preliminary Results</td>
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<td>Voluntary Hydration Status Is Maintained During A 5-day Isothermal Heat Acclimation Program Improving Heat Stress Indicators And Maintaining Exercise Capacity</td>
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<td>5-hydroxymethyl-2-furfural Improves Exercise Capacity During Normoxia And Preserves Cardiovascular Function During Severe Hypoxia In Swine</td>
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<td>Denis Bragin, Ph.D.</td>
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<td>A Neuroprotective Superoxide Dismutase / Catalase Mimetic Drug For Resuscitation After Traumatic Brain Injury Combined With Hemorrhagic Shock For Combat Casualty Care</td>
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<td>Tranexamic Acid Administration Following Head Trauma In A Combat Setting: Does TSA Result In Improved Neurologic Outcomes</td>
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<td>CPT Douglas Morte, USA</td>
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<td>The Neuroprotective Effect Of Quetiapine In Critically-ill Traumatic Brain Injury Patients</td>
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<td>Low Level Light Therapy With Near Infrared Light Emitting Diodes In Patients With Moderate Traumatic Brain Injury</td>
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<td>Rajiv Gupta, Ph.D., M.D.</td>
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<td>XPro1595 Therapy Improves Hippocampal Pathology And Associated Neurological Outcomes Following Traumatic Brain Injury</td>
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<td>Kirsty Dixon, Ph.D.</td>
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<td>Anti-seizure Combination Therapies In A Preclinical Model Of Post-traumatic Nonconvulsive Seizures Induced By A Penetrating Brain Injury—An Isobolographic Approach To Detect Synergism</td>
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<td>Tissue Nano-transfection-based Genetic Manipulation Of Graftable Tissue Leads To Improved Outcomes</td>
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<td>Early Intervention Of Ischemic Tissue With Oxygen Nanocarriers Is Key To Enabling Successful Implementation Of Restorative Cell Therapies</td>
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<td>Ludmila Diaz-Starokozheva, M.S.</td>
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<td>Negative Pressure Wound Therapy Does Not Diminish Effectiveness Of Topical Antibiotic Powder In A Preclinical Contaminated Wound Model</td>
<td>MHSRS-19-01421</td>
<td>Stefanie Shieh, Ph.D.</td>
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<td>1148 - 1200</td>
<td>Multifunctional Hydrogel Biomaterials For Treatment Of Wounds</td>
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<td>Mary Calvareza-Moore, Ph.D.</td>
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<td>1200 - 1212</td>
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<td>1212 - 1224</td>
<td>The Influence Of A COX-2 Specific NSAI On Biologic Scaffold Mediated Treatment Of Volumetric Muscle Loss</td>
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<td>1224 - 1236</td>
<td>Advances In The Intra-operative Positioning System Relevant To Combat Casualty Care</td>
<td>MHSRS-19-02386</td>
<td>Vikash Goel, M.S.</td>
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<td>Non-invasive Ultrasound Diagnosis Of Extremity Compartment Syndrome Using Shear Wave Elastography And Vascular Micro-flow Imaging</td>
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<td>Modeling Rapid Hypothermic Cooling For Prolonged Field Care In Tourniqueted Limbs And Appendages</td>
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<td>Rafael Veraza, MPH, Ph.D.</td>
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<td>Advances in Prolonged Care</td>
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<td>Medical Support For Combat Operations In A Denied Environment</td>
<td>MHSRS-19-01266</td>
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<td>1115 - 1130</td>
<td>Prehospital Survival And Prolonged Field Care During Recent U.S. Military Combat Operations</td>
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<td>1130 - 1145</td>
<td>Surgical Telementorship; Experience During San Francisco Fleet Week, And Preliminary Information About The ARTEMIS Study</td>
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<td>1145 - 1200</td>
<td>Mitigation Of Hyperkalemia Using The K+ontrolsorbent: An Ex Vivo Circulation System</td>
<td>MHSRS-19-00058</td>
<td>Andriy Batchinsky, M.D.</td>
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<td>Efficacy Of Intermittent Versus Standard Reboa In A Lethal Solid Organ Injury Model</td>
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<td>Combat-related AKI Following Prolonged Hemorrhagic Shock: Model Development And Renal Tolerance To Hypotension</td>
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<td>Xiang Lusha, M.D.</td>
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<td>1230 - 1245</td>
<td>Effect Of Hemorrhagic Shock With Damage Control Resuscitation On Local Limb Tissue Metabolism During Acute Limb Ischemia</td>
<td>MHSRS-19-01867</td>
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<td>1245 - 1300</td>
<td>Preventing Myoglobin Uptake Ameliorates Acute Kidney Injury Due To Rhabdomyolysis</td>
<td>MHSRS-19-01250</td>
<td>Michael Hutchens, M.D.</td>
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<td>Auditory Injury Prevention</td>
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<td>Auditory Injury Prevention And Reduction Overview</td>
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<td>1110 - 1130</td>
<td>Considerations For Assessing The Hearing Risk Associated With Military Impulse Noise</td>
<td>MHSRS-19-01206</td>
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<td>Brisii Zagadou, Ph.D.</td>
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<td>1150 - 1215</td>
<td>Otoprotection: Prevention Of Noise-induced Hearing Loss In Animal Models And Humans Trials</td>
<td>MHSRS-19-01835</td>
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<td>Detecting Cochlear Metaplasticity After Noise-induced Hearing Loss</td>
<td>MHSRS-19-00628</td>
<td>Jianxin Bao, Ph.D.</td>
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<td>1235 - 1255</td>
<td>Gene Therapy Approach To Protect Hearing From Age-related And Noise-induced Hearing Loss</td>
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<td>Zheng- Yi Chen, Ph.D.</td>
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<td>U.S. Army Medical Research &amp; Development Command Overview and Updates</td>
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MHSRS 2019 – Poster Session 1
Tuesday, 20 August

WARFIGHTER MEDICAL READINESS

TRAINING EFFECTIVENESS FOR POINT OF INJURY MEDICAL CARE

MHSRS-19-00184 - SESSION 1 - #001
Impact of a 4-hr Introductory EFAST Training Intervention among Ultrasound-naïve Military Medics
Presentation Author: Dr. Jonathan Monti

MHSRS-19-00287 - SESSION 1 - #002
An Expert Review Panel of Army Lessons Learned for Prehospital, Airway Management during the Recent Conflicts
Presentation Author: MAJ Steven Schauer

MHSRS-19-00411 - SESSION 1 - #003
Low-fidelity ECMO Simulation versus Animal Model: Does Individual Experience Affect its Efficacy?
Presentation Author: LTC Thornton Mu

MHSRS-19-00461 - SESSION 1 - #004
Are Self-assessment and Cognitive Scores Associated with ECMO Training Performance Outcomes?
Presentation Author: Mrs. Tricia Garcia-Choudary

MHSRS-19-00470 - SESSION 1 - #005
Effects of an Advanced Airway “Boot Camp” For Military Family Medicine Physician Trainees
Presentation Author: LCDR Art Ambrosio

MHSRS-19-00472 - SESSION 1 - #006
Multi Tissue Additive Manufactured Training Models for Point of Injury Medical Care
Presentation Author: Dr. Jonathon Barton

MHSRS-19-00600 - SESSION 1 - #007
Operation Fido: Pre-deployment Training for Life Saving Surgical Management of Military Working Dogs
Presentation Author: CAPT William Sweeney

MHSRS-19-00959 - SESSION 1 - #008
From Novice to Expert in Cricothyroidotomy: How Long Does it Take?
Presentation Author: Ms. Rachael Dampman

MHSRS-19-01385 - SESSION 1 - #009
A Portable and Self-contained Approach for Surgical Telementoring: Towards Remote, Point of Injury Care
Presentation Author: Dr. Juan Wachs

MHSRS-19-01388 - SESSION 1 - #010
High Efficiency EMS Training: A Novel, Effective Strategy for on-the-job Trauma Retraining in a Low-resource International Setting
Presentation Author: Dr. Nee-Kofi Mould-Millman
MHSRS-19-01429 - SESSION 1 - #011
A Survey of Combat Medic Airway Training and Experiences: A Preliminary Analysis
Presentation Author: Ms. Nguvan Uhaa

MHSRS-19-00097 - SESSION 1 - #012
High Tourniquet Failure Rates among Soldiers Do Not Improve with Tourniquet Training Including Combat Stress Inoculation: A Randomized Controlled Trial
Presentation Author: CPT Avishai Tsur

MHSRS-19-01535 - SESSION 1 - #013
Association of Experience and Self-efficacy in Performing Life-saving Interventions among Israel Defense Forces Advanced Life Support Providers
Presentation Author: CPT Avishai Tsur

MHSRS-19-01543 - SESSION 1 - #014
The Next Great Generation: Adapting Continuing Combat Casualty Care Education to Millennials and Gen Z’ers Advanced Life Support Providers
Presentation Author: CPT Avishai Tsur

MHSRS-19-01568 - SESSION 1 - #015
Professional Confidence Builds Leadership - New Concepts in Combat Medicine Training during the Apex (Tzameret) Military MD Program
Presentation Author: CPT Avishai Tsur

MHSRS-19-01648 - SESSION 1 - #016
Preparing for Deployment: Characteristics that Help Military Interprofessional Healthcare Teams Succeed Across Care Contexts
Presentation Author: Dr. Lara Varpio

MHSRS-19-01659 - SESSION 1 - #017
Military Interprofessional Education: How the U.S. Military Prepares its Care Teams for the Deployed Environment
Presentation Author: Dr. Lara Varpio

MHSRS-19-01660 - SESSION 1 - #018
Using 3D Printing (Additive Manufacturing) to Manufacture Low Cost Simulation Models for Dental and Oral and Maxillofacial Surgical Procedures
Presentation Author: Dr. Peter Liacouras

MHSRS-19-01762 - SESSION 1 - #019
Combining Computational Physiology with Virtual Reality for an Immersive and Effective Trauma Simulator
Presentation Author: Dr. Rachel Clipp

MHSRS-19-01823 - SESSION 1 - #020
Vital Sign Monitoring and Demographic Comparisons of Paramedics in Warm Zone Active Shooter Drills
Presentation Author: Dr. Rebecca Ryznar

MHSRS-19-01943 - SESSION 1 - #021
Knowledge, Skills, and Attitudes of Medical Students Participating in a Military Medical Field Training Exercise on Prolonged Field Care
Presentation Author: 2LT David Ediger
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

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MHSRS-19-02358 - SESSION 1 - #022
A Preliminary Evaluation of Ambulatory Physiological Monitoring and Performance Enhancement Techniques in a MARSOC Multi-purpose Canine Unit
Presentation Author: Dr. Deane Aikins

MHSRS-19-02428 - SESSION 1 - #023
Operation Gunpowder: Unique and Essential Training in Prolonged Field Care for Third Year Military Medical Students
Presentation Author: 2nd Lt Ryan Sumpter

MHSRS-19-02443 - SESSION 1 - #024
Addressing Reserve Joint-service Medical Training Gaps through Multi-faceted Expeditionary Simulation
Presentation Author: Lt Col Luis Berrios

MHSRS-19-02605 - SESSION 1 - #025
The Army Medical Department Military-Civilian Trauma Team Training Experience
Presentation Author: CPT Simon Sarkisian

MHSRS-19-02614 - SESSION 1 - #026
Development of a Clinical Experience Log at the Navy Trauma Training Center
Presentation Author: CDR Virginia Blackman

MHSRS-19-02625 - SESSION 1 - #027
Trauma Simulator: Autonomous Immersive Virtual Reality Medical Simulation
Presentation Author: CPT Kyle Couperus

MHSRS-19-02266 - POSTER SESSION 2 - #028
Assessment of Telemedicine Needs of the Special Operations Medic
Presentation Author: ENS Dustin Lowery

INNOVATIVE COUNTERMEASURES AND DIAGNOSTICS TO EMERGING INFECTIOUS DISEASES

MHSRS-19-00045 - SESSION 1 - #029
Disease Outbreak Risk Assessment Tool
Presentation Author: Ms. Louise Sumner

MHSRS-19-00145 - SESSION 1 - #030
Can We Expand the Diagnostic Capabilities of the FDA-Cleared Cl Detect™ Rapid Test from Old World to New World Cutaneous Leishmaniasis?
Presentation Author: LCDR Christie Joya

MHSRS-19-00211 - SESSION 1 - #031
Utilizing Crowdsourcing to Accelerate the Advancement of Bioinformatics Workflows for Identifying Infectious Disease Microorganisms
Presentation Author: Dr. Ezekiel Maier
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<td>Utility of a Plasmodium 18S qRT-RNA PCR Assay for Diagnosis in Controlled Human Malaria Infection Studies</td>
<td>CPT Jangwoo Lee</td>
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<td>Bioprospecting Host Defense for New Antiviral Agents</td>
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<td>Molecular Biomarker Diagnostic Assays as a Potential Tool to Mitigate Force Health Protection Risk against Aedes Aegypti Insecticide Resistance</td>
<td>LCDR Jeff Hertz</td>
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<td>MHSRS-19-00439 - SESSION 1 - #035</td>
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<td>Mr. Alan Hawk</td>
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<td>MHSRS-19-00503 - SESSION 1 - #036</td>
<td>Identification of Respiratory Pathogens in Viral Culture Isolates using Whole Genome Sequencing and the Edge Bioinformatics Suite</td>
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<td>Molecular Alterations Induced by Yersinia Pestis, Dengue Virus and Staphylococcal Enterotoxin B under Severe Stress</td>
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<td>Isothermal Amplification Assays for Rapid Pathogen Identification Directly from Clinical Sputum, Urine and Stool Samples</td>
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<td>MHSRS-19-00714 - SESSION 1 - #041</td>
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<td>Ms. Hadrian Sparks</td>
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<td>Dual Use Diagnostic Devices to Optimize Treatment &amp; Reduce the Threat Posed by Antimicrobial Resistant Pathogens</td>
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Effect of Probe DNA Density of Label-free Impedimetric Nucleic Acid Biosensing Chip on the Detection of Extracted RNA of Dengue Virus
Presentation Author: Dr. Hua-Wei Chen

MHSRS-19-00805 - SESSION 1 - #045
Single Domain Antibody-SpyTag Constructs for Enhancing Detection of Dengue Non-structural Protein 1 in Clinical Samples
Presentation Author: Dr. Victor Sugiharto

MHSRS-19-00841 - SESSION 1 - #046
Targeting Host-Cell Metabolism as a Broadly-Effective Medical-Counter-Measure against Emerging Infectious Diseases
Presentation Author: Dr. Lillian Chiang

MHSRS-19-00993 - SESSION 1 - #047
Mobile Manufacturing Platform for Rapid Response
Presentation Author: Ms. Evelyn Van der Hart

MHSRS-19-01095 - SESSION 1 - #048
Single-Cycle Adenoviruses as Platforms to Combat Emerging and Persistent Pathogens
Presentation Author: Dr. Michael Barry

MHSRS-19-01119 - SESSION 1 - #049
Role of Antimicrobial Lipid Coating on Endotracheal Tubes in Preventing Endotracheal Biofilm
Presentation Author: Dr. Mackenzie Morris

MHSRS-19-01151 - SESSION 1 - #050
Tick-borne Encephalitis Virus Immunization among DoD Personnel, 2001-Current
Presentation Author: Dr. Paul Scott

MHSRS-19-01204 - SESSION 1 - #051
Clinical Effectiveness of a Biofilm Disrupting Surgical Lavage in Reducing Bacterial Plate Counts in Total Knee Arthroplasty Revision Surgery in Known Cases of Prosthetic Joint Infection
Presentation Author: Dr. Matthew Myntti

MHSRS-19-01274 - SESSION 1 - #052
Zoonotic and Infectious Disease Pathogen Surveillance in Multiple Canine Populations from Varying Regions of South America Enhancing Warfighter Lethality, Force Health Protection, and Public Health by Applying the One Health Concept
Presentation Author: LTC Michael McCown

MHSRS-19-01291 - SESSION 1 - #053
Real-time Detection of Cellular Respiratory Bio-markers of Early-stage Infections using Terahertz Sensing
Presentation Author: Mr. Ivan Medvedev

MHSRS-19-01299 - SESSION 1 - #054
Rickettsia species identified in Ticks along the Mongolia-China border
Presentation Author: Dr. Michael von Fricken
MHSRS-19-01369 - SESSION 1 - #055  
Carbon Nanotubes as Novel HIV-1 Vaccine Antigen Vectors for Mucosal Immunity Stimulation  
Presentation Author: Dr. Yang Xu

MHSRS-19-01424 - SESSION 1 - #056  
Toward Universal Flaviviridae Surveillance  
Presentation Author: Mr. James Mann

MHSRS-19-01453 - SESSION 1 - #057  
Global Lipidomics Identifies a Host Sphingolipid Pathway Essential for Zika Virus Replication  
Presentation Author: Dr. Jennifer Kyle

MHSRS-19-01528 - SESSION 1 - #058  
Anaphylaxis to Multiple Vaccines: A Case Series and Recommended Approach to Optimize Immunization Readiness in the Warfighter  
Presentation Author: Dr. Bruce McClenathan

MHSRS-19-01620 - SESSION 1 - #059  
Potential Impact of Deployed Modular Manufacturing in an Outbreak Situation  
Presentation Author: Ms. Laura Saward

MHSRS-19-01650 - SESSION 1 - #060  
Systematic Review of Marburg Virus Vaccine Clinical Trials  
Presentation Author: 2LT Nicholas Dulin

MHSRS-19-01859 - SESSION 1 - #061  
ATI-1701, a Live Attenuated Francisella Tularensis Vaccine for the Prevention of Pneumonic Tularemia in the Warfighter  
Presentation Author: Dr. Carl Gelhaus

MHSRS-19-01919 - SESSION 1 - #062  
Paper Based Microfluidic Devices: Low Cost Platforms for Rapid Biochemical Detection  
Presentation Author: Dr. Baris Unal

MHSRS-19-01946 - SESSION 1 - #063  
Machine Learning to Identify Military Treatment Facilities at Risk for Vancomycin Resistant Enterococcus Infections  
Presentation Author: LTC Cade Nylund

MHSRS-19-01994 - SESSION 1 - #064  
Understanding How Alphaviruses Cause Musculoskeletal Disease  
Presentation Author: Dr. Suresh Mahalingam

MHSRS-19-01997 - SESSION 1 - #065  
Structure-based Arenavirus Vaccine Design  
Presentation Author: Dr. Michael Joyce

MHSRS-19-02015 - SESSION 1 - #066  
Spatiotemporal Profiling of Bacterial Communities and Interpersonal Interactions to Capture Transmission Events  
Presentation Author: Dr. Briana Vecchio-Pagan
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**MHSRS-19-02061 - SESSION 1 - #067**
Cataloging Host Response Infectious Disease Signatures to Accelerate the Development of Countermeasures and Diagnostics for Emerging Infectious Diseases  
Presentation Author: Dr. Katrina Waters

**MHSRS-19-02092 - SESSION 1 - #068**
Potent Zika and Dengue Cross-Neutralizing Antibodies Induced by Zika Vaccination in a Dengue-Exposed Donor  
Presentation Author: Dr. Shelly Krebs

**MHSRS-19-02142 - SESSION 1 - #069**
Zika Virus Infection and the Blood Brain Barrier: Insights from the 3D-bioprinted BBB Model  
Presentation Author: Mr. William Valiant

**MHSRS-19-02164 - SESSION 1 - #070**
Validation of a Plasmodium 18S rRNA qRT-PCR Assay in a CAP-Accredited Laboratory for Diagnosis in Controlled Human Malaria Infection Trials  
Presentation Author: Dr. Linda Jagodzinski

**MHSRS-19-02233 - SESSION 1 - #071**
Performance of One-Minute, Accurate, Portable Point-of-Need Diagnostic Test to Detect Malaria Parasites  
Presentation Author: Dr. Priyaleela Thota

**MHSRS-19-02257 - SESSION 1 - #072**
Establishing a Preclinical Chronic Periprosthetic Infection Model in Rats  
Presentation Author: Dr. Yingfang Fan

**MHSRS-19-02264 - SESSION 1 - #073**
Fix it with New Fixatives  
Presentation Author: Dr. Anne Davis

**MHSRS-19-02290 - SESSION 1 - #074**
A Novel Inactivated-Chikungunya Virus Vaccine  
Presentation Author: Dr. Anuj Sharma

**MHSRS-19-02327 - SESSION 1 - #075**
Development of Nanobody-lampole Diagnostic Tests for Dengue and Zika  
Presentation Author: Dr. Dennis Grab

**MHSRS-19-02445 - SESSION 1 - #076**
Modeling the Potential Impact of Norovirus Vaccination among DoD Forces  
Presentation Author: Ms. Colleen Burgess

**MHSRS-19-02454 - SESSION 1 - #077**
Scalable Response to High-consequence Emerging Infectious Disease Epidemics  
Presentation Author: Dr. Erwin Berthier

**MHSRS-19-02486 - SESSION 1 - #078**
Modeling Zika Vaccination Combined with Vector Interventions for Outbreak Response in DoD Populations  
Presentation Author: Ms. Colleen Burgess
MHSRS-19-02488 - SESSION 1 - #079
Applications of Antimicrobial 3D Printing Materials for On Orbit Missions
Presentation Author: Mr. Michael Thompson

MHSRS-19-02532 - SESSION 1 - #080
Real-time Pathogen Genomic Characterization of Human Clinical Isolates using the Oxford Minion Handheld Sequencer
Presentation Author: Mr. Thomas Mehoke

MHSRS-19-02618 - SESSION 1 - #081
Assessing Biofilm Biomass in a High Throughput Testing Format
Presentation Author: Dr. Mina Izadjoo

NON-VACCINE APPROACHES TO PREVENT OR TREAT MILITARILY RELATED INFECTIONS

MHSRS-19-00257 - SESSION 1 - #082
Adenovirus Typing to Determine Trends in Military Recruit and Community Populations
Presentation Author: Ms. Brieanne Koster

MHSRS-19-00323 - SESSION 1 - #083
Capability Gaps and Target Product Profile for Next Generation Malaria Drugs in the Context of Tafenoquine Approval and Fielding
Presentation Author: LTC Mara Kreishman-Deitrick

MHSRS-19-00370 - SESSION 1 - #084
Development of GC-072 Antimicrobial for Treatment of Acute Melioidosis
Presentation Author: Ms. Michelle Saylor

MHSRS-19-00448 - SESSION 1 - #085
Do S. Boulardii CNCM I-745 Probiotics affect the Pharmacokinetics of Amoxicillin in ICR Mice?
Presentation Author: CPT Daniel Selig

MHSRS-19-00466 - SESSION 1 - #086
Identification of Pathogenic Escherichia Coli and Antibiotic Susceptibility Testing from Stool Samples Obtained from Ongoing Acute Gastroenteritis Surveillance Studies
Presentation Author: Ms. Katherine Whitelock

MHSRS-19-00486 - SESSION 1 - #087
Acute Gastroenteritis Surveillance at U.S. Military Recruit Training Facilities Implicates Emergent Recombinant Norovirus Strains as Primary Etiology of Age Outbreaks
Presentation Author: Mr. Reza Zeighami

MHSRS-19-00508 - SESSION 1 - #088
A Randomized, Double-blind, Placebo-controlled Trial Evaluating the Efficacy of Non-antibiotic OTC Products in Travelers Diarrhea Prevention: Methods
Presentation Author: Dr. Tahaniyat Lalani
MHSRS-19-00546 - SESSION 1 - #089
The Engineered Cationic Amphipathic Peptide WLBU2 Eliminates Staphylococcus Aureus Biofilms
Presentation Author: Dr. Kenneth Urish

MHSRS-19-00548 - SESSION 1 - #090
Elevated Cap-D3 Levels in Intestinal Epithelial Cells Cause Global Chromatin Disorganization and May Have Implications for Crohn's Disease
Presentation Author: Dr. Michelle Longworth

MHSRS-19-00640 - SESSION 1 - #091
Comparative Biocompatibility and Osteogenic Potential of Two Bioceramic Sealers
Presentation Author: Dr. Rodney Phoenix

MHSRS-19-00853 - SESSION 1 - #092
Boosting Innate Immunity through P53 to Counter Viral Infection
Presentation Author: Dr. Robert Shalwitz

MHSRS-19-00890 - SESSION 1 - #093
Addressing Unmet Needs in HIV Research via Project-driven, Cohort Specific Human Biospecimen Collection
Presentation Author: Dr. Thomas Bell

MHSRS-19-00895 - SESSION 1 - #094
Detection and Classification of Shigella Toxin Producin Escherichia Coli by Surface Enhanced Raman Scattering Spectroscopy
Presentation Author: Dr. Luis Martinez

MHSRS-19-01069 - SESSION 1 - #095
Use of a Porcine Wound Model for Evaluation of Eskape Pathogens Bacterial Burden
Presentation Author: Dr. Francoise Arnaud

MHSRS-19-01072 - SESSION 1 - #096
Synergistic Inactivation of Pseudomonas Aeruginosa by Oregano Oil and Blue Light
Presentation Author: Mr. Min Lu

MHSRS-19-01093 - SESSION 1 - #097
Passive Immunotherapeutic of Hyperimmune Bovine Colostrum to Prevent Shigellosis in a Non-human Primate Model
Presentation Author: Ms. Nattaya Ruamsap

MHSRS-19-01094 - SESSION 1 - #098
Novel Prophylactic and Therapeutic Approach against Dengue Infection through Viral Protease Inhibition
Presentation Author: Dr. Bernd Van Buuren

MHSRS-19-01280 - SESSION 1 - #099
Identification and Validation of the Plasmodium Cell-cycle in Blood-stage by Flow Cytometry in Comparison to Optical Microscopy
Presentation Author: Dr. Qigui Li
MHSRS-19-01326 - SESSION 1 - #100
Prevention of Tick Transmitted Lyme Spirochete Infection in Nonhuman Primates by Anti-OspA Human Monoclonal Antibody
Presentation Author: Dr. Yang Wang

MHSRS-19-01347 - SESSION 1 - #101
Oral Administration of an Anti-CFA/I Secretory IgA Antibody Protects against Enterotoxigenic Escherichia Coli Diarrheal Disease in a Non-human Primate Model
Presentation Author: Dr. Yang Wang

MHSRS-19-01395 - SESSION 1 - #102
Analysis of Lyme Disease in Class Cohort (2013-17) of U.S. Military Academy Cadets and Tips on Exposure Prevention
Presentation Author: LTC Vanessa Melanson

MHSRS-19-01426 - SESSION 1 - #103
Pharmacokinetics and Tolerability of Primaquine Enantiomers in Human Volunteers
Presentation Author: Dr. Larry Walker

MHSRS-19-01428 - SESSION 1 - #104
Antifungal Activity of Scorpion Venom-derived Peptide Analogues against Candida Albicans
Presentation Author: Dr. Nancy Millenbaugh

MHSRS-19-01592 - SESSION 1 - #105
ATI-1503, A Novel Negamycin Analogue for the Treatment of Multi Drug Resistant Gram-negative Infection
Presentation Author: MAJ Armand Balboni

MHSRS-19-01598 - SESSION 1 - #106
Nitric Oxide Releasing Coatings for Heparin Free Extracorporeal Life Support with Antimicrobial, Antithrombogenic and Antifouling Properties
Presentation Author: Dr. Hitesh Handa

MHSRS-19-01624 - SESSION 1 - #107
Initial Perceptions of Efficacy of a Spatial Repellent against Arbovirus Infections: Recent Evidence from an Ongoing Clinical Trial in Peru
Presentation Author: Lt Eugenio Abente

MHSRS-19-01626 - SESSION 1 - #108
Nitric Oxide-releasing Polymers with Antimicrobial Properties via Solvent Impregnation of Plasticized Polyvinyl Chloride
Presentation Author: Dr. Elizabeth Brisbois

MHSRS-19-01667 - SESSION 1 - #109
Alligators and the Discovery of Novel Peptides with Broad Antibacterial Efficacy
Presentation Author: Dr. Barney Bishop

MHSRS-19-01720 - SESSION 1 - #110
Treatment of Drug Resistant Malaria with Light: Exploiting the Parasite’s Manipulation of Vestigial Erythrocytic Pathways
Presentation Author: Dr. Akilan Palanisami
MHSRS-19-01801 - SESSION 1 - #111
Burden of Diarrhoeal Disease on Overseas Exercises in the Post-Afghanistan Era
Presentation Author: MAJ Daniel Burns

MHSRS-19-01825 - SESSION 1 - #112
Trends and Antibiotic Resistance Rates of Group a Streptococcus across Military Recruit Training Sites
Presentation Author: Ms. Julianne Mesa

MHSRS-19-01827 - SESSION 1 - #113
Enhancing Resistance to Nosocomial Infections with Synthetic Toll-like Receptor Agonists
Presentation Author: Dr. Antonio Hernandez

MHSRS-19-01831 - SESSION 1 - #114
Developing New Immunotherapeutic Strategies against Human Disseminated Candidiasis by Medically Important Candida Species
Presentation Author: Dr. Hong Xin

MHSRS-19-01886 - SESSION 1 - #115
Point-of-use Generation of Nitric Oxide to Prevent and RemEDIATE Infected Wounds
Presentation Author: Dr. Jacob Adams

MHSRS-19-01913 - SESSION 1 - #116
Trial of New Combination Therapies to Protect Malarone and Examine Treatment Options for Militaries affected by Malaria in Southeast Asia
Presentation Author: MAJ Mariusz Wojnarski

MHSRS-19-01987 - SESSION 1 - #117
Standard Issue Antimicrobial Field Dressings Based on a One Shot Method for Sterilization and Coating using Supercritical Carbon Dioxide
Presentation Author: Dr. Aaron Strickland

MHSRS-19-01996 - SESSION 1 - #118
In Vitro Eryptosis Assays: An Evaluation of Apoptotic Activities by Antimalarial Compounds
Presentation Author: Dr. Xiannu Jin

MHSRS-19-02026 - SESSION 1 - #119
Pursuing a Cure: Monoclonal Antibodies for Treatment of HIV-1
Presentation Author: Dr. Trevor Crowell

MHSRS-19-02041 - SESSION 1 - #120
A New and Improved Collaborative System to Efficiently Evaluate Natural Product Extracts for any Therapeutic Area: Proof-of-concept in Malaria, Multi-drug Resistant Bacteria, and Leishmaniasis
Presentation Author: Ms. Patricia Lee

MHSRS-19-02062 - SESSION 1 - #121
Innovative Implant Nanocoatings with Controlled Dual Drug Release for Infection Prevention
Presentation Author: Dr. Bingyun Li

MHSRS-19-02140 - SESSION 1 - #122
Inertial-based Fluidic Platform for Rapid Capture of Blood-borne Pathogens
Presentation Author: Mr. Todd Giorgio
In Situ Topical Treatment with ASP-105 Microbicide Effectively Sterilizes Drug Resistant Staphylococcus Aureus in An Experimental Murine Wound Infection Model

Presentation Author: Mr. Joseph Hoffmann

Sanaria® PfSPZ Vaccine: Progress towards Licensure of a 3-dose 28-day Regimen for Protection against Infection with Plasmodium Falciparum Presentation

Presentation Author: CAPT Judith Epstein

**INFLUENZA PREVENTION: OPTIMAL STRATEGIES TO ENHANCE READINESS**

Shoulder Injury Related to Vaccine Administration: The DoD Experience

Presentation Author: Ms. Laurie Housel

Burden of Respiratory Infections in Trainees Higher than Healthcare Records Indicate: Results from an Anonymous Survey

Presentation Author: Dr. Stephanie Richard

Effect of Influenza a Viral Infection on Blood Coagulation Factor VIII Levels in the Lungs

Presentation Author: Mr. Teodor Brumeanu

Active Surveillance for Respiratory Pathogens among DoD Beneficiaries

Presentation Author: Mr. Cyril England

Active Surveillance for Respiratory Pathogens among High Risk U.S. Military Personnel in the Recruit Training Environment

Presentation Author: Mr. Evan Stiner

Automation of Influenza EHR Documentation Tasks to Reduce Clinical Workflow Burdens, Enhance Clinical Coding Accuracy, Increase Access to Care, and Improve Patient Care across the Army and Navy during the 2018-2019 Flu Season

Presentation Author: Mr. Ronald Yeaw

Cutaneous Mastocytosis Presenting as Anaphylaxis to Multiple Immunizations: A Case Report

Presentation Author: Capt Benjamin St. Clair

Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD: Immunogenicity Sub-Study

Presentation Author: Dr. Rhonda E. Colombo
MHSRS-19-02076 - SESSION 1 - #133
Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD: Influenza-like-illness Rates in Year 1
Presentation Author: CAPT Timothy Burgess

MHSRS-19-02165 - SESSION 1 - #134
“Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD,” Influenza-like-illnesses Sub-Study at the Marine Corps Recruit Depot - San Diego, CA during the 2018-2019 Influenza Season
Presentation Author: CAPT Ryan Maves

MHSRS-19-02191 - SESSION 1 - #135
Disparities in Healthcare Seeking Behaviors in the Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD Study
Presentation Author: Dr. Christina Schofield

MHSRS-19-02317 - SESSION 1 - #136
Translating Surveillance Data into Policy and Practice: A Data-driven Tool for Local Influenza Response at Naval Medical Center Portsmouth
Presentation Author: Dr. Kathleen Creppage

MHSRS-19-02487 - SESSION 1 - #137
Local Respiratory Viral Surveillance Can Focus Public Health Interventions to Decrease Influenza Disease Burden
Presentation Author: 2ndLt Elena Crouch

MHSRS-19-02623 - SESSION 1 - #138
Urticaria Temporally Associated with Influenza Vaccination: A Case Series
Presentation Author: Ms. Jennifer Ritschl

OCCUPATIONAL AND ENVIRONMENTAL EXPOSURE: BASIC AND APPLIED RESEARCH

MHSRS-19-00159 - SESSION 1 - #139
Using Drugpath: A New Database for Mapping Polypharmacology to Assess Multi-drug Treatments for Gulf War Illness
Presentation Author: Mr. Rajeev Jaundoo

MHSRS-19-00346 - SESSION 1 - #140
Expeditionary Field Decontamination of Military Working Dogs in a CBRN Environment
Presentation Author: Dr. Kristina McElroy

MHSRS-19-00415 - SESSION 1 - #141
Mitigation of Radiation-induced Morbidity and Mortality of Mice by a Thrombopoietin Mimetic (JNJ-26366821) Administered alone and in Combination with Filgrastim
Presentation Author: Dr. Gregory Holmes-Hampton

MHSRS-19-00477 - SESSION 1 - #142
Protection from Targeted Radiation Injury to Lungs by Gamma Tocotrienol Treatment
Presentation Author: Dr. Vidya Kumar
MHSRS-19-00516 - SESSION 1 - #143
Senolytic Drugs Can Mitigate Radiation Induced Astrocyte Senescence that Promotes Glioblastoma Growth
Presentation Author: Capt Eliot Fletcher

MHSRS-19-00544 - SESSION 1 - #144
Incorporation of Thermal Stress Effects into Physiologically Based Pharmacokinetic Models Leading to Enhanced Exposure Profiling of Department of Defense Personnel
Presentation Author: Mr. Evan Pitts

MHSRS-19-00574 - SESSION 1 - #145
Improving Envenomation Outcomes with Spreading Factor Inhibitors
Presentation Author: Dr. Angela Jockheck-Clark

MHSRS-19-00661 - SESSION 1 - #146
Mechanism Prediction through Dose-responsive Phase-specific Effects on the Zebrafish Photomotor Response Assay
Presentation Author: Mr. Chance Carbaugh

MHSRS-19-00721 - SESSION 1 - #147
PF-clean: Detection and Degradation of Perfluorinated Compounds in Water Supplies
Presentation Author: Dr. J. Jordan Steel

MHSRS-19-00811 - SESSION 1 - #148
Comparison of Operational Jet Fuel and Noise Exposures: Noise Dosimetry Results
Presentation Author: SSgt Kerrine LeGuin

MHSRS-19-00826 - SESSION 1 - #149
In Vitro Methods to Study Human Microbiome Systems
Presentation Author: Dr. Andrea Timm

MHSRS-19-00861 - SESSION 1 - #150
Insulin-IGF1 Axis at the Core of Resistance to Lethal Radiation: A Deep Sequencing Analysis of Multi-tissue Cross Talk among Multi Minipig Strain Model
Presentation Author: Mr. Nabarun Chakraborty

MHSRS-19-00974 - SESSION 1 - #151
Competency-based Simulator Training in TRUS Side-fire Templated Prostate Biopsy
Presentation Author: Dr. Samsun Lampotang

MHSRS-19-01023 - SESSION 1 - #152
Enhancing Functional Relevance of in vitro CNS Models by Recapitulating Native Cellular Composition, Extracellular Matrix, and Architecture
Presentation Author: Dr. Nicholas Fischer

MHSRS-19-01042 - SESSION 1 - #153
Recapitulating Complex Neuronal-Glia Networks in an in Vitro System for Toxicant Characterization
Presentation Author: Dr. Heather Enright

MHSRS-19-01101 - SESSION 1 - #154
Neurobehavioral and Respiratory Effects of Acute Trimethylsilanol Inhalation in Rats
Presentation Author: Dr. Frank Golich
MHSRS-19-01158 - SESSION 1 - #155
Safety of Tetanus, Diphtheria, and Acellular Pertussis Vaccination in a Cohort of Pregnant Active Duty U.S. Military Women
Presentation Author: Dr. Clinton Hall

MHSRS-19-01162 - SESSION 1 - #156
Curcumin Preserves Mitochondrial Integrity, Alleviates Oxidative Stress and Minimizes Heat-induced Skeletal Muscle Injury in Mice
Presentation Author: Mr. Jacob Dohl

MHSRS-19-01223 - SESSION 1 - #157
Effects of Military-relevant Environmental Contaminant, Benzo[a]pyrene, on the Blood-Brain Barrier and Behavior
Presentation Author: Dr. Dao Ho

MHSRS-19-01241 - SESSION 1 - #158
Developing IL-18 Binding Protein as a Novel Radiation Countermeasure after Radiation Exposure
Presentation Author: Dr. Mang Xiao

MHSRS-19-01310 - SESSION 1 - #159
Thromboelastography Detects Coagulopathy Faster than Standard Coagulation Studies in Simulated Pit Viper Envenomation Using Human Blood
Presentation Author: Lt Andrew McGowan

MHSRS-19-01319 - SESSION 1 - #160
Assessment of Oncogene Mutations by Digital PCR in Thyroid Cancer Samples from Young Adults Exposed to Radiation after the Chernobyl Accident
Presentation Author: Lt Col Kirk Jensen

MHSRS-19-01330 - SESSION 1 - #161
An ABCC9 Ala1513Thr Variant Associated with Dilated Cardiomyopathy in a Patient with Recurrent Exertional Rhabdomyolysis
Presentation Author: Dr. Mungunsukh Ognoon

MHSRS-19-01335 - SESSION 1 - #162
Development of New Nerve Agent Antidotes by Rational Drug Design
Presentation Author: MAJ Sebastian Rappenglueck

MHSRS-19-01398 - SESSION 1 - #163
Inflammatory Consequences during the Post-lethal Radiation Linked to Circulatory miRNAs and Metabolites
Presentation Author: Mrs. Raina Kum

MHSRS-19-01407 - SESSION 1 - #164
Thermosensitive Mutation in the Calcium Binding Pocket of TRPM4 Confers Susceptibility to Malignant Hyperthermia and Recurrent Exertional Heat Illness
Presentation Author: Dr. Nyamkhishig Sambuughin

MHSRS-19-01522 - SESSION 1 - #165
X-ray Irradiation Induces Subtle Changes in the Genome-wide Distribution of DNA Hydroxymethylation with Opposing Trends in Genic and Intergenic Regions
Presentation Author: LCDR Hanns Leonhard Kaatsch
MHSRS-19-01532 - SESSION 1 - #166
Treatment of A549 Cells with Industrial Surfactants Causes a Microrna Regulated Epithelial to Mesenchymal Transition
Presentation Author: Mr. Craig McPherson

MHSRS-19-01547 - SESSION 1 - #167
Generation of a Biofabricated Human Colonic Model System to Investigate the Pathogenesis of Shiga Toxin-producing and Enteroaggregative Escherichia Coli
Presentation Author: Dr. Theodore Picou

MHSRS-19-01554 - SESSION 1 - #168
Refractive Surgery: A Review of Enhancing the Warfighter and Optimizing Performance
Presentation Author: COL Bruce Rivers

MHSRS-19-01574 - SESSION 1 - #169
Augmenting the Warfighter through Smart Probiotics that Sense and Modulate Stress Levels of Cortisol
Presentation Author: Mr. Vaughn Litteral

MHSRS-19-01642 - SESSION 1 - #170
Extrusion Bioprinting and 3D Printing of Collagen-based Skin Barrier Tissue Models
Presentation Author: Dr. Jordan Betz

MHSRS-19-01899 - SESSION 1 - #171
Comprehensive Chemical Identification: Evaluation of in Silico Libraries to Identify Small Molecules in Environmental and Exposure-related Samples
Presentation Author: Dr. Ryan Renslow

MHSRS-19-02082 - SESSION 1 - #172
Signatures of Chemical and Radiation Exposures in the Skin Microbiome
Presentation Author: Dr. Kristin Loomis

MHSRS-19-02098 - SESSION 1 - #173
Reverse Docking to Identify Toxin Targets
Presentation Author: Dr. Michael McCarthy

MHSRS-19-02108 - SESSION 1 - #174
Point of Care Diagnostic Device for Toxic Organ Injury from Saliva Samples
Presentation Author: Dr. Richard Baldwin

MHSRS-19-02278 - SESSION 1 - #175
Desert Dust Exposure Induces Epidermal Differentiation of Both Human Airway Epithelial Stem Cells and the Mucociliary Airway Epithelium
Presentation Author: Dr. Jamie Everman

MHSRS-19-02299 - SESSION 1 - #176
Development of a Rat Sulfur Mustard Model of Hematological Toxicity for Countermeasure Efficacy Testing
Presentation Author: Dr. Phillip Beske

MHSRS-19-02300 - SESSION 1 - #177
Sampling and Toxicological Assessment of Chemical Contaminants in Aircraft Pilot Breathing Air
Presentation Author: Dr. Jeffery Gearhart
Poster Session 1

MHSRS-19-02321 - SESSION 1 - #178
Mitochondrial Targeted Biofuels as Countermeasures against Chemical Threats
Presentation Author: Dr. Sarah Piel

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MHSRS-19-02406 - SESSION 1 - #180
Afghanistan Particulate Matter Increases Mouse Airway Hyperresponsiveness, Partially through IL-33 Signaling
Presentation Author: Ms. Reena Berman

MHSRS-19-02457 - SESSION 1 - #181
Noise-induced Otolith Organ Injury and Altered Motor Performance in Rats
Presentation Author: Dr. Courtney Stewart

MHSRS-19-02466 - SESSION 1 - #182
Neuroimmunological Responses to Environmental Exposures: Lessons Learned from Gulf War Illness
Presentation Author: Dr. Mulugu Brahmajothi

MHSRS-19-02560 - SESSION 1 - #183
Lethal Box Jellyfish Envenomation Syndromes: Murine- and Porcine- in vitro and Human Blood Based Model Approaches
Presentation Author: Dr. Angel Yanagihara

MHSRS-19-02585 - SESSION 1 - #184
Microdermal Implants Show No Effect on Surrounding Tissue during Surgery with Electrocautery
Presentation Author: CPT Rowan Sheldon

MHSRS-19-02598 - SESSION 1 - #185
Intranasal Insulin: A Novel Treatment of Gulf War Multisymptom Illness
Presentation Author: Ms. Ivonne Cruz

MHSRS-19-02599 - SESSION 1 - #186
Activity-based Protein Profiling Reveals Exposure Impacts in the Liver, Lung, and Gut Microbiome
Presentation Author: Dr. Aaron Wright

MHSRS-19-02662 - SESSION 1 - #187
Near-infrared Brain Imaging System for Continuous Monitoring of Cerebral Blood Flow and Oxygenation
Presentation Author: Dr. Megan Blackwell

MHSRS-19-02665 - SESSION 1 - #188
Computational Fluid Dynamics Simulation of Ventilation in an Enclosed Air Force Small Arms Firing Range
Presentation Author: Ms. Jennifer Melendez

MHSRS-19-02669 - SESSION 1 - #189
Assessments of Gulf War Chemical Toxicity in Rats
Presentation Author: Dr. Joyce Rohan
EARLY RESEARCH IN TOTAL EXPOSURE HEALTH

MHSRS-19-00560 - SESSION 1 - #190
UV-induced SOCE Suppression in Melanoma Metastatic Progression
Presentation Author: Dr. Jonathan Soboloff

MHSRS-19-00787 - SESSION 1 - #191
Intelligent Textile Systems for Monitoring Individual Exposure Health
Presentation Author: Dr. Gloria See

MHSRS-19-01539 - SESSION 1 - #192
Blood mRNA Integrity is a Direct and Simple Reporter of Radiation Exposure
Presentation Author: Dr. Abdulnaser Alkhalil

MHSRS-19-01541 - SESSION 1 - #193
A Translational Medicine Approach to Gulf War Illness: From Cells to Therapy
Presentation Author: Dr. Kristina Aenlle

MHSRS-19-01753 - SESSION 1 - #194
BMI and Diagnosis of Obesity in the Military and Civilian Population
Presentation Author: CPT Jason Estes

MHSRS-19-01973 - SESSION 1 - #195
Circulating Biomarkers of Acute Nerve Agent Exposure
Presentation Author: Mr. Kevin McGarry Jr.

MHSRS-19-02138 - SESSION 1 - #196
Characterization of Cholinesterases from Multiple Large Animal Species for Medical Countermeasure Development against Chemical Warfare Nerve Agents
Presentation Author: Mr. Kevin McGarry Jr.

MHSRS-19-01975 - SESSION 1 - #197
Detection and Quantification of Immunomodulatory Bacterial Species Important To Health and Performance
Presentation Author: Capt David Leonard

MHSRS-19-02329 - SESSION 1 - #198
In Vitro Validation of Genetic Elements Conferring Neuronal Hypoxia Tolerance using CRISPR/Cas9 System and Microelectrode Arrays
Presentation Author: Dr. Oksana Pavlyuk

MHSRS-19-02389 - SESSION 1 - #199
Identifying Epigenetic Signatures of Organophosphate Exposure
Presentation Author: Dr. Julie Gleason

MHSRS-19-02570 - SESSION 1 - #200
Epigenetic Regulation in Response to Exposure: Epigenetic Regulator Targeted
Presentation Author: Dr. Rachel Spurbeck
IMPROVED OCCUPATIONAL AND ENVIRONMENTAL EXPOSURE MONITORING

MHSRS-19-00313 - SESSION 1 - #201
Blood Proteomic Biomarker Discovery using an in vivo Inhalation Model
Presentation Author: Dr. Camilla Mauzy

MHSRS-19-01308 - SESSION 1 - #202
Particle Analysis by Scanning Electron Microscopy with Energy Dispersive X-Ray Analysis in Pulmonary Pathology Specimens from U.S. Military Service Members Deployed during the Global War on Terror 2002-2015
Presentation Author: Ms. Stacy Strausborger

MHSRS-19-01488 - SESSION 1 - #203
A Point-of-care Salivary Diagnostic Tool for Detection of Multi Organ Injury in the Battlefield
Presentation Author: Dr. Anamika Ray

MHSRS-19-01701 - SESSION 1 - #204
A Mouse Model of Gulf War Illness Allows for Mechanistic Studies and the Search for Antidotes
Presentation Author: Mrs. Nadezhda Sabeva

MHSRS-19-02260 - SESSION 1 - #205
Simulating Field Storage Conditions for Evaluating Medical and Dental Materials
Presentation Author: Dr. David Lemon

MHSRS-19-02334 - SESSION 1 - #206
Development of a Versatile, Translational, Porcine (Sus Domesticus) Model for Lethal Snake Envenomation and Rescue: Experience with 70 Animals
Presentation Author: Dr. Lyndi Gilliam

ENHANCING HUMAN PERFORMANCE AND SURVIVABILITY IN EXTREME ENVIRONMENTS

MHSRS-19-00071 - SESSION 1 - #207
Eustachian Tube Dilation for Baro-challenge Induced Dysfunction in Military Divers and Aviators
Presentation Author: LCDR Edward Utz

MHSRS-19-00117 - SESSION 1 - #208
The Trifecta of Tele-Critical Care: Intra-hospital, Operational and Mass Casualty Applications
Presentation Author: Mrs. Kristina Ieronimakis

MHSRS-19-00253 - SESSION 1 - #209
Diabetes by Air, Land, and Sea: Effects of Military Deployment on A1C and BMI
Presentation Author: Lt Col Irene Folaron

MHSRS-19-01018 - SESSION 1 - #210
Heat Strain Assessment: Use of Meteorological Data as a Cost-effective Means to Estimate Wet Bulb-Globe Temperature
Presentation Author: Ms. Ericka Crosley
MHSRS-19-01041 - SESSION 1 - #211
Establishing a Physiological Strain Index Criterion during the Final Sixty Minutes of Heat Tolerance Testing
Presentation Author: Mr. Douglas Jones

MHSRS-19-01137 - SESSION 1 - #212
40% Body Surface Area Burned is an Inappropriate Cutoff for the U.S. Army's Standards of Medical Fitness for Burn Injuries: Effects of Work Intensity
Presentation Author: Dr. Craig Crandall

MHSRS-19-01138 - SESSION 1 - #213
Warfighter with Sickle Cell Trait and Exertional Rhabdomyolysis with Extreme Pain: Does Variant in GDAP1 Linked to Peripheral Neuropathy Play a Role?
Presentation Author: Dr. Nyamkhishig Sambuughin

MHSRS-19-01187 - SESSION 1 - #214
Palatability of Commercially Available Rehydration Solutions: Preferences of Active Duty Service Members
Presentation Author: SPC Joshua Little

MHSRS-19-01396 - SESSION 1 - #215
Comparison of Physiological Strain Index and Core Temperature Rise for Classifying Heat Tolerance among Warfighters
Presentation Author: Mr. Jay Heaney

MHSRS-19-01420 - SESSION 1 - #216
Magnitude and Persistence of Clinical Laboratory Markers Following Exertional Heat Stroke
Presentation Author: CPT Matthew Ward

MHSRS-19-01433 - SESSION 1 - #217
Spatial Audio Cues Help Helicopter Pilots Fly When They Can't See
Presentation Author: Ms. Lana Milam

MHSRS-19-01768 - SESSION 1 - #218
Realtime Monitoring of Physiological Parameters in Training Operations
Presentation Author: Dr. Alessio Medda

MHSRS-19-01949 - SESSION 1 - #219
Performance and Safety Monitoring in Aquatic Environments
Presentation Author: Dr. Regina Shia

MHSRS-19-01958 - SESSION 1 - #220
The Effects of 5-hydroxymethyl-2-furfural (5-HMF) on Reactive Oxygen Species and Regulators of Mitochondrial Dynamics in Skeletal Muscle of Rats Exposed to Hypobaric Hypoxia
Presentation Author: Lt Geoffrey Ciarlone

MHSRS-19-02037 - SESSION 1 - #221
Real-time Hydration Monitoring
Presentation Author: Ms. Victoria Razin
MHSRS-19-02081 - SESSION 1 - #222
Development of a Rodent Model for High Altitude Induced Working Memory Impairment
Presentation Author: Dr. Brian Williams

MHSRS-19-02139 - SESSION 1 - #223
A Meta-analysis of Assessment of Doxycycline as an Adjunctive Therapy to Prevent Decompression Sickness in Swine
Presentation Author: Mrs. Hanbing Zhou

MHSRS-19-02343 - SESSION 1 - #224
Ehealth Garment for Physiological Monitoring
Presentation Author: Ms. Trang Young

MHSRS-19-02666 - SESSION 1 - #225
Impact of MOPP-4 on Emergency Response Equipment Usage in Operational Environmental Conditions
Presentation Author: Mr. Ryan McNeilly

DIRECTED ENERGY HEALTH EFFECTS

OPEN - SESSION 1 - #226

MHSRS-19-00231 - SESSION 1 - #227
Magnetic Resonance Imaging and Biomarker Model for Directed Energy Exposure Medical Evaluation in Swine (Sus Scrofa Domestica)
Presentation Author: Dr. Paul Sherman

MHSRS-19-00314 - SESSION 1 - #228
Neural Cellular Response to Cavitation-inducing Directed Energy Hazards
Presentation Author: Dr. Christian Franck

MHSRS-19-00371 - SESSION 1 - #229
In vitro Laser MicroRNA Analysis: Human Primary Epithelium MicroRNA Response to 532-nm Pulsed Laser
Presentation Author: Dr. Joshua Cohen

MHSRS-19-01057 - SESSION 1 - #230
Comparing Skin Damage from Directed Energy to Thermal Contact Burns in Swine
Presentation Author: Dr. Christine Kowalczewski

MHSRS-19-01368 - SESSION 1 - #231
Neural Networks Models for Retinal Laser Lesion Detection and Classification
Presentation Author: Mr. Eddie Gil

MHSRS-19-01441 - SESSION 1 - #232
Distinctive Convergence Eye Movements in an Acquired Neurosensory Dysfunction from Havana
Presentation Author: Dr. Carey Balaban

MHSRS-19-02183 - SESSION 1 - #233
Model to Predict Probability of Significant Skin Burn Injury from Radiant Heat Source
Presentation Author: Dr. Anthony Iyoho
Poster Session 1

**MHSRS-19-02306 - SESSION 1 - #234**
Using Human Performance Metrics to Support LEP Acquisition Decisions
Presentation Author: LCDR Micah Kinney

**MHSRS-19-02356 - SESSION 1 - #235**
Total Force Fitness Based Predictive Analytics to Build a Ready and Resilient U.S. Military
Presentation Author: Dr. Charles Baschnagel

**MILITARY FAMILY FRAMEWORKS FOR READINESS AND RESILIENCE**

**MHSRS-19-00152 - SESSION 1 - #236**
Military Teen Mobile App Promotes Psychological Resilience: Preliminary Usage and Engagement
Presentation Author: Dr. Kathy Puskar

**MHSRS-19-00213 - SESSION 1 - #237**
Interpersonal Mindfulness Based Therapy Fosters Resilience amongst those Suffering from Systemic Lupus Erythematosus and their Families
Presentation Author: Ms. Dallas Ducar

**MHSRS-19-00612 - SESSION 1 - #238**
Religion and Spirituality in Veteran Couple Relationships
Presentation Author: MAJ Timothy Usset

**MHSRS-19-01190 - SESSION 1 - #239**
Prediction Model Development of Daily Asthma Control using Fitness Tracker Sleep Patterns
Presentation Author: Dr. Jessica Castner

**MHSRS-19-01232 - SESSION 1 - #240**
Racial Disparity in Home Environment Triggers for Asthma
Presentation Author: Dr. Jessica Castner

**MHSRS-19-01494 - SESSION 1 - #241**
Home Environment Allergen Exposure Scale: Comparing Dimension Reduction, Theory-driven, and Biomarker-based Methods
Presentation Author: Dr. Jessica Castner

**MHSRS-19-01196 - SESSION 1 - #242**
Transitioning Home Following Traumatic Brain Injury: Examination of the Long-term Service Needs and Barriers to Care among Caregivers of Service Members and Veterans Following Mild Traumatic Brain Injury
Presentation Author: Dr. Tracey Brickell

**MHSRS-19-01298 - SESSION 1 - #243**
Trajectory of Service Needs Across the Care Continuum and Barriers to Care among Caregivers of Service Members and Veterans Following Traumatic Brain Injury
Presentation Author: Dr. Tracey Brickell

**MHSRS-19-01305 - SESSION 1 - #244**
Caring for a Service Member or Veteran Following Traumatic Brain Injury Influences Caregiver Mental Health
Presentation Author: Dr. Tracey Brickell
Poster Session 1

MHSRS-19-01312 - SESSION 1 - #245
Service Member and Veteran Traumatic Brain Injury Severity Influences Caregiver Health-related Quality of Life
Presentation Author: Dr. Tracey Brickell

MHSRS-19-01261 - SESSION 1 - #246
Supportive Supervisor Behaviors and Family and Health Outcomes
Presentation Author: Dr. Leslie Hammer

MHSRS-19-01302 - SESSION 1 - #247
Loss of Control Eating, Adiposity, and Metabolic Health in Adolescent Military Dependents with Overweight and Obesity
Presentation Author: Ms. Lisa Shank

MHSRS-19-01340 - SESSION 1 - #248
Demographic Variation in Military Life Stress and Perceived Support among Military Spouses
Presentation Author: Dr. Nida Corry

MHSRS-19-01599 - SESSION 1 - #249
Challenges within Drill Sergeant Families: Deployment vs. the Trail
Presentation Author: Ms. Molly Schwalb

MHSRS-19-01734 - SESSION 1 - #250
Personal Growth in Spouses of Deployed Service Members: Risk and Protective Factors
Presentation Author: Dr. Sybil Mallonee

MHSRS-19-01747 - SESSION 1 - #251
Collaborative Relationships for Meaningful Health Outcomes
Presentation Author: Ms. Heather Michael

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Through the Eyes of a Child
Presentation Author: Dr. Kimberly Peacock

MHSRS-19-02004 - SESSION 1 - #253
Well-being and Coping Strategies of Military Veterans Readjusting into Academia
Presentation Author: MAJ Brian Gregg

MHSRS-19-02029 - SESSION 1 - #254
PAACC: A Mindfulness Based Multicomponent Program for Family Caregivers of Persons with Dementia
Presentation Author: Dr. Mamta Sapra

MHSRS-19-02157 - SESSION 1 - #255
Addressing the Need for Military Spouse Resiliency Skills using an Agile and Scientific Methodology
Presentation Author: Ms. Joanne Barnieu

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The Impact of Parental Injury and Illness on Children’s Mental Health Diagnoses and Prescriptions
Presentation Author: Dr. Elizabeth Hisle-Gorman
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What Do Families, Social Support, and Military Convoys Have in Common?
Presentation Author: Dr. Penny Pierce

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Reasons for Weight Loss Program Participation Differ Between Adult Family Members of Active Duty Military Personnel and the Civilian Population
Presentation Author: MAJ Joetta Khan

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“Band of Brothers” or “Broken Family?” - The Role of Social Support in the U.S. Military’s Depression Crisis
Presentation Author: SSgt Aaron San Miguel

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Interprofessional Student Hotspotting: Addressing the Socio-cultural needs of High Medical Resource Utilizers in the DoD
Presentation Author: MAJ Elizabeth Belleau

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Integrative Review of Racial and Ethnic Disparities in Perinatal Outcomes among Beneficiaries of Military Healthcare System and Tricare
Presentation Author: Dr. Stacey Iobst

APPROACHES TO PREVENTION AND TREATMENT OF HIGH RISK BEHAVIORS

MHSRS-19-00397 - SESSION 1 - #262
Suicide Attempts and other Risky Behaviors in Service Members – Data from 2017 DoDSER
Presentation Author: Dr. Jennifer Tucker

MHSRS-19-00418 - SESSION 1 - #263
Sexually Transmitted Infection Acquisition Risk in Port among Ship-Assigned U.S. Navy Personnel
Presentation Author: Mr. Daniel Triplett

MHSRS-19-00471 - SESSION 1 - #264
Web-delivered Financial Readiness Education Increases Knowledge of Predatory Lending
Presentation Author: Dr. Tim Hoyt

MHSRS-19-00782 - SESSION 1 - #265
Impact of Tobacco Smoking on Cognition after Traumatic Brain Injury: VA TBI Model Systems Study
Presentation Author: Dr. Marc Silva

MHSRS-19-00879 - SESSION 1 - #266
Prevention of the Opioid Crisis
Presentation Author: Dr. John Hsu

MHSRS-19-00884 - SESSION 1 - #267
A Safer Abuse Deterrent Method to Prevent Opioid Abuse and Addiction
Presentation Author: Dr. John Hsu
MHSRS-19-00900 - SESSION 1 - #268
The Need to Study the Effects of Electronic Cigarette Use on Physical Readiness among U.S. Military Personnel
Presentation Author: Lt Thuyvi Amy Truong

MHSRS-19-00950 - SESSION 1 - #269
Dual Tobacco Use and Related Factors among Active Duty Service Members in the U.S. Military
Presentation Author: Dr. Jie Lin

MHSRS-19-00955 - SESSION 1 - #270
Emotional Eating Behavior Mediates the Association between Perceived Stress and Body Weight Status
Presentation Author: MAJ Julianna Jayne

MHSRS-19-01020 - SESSION 1 - #271
Heavy Drinking before Sex and Attitudes towards Sexual Violence in a U.S. Military Population
Presentation Author: Ms. Elizabeth Metzger

MHSRS-19-01112 - SESSION 1 - #272
Autism Symptoms and Suicide Risk among Active Duty U.S. Military Service Members
Presentation Author: Mr. Ian Stanley

MHSRS-19-01182 - SESSION 1 - #273
All the Way Home: Suicide Prevention through Moral Injury Repair in our Nation’s Combat Veterans
Presentation Author: Ms. Eva Usadi

MHSRS-19-01372 - SESSION 1 - #274
Alcohol use Disorders: Implementing Medication-assisted Treatment in Primary Care Settings
Presentation Author: MAJ Marlene Arias-Reynoso

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Opioid Prescribing to U.S. Army Iraq and Afghanistan Veterans Declines after Implementation of Policies on High Risk Polypharmacy and Overdose Prevention
Presentation Author: Dr. Nikki Wooten

MHSRS-19-01651 - SESSION 1 - #278
A Functional Cellular Based Assay for Synthetic Cannabinoids
Presentation Author: Dr. Andrew Monte

MHSRS-19-01652 - SESSION 1 - #279
Long Term Evaluation of the Impact of a Universally Delivered, Brief Alcohol Intervention for Military Personnel in Technical Training
Presentation Author: Dr. Gerald Talcott
MHSRS-19-02148 - SESSION 1 - #280
The Relationship between Alcohol Use, Suicidal Ideation, and Sleep Problems among Veterans Actively Engaged in Substance Abuse Treatment Programming
Presentation Author: Mr. Nicholas Shaughnessy

MHSRS-19-02174 - SESSION 1 - #281
The Relationship between Combat and Non-combat Trauma and Risk-taking Propensity in Individuals with PTSD
Presentation Author: Ms. Meltem Ozcan

MHSRS-19-02234 - SESSION 1 - #282
Towards a System-wide Program for Understanding Destructive Behaviors
Presentation Author: LCDR Peter Walker

MHSRS-19-02346 - SESSION 1 - #283
Association between Trauma-related Externalizing Behaviors and Criminal Activity in OEF/OIF/OND Veterans
Presentation Author: Dr. Michelle Bovin

MHSRS-19-02404 - SESSION 1 - #284
Exploration of Emotional Intelligence and Self-perceived Invincibility
Presentation Author: Mr. Simon Esbit

MHSRS-19-02412 - SESSION 1 - #285
Self-perceived Invincibility is Associated with Greater Cognitive Flexibility
Presentation Author: Mr. Kyle LaFollette

MHSRS-19-02421 - SESSION 1 - #286
Big Five Personality Traits and How They Relate to Self-perceived Invincibility
Presentation Author: Mr. Michael Strong

MHSRS-19-02541 - SESSION 1 - #287
Evaluation of AMIOP at Fort Bliss
Presentation Author: MAJ Marlene Arias-Reynoso

MHSRS-19-02590 - SESSION 1 - #288
Examining the Influence of Autism Symptoms and Unit Cohesion on Suicide Risk among Military Personnel
Presentation Author: Mr. Austin Gallyer

HITTING THE TARGET–ENSURING OPTIMAL HUMAN PERFORMANCE, PSYCHOLOGICAL HEALTH AND READINESS THROUGHOUT MILITARY SERVICE

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Effects of Pre-deployment Mental Health on Aeromedical Evacuation Mental Health Status during Operation Enduring Freedom/Operation Iraqi Freedom
Presentation Author: Lt Amber Hekler

MHSRS-19-00246 - SESSION 1 - #290
Asymptotic Performance and Learning Curves for Simulated Rifle and Pistol Marksmanship and Visual Search Tasks
Presentation Author: Mr. Andrew Johnson
MHSRS-19-00337 - SESSION 1 - #291
Evolution of the Combat and Operational Stress Control Program within the Department of Defense: Historical Origins, Current Model of Services and Activities, and Future Directions
Presentation Author: Dr. Denise Cooper

MHSRS-19-00369 - SESSION 1 - #292
Behavioral Correlates of Self-Reported Health Status in U.S. Active Duty Military
Presentation Author: Dr. Tracey Smith

MHSRS-19-00377 - SESSION 1 - #293
Why Have a Total Force Fitness Spiritual Fitness Metric? Pros and Cons
Presentation Author: Dr. Kathleen Charters

MHSRS-19-00388 - SESSION 1 - #294
Stress Response Optimization in Live Training Exercises
Presentation Author: Mr. Mitchell Ruble

MHSRS-19-00642 - SESSION 1 - #295
The Effects of Therapy Dog Intervention on Anxiety in Adult Patients Undergoing Dental Procedures: A Pilot Study
Presentation Author: Dr. Rod Phoenix

MHSRS-19-00807 - SESSION 1 - #296
Validity of the Walter Reed Functional Impairment Scale in a Military Population
Presentation Author: Dr. Farifteh Duffy

MHSRS-19-00813 - SESSION 1 - #297
Stress Augmentation with Immersive Virtual Reality and Augmented Reality Technologies: Stress and Neurocognitive Outcomes Pilot Data
Presentation Author: Dr. Amanda Glueck

MHSRS-19-00818 - SESSION 1 - #298
If You Say So: Health-promoting Leader Behaviors Correlate with Military Medical Staff Well-Being
Presentation Author: Dr. Coleen Crouch

MHSRS-19-00906 - SESSION 1 - #299
Stressful Life Changes affect Nutrition-related Health Outcomes among U.S. Army Soldiers
Presentation Author: MAJ Julianna Jayne

MHSRS-19-00942 - SESSION 1 - #300
Using the Healthy Eating Score-5 as a Measure of Diet Quality in an Active Duty Military Population
Presentation Author: 1LT Rachel Dyal

MHSRS-19-00978 - SESSION 1 - #301
The Association Between Military Weight Status and Body Image in a Sample of Active Duty Soldiers
Presentation Author: 1LT Maria Stukenborg

MHSRS-19-01032 - SESSION 1 - #302
Military Health Screening During Accession into the U.S. Armed Forces
Presentation Author: COL Brigilda Teneza
MHSRS-19-01179 - SESSION 1 - #303
U.S. Navy Physical Readiness Test Modality Pilot Study
Presentation Author: Lt Melissa Laird

MHSRS-19-01216 - SESSION 1 - #304
Extending Peer Support across the Military Health System to Promote Physician Resilience
Presentation Author: MAJ Erin Keyser

MHSRS-19-01225 - SESSION 1 - #305
Stressing the Heart Results in Molecular, Functional and Structural Changes that Remodel the Heart: The Search for Mechanisms to Prevent Heart Failure from PTSD
Presentation Author: Dr. Nisha Plavelil

MHSRS-19-01295 - SESSION 1 - #306
The Benefit of ‘Bouncing Back’: Resilience Moderates the impact of Adverse Childhood Experiences on Post-traumatic and Depressive Symptoms among Soldiers
Presentation Author: Ms. Joy Hocut

MHSRS-19-01459 - SESSION 1 - #307
Medical Nutrition Therapy to Optimize Readiness and Performance: We Can Do Better
Presentation Author: Capt Philip Clerc

MHSRS-19-01492 - SESSION 1 - #308
Calculating the Cardiac Impact of Exercise in the Military
Presentation Author: 2ndLt Elena Segre

MHSRS-19-01557 - SESSION 1 - #309
Challenges for Research into Military Disciplinary Investigations
Presentation Author: Dr. Antje Buehler

MHSRS-19-01607 - SESSION 1 - #310
Social Stress Potentiates Negative Outcomes for Male Prairie Voles (Microtus Ochrogaster) in Polytraumatic Injury
Presentation Author: Dr. Vanessa Chaplin

MHSRS-19-01830 - SESSION 1 - #311
The Relationships Between Core Self-evaluations, MOS-related Affective Commitment, and Performance During Combat Medic Training
Presentation Author: Dr. Valerie Rice

MHSRS-19-01912 - SESSION 1 - #312
Brief Meditation to Improve Wellness in Deployed Healthcare Providers
Presentation Author: Lt James D’Andrea

MHSRS-19-01940 - SESSION 1 - #313
Risk of Dental Disease among Israel Defense Forces Combat Soldiers
Presentation Author: CPT Avishai Tsur

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Sick & Tired: Burnout and Functioning of Military Healthcare Staff
Presentation Author: Ms. Yvonne Allard
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Improving the Accuracy of Psychological Health Screening in the Submarine Service  
Presentation Author: Lt Chad Peltier

**MHSRS-19-02134 - SESSION 1 - #316**
Effects of Medical Accession Waivers on Attrition and Operational Readiness among Sailors and Marines, 2012-2017  
Presentation Author: Ms. Angie (Shing Lai) Cheng

**MHSRS-19-02135 - SESSION 1 - #317**
Use of Wearable Physiologic Sensors to Monitor Wellbeing and Health  
Presentation Author: Dr. Elizabeth Brokaw

**MHSRS-19-02193 - SESSION 1 - #318**
Skin Sympathetic Nerve Activity – A Novel Non-invasive Marker of Altered Autonomic Tone and a Biomarker for Estimating Fitness Level in Military Personnel  
Presentation Author: Dr. Thomas Everett

**MHSRS-19-02214 - SESSION 1 - #319**
Deployment Cycle Resilience Training: Quality Improvement Program Evaluation  
Presentation Author: Ms. Laurel Booth

**MHSRS-19-02226 - SESSION 1 - #320**
Applying Item Response Theory to Subscreen to Understand Behavioral Health Response Patterns of Prospective Submariners  
Presentation Author: Dr. Andrea Bizarro

**MHSRS-19-02293 - SESSION 1 - #321**
Revising the Master Resilience Trainer Course: From a Front-end Analysis to a Curriculum Map  
Presentation Author: Dr. Susannah Knust

**MHSRS-19-02314 - SESSION 1 - #322**
Leader Development: Connecting Resilience Training To Army Doctrine  
Presentation Author: Ms. Pam Kumparatana

**MHSRS-19-02554 - SESSION 1 - #323**
Does Military or First Responder Service Impact Emotional Intelligence?  
Presentation Author: Ms. Ashley Holland

**MHSRS-19-02642 - SESSION 1 - #324**
Marine Recruits with Behavioral Health Complaints: A Process Improvement Initiative  
Presentation Author: Lt Samuel Walther

**AUDITORY INJURY PREVENTION**

**MHSRS-19-00321 - SESSION 1 - #325**
Considerations for a Military Health System Auditory Blast Injury Prevention Standard  
Presentation Author: Dr. Elizabeth Brokaw
MHSRS-19-00434 - SESSION 1 - #326
Prediction and Prevention of Blast-induced Auditory Injury using 3D-printed Chinchilla “Helmet” and Hearing Protection Devices
Presentation Author: Dr. Rong Gan

MHSRS-19-00664 - SESSION 1 - #327
Hearing Protection of the Communication Earplug with a Custom Earplug Tip and the HGU-56/P Flight Helmet
Presentation Author: Mr. JR Stefanson

MHSRS-19-00801 - SESSION 1 - #328
Constructing the Ototoxic and Therapeutic Compounds Database
Presentation Author: Dr. Kathryn Marshall

MHSRS-19-01414 - SESSION 1 - #329
Advanced Hearing Conservation Surveillance Metrics: International Standards for Hearing Thresholds by Age and Gender, and Estimation of Noise-induced Hearing Loss in Air Force Audiometric Data
Presentation Author: Dr. Elizabeth McKenna

MHSRS-19-01479 - SESSION 1 - #330
Nonlinear Passive Acoustic Device for Preventing Blast Injury of the Ear
Presentation Author: Mr. Soroush Shabahang

MHSRS-19-01501 - SESSION 1 - #331
Targeted Drug Discovery for Noise-induced Hearing Loss: Intersection of Noise Exposure and Genetics
Presentation Author: Dr. Allison Coffin

MHSRS-19-01567 - SESSION 1 - #332
The Military Hearing in Noise Test: Test Design and Norming Study Results
Presentation Author: Dr. Odile Clavier

MHSRS-19-01630 - SESSION 1 - #333
Integrating User Voice in Hearing Care with Focus on Young Adult Warfighter
Presentation Author: Mr. Shayan Gupta

MHSRS-19-01778 - SESSION 1 - #334
Noise-induced Hearing Loss in Police Officers
Presentation Author: Dr. Kristine Sonstrom Malowski

MHSRS-19-02019 - SESSION 1 - #335
Characterization of Acute Hearing Changes in U.S. Military Populations
Presentation Author: Dr. Quintin Hecht
RETURN-TO-DUTY

WHAT’S NEW IN ANTIMICROBIAL DEVELOPMENT TO COUNTER MULTIDRUG-RESISTANT BACTERIAL INFECTIONS IN MILITARY PERSONNEL

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Photo-inactivation of Neisseria Gonorrhoeae: A Paradigm Changing Approach for Combating Antibiotic-resistant Gonorrhea
Presentation Author: Dr. Tianhong Dai

MHSRS-19-00271 - SESSION 1 - #337
Screening Traditional Chinese Medicine for Bactericidal Activity against Acinetobacter Baumannii
Presentation Author: MAJ Lucas Poon

MHSRS-19-00373 - SESSION 1 - #338
EBX-205 - A Broad Spectrum Antibiotic to Orally Treat Biodefense and Public Health Threats
Presentation Author: Ms. Michelle Saylor

MHSRS-19-00623 - SESSION 1 - #339
The Topical Metalloprotease SN514 Enhances Antimicrobial Activity Against Bacterial Biofilms
Presentation Author: Mr. Paul Renick

MHSRS-19-00655 - SESSION 1 - #340
Lactobacillus Membrane Vesicles for Delivery of Novel Antimicrobial Peptides
Presentation Author: Mr. Scott Dean

MHSRS-19-00692 - SESSION 1 - #341
A Volatolomic Approach: A Step Forward in the Characterization of Wound Pathogens
Presentation Author: Ms. Shawna Gallegos

MHSRS-19-00694 - SESSION 1 - #342
Broad Spectrum Host-oriented Therapy for Wound Infection: (1) Using Mimetic Peptides as Antagonists
Presentation Author: Dr. Raymond Kaempfer

MHSRS-19-01035 - SESSION 1 - #343
Broad Spectrum Host-oriented Therapy for Wound Infection: (2) Evaluating in Vivo Efficacy of Antagonists
Presentation Author: Dr. Alan Cross

MHSRS-19-00715 - SESSION 1 - #344
Development of Precision Based Phage Therapy Model: The Benefits and Science Considerations
Presentation Author: Dr. Biswajit Biswas

MHSRS-19-00730 - SESSION 1 - #345
Investigating the Role of Benzalkonium Chloride, a Common Biocidal used in Hand Sanitizer, and Antimicrobial Resistance in Pseudomonas Aeruginosa
Presentation Author: Dr. Christine Nadeau
MHSRS-19-00933 - SESSION 1 - #346
Development of Mouse Models of Water-borne Infections Caused by Vibrio Vulnificus and Aeromonas Hydrophila to Characterize Wound Infections in Maritime Environments
Presentation Author: Lt Jae Dugan

MHSRS-19-01007 - SESSION 1 - #347
The Multidrug-resistant and Other Virulent Organisms Trauma Infections Initiative: 2019 Update
Presentation Author: Dr. Katrin Mende

MHSRS-19-01096 - SESSION 1 - #348
Gene-based Vaccines against Antibiotic Resistant Staphylococcus Aureus
Presentation Author: Dr. Michael Barry

MHSRS-19-01114 - SESSION 1 - #349
Novel Small-molecule Inhibitors of Methicillin-resistant Staphylococcus Aureus
Presentation Author: Dr. Schroeder Noble

MHSRS-19-01155 - SESSION 1 - #350
Antimicrobial Resistance and Utilization: A Diagnostic Approach to Antimicrobial Stewardship in a Large Military Treatment Facility
Presentation Author: Mrs. Jessica Spencer

MHSRS-19-01252 - SESSION 1 - #351
Afghanistan: A Haven For Carbapenemase-producing Organisms
Presentation Author: Dr. Patrick MCGann

MHSRS-19-01304 - SESSION 1 - #352
Impact of Route on Therapeutic Efficacy of Bacteriophage in an A. Baumannii Mouse Wound Infection Model
Presentation Author: Dr. Michael Rouse

MHSRS-19-01416 - SESSION 1 - #353
Potential of Clofazimine as a Highly Promising Therapeutic Agent for Treatment of NAP1/B1/027 and Other Antibiotic Resistant Strains of Clostridium Difficile
Presentation Author: Dr. Sharanjit VedBrat

MHSRS-19-01556 - SESSION 1 - #354
Intraoperative use of Amicidin-alpha Surgical Gel to Decrease Risk of Infection
Presentation Author: Dr. Michael Bevilacqua

MHSRS-19-01576 - SESSION 1 - #355
Rapid Diagnosis of Bacterial Pneumonia using Volatile Organic Compounds
Presentation Author: Dr. Allyson Dailey

MHSRS-19-01657 - SESSION 1 - #356
DNA Gyrase Inhibition by Binding Small Molecules to both Gyrase A and B
Presentation Author: Dr. Mary MacDonald

MHSRS-19-01715 - SESSION 1 - #357
Determining the Safety of Glycoside Hydrolases as a Treatment Option for Dispersing Poly-microbial Biofilms
Presentation Author: Ms. Whitni Redman
MHSRS-19-01736 - SESSION 1 - #358
Point-of-injury Thermostable Antimicrobial Wound Matrices for Combat Wounds
Presentation Author: Mr. Ravi K. Mekala

MHSRS-19-01746 - SESSION 1 - #359
Tackling Disease-causing Biofilms using Light Activated Nanomaterials
Presentation Author: Dr. Peng Zhang

MHSRS-19-01792 - SESSION 1 - #360
Novel Antimicrobial Wound Dressing for Treating Chronic Wound Infections
Presentation Author: Dr. Haluk Beyenal

MHSRS-19-01833 - SESSION 1 - #361
Composition, Function, and Relevance of the Microbial Microenvironment in Wounds from Combat Injuries
Presentation Author: Dr. Nicholas Be

MHSRS-19-01876 - SESSION 1 - #362
In Vitro and in Vivo Characterization of a Pseudomonas Aeruginosa Therapeutic Phage Cocktail
Presentation Author: Dr. Anna Jacobs

MHSRS-19-01887 - SESSION 1 - #363
Investigation of the Effects of Blast Overpressure Exposure on Wound Infection Susceptibility
Presentation Author: Dr. Vlado Antonic

MHSRS-19-02025 - SESSION 1 - #364
Discovery of Novel, Small Molecule Modulators of Metabolic Pathways as Potential Antibiotics for the Treatment of Gram-negative, Multi-drug Resistant Pathogens
Presentation Author: Dr. Malik Raynor

MHSRS-19-02033 - SESSION 1 - #365
Targeted Drug Combination Approach for Identification of New Therapeutics against Multi-drug Resistant Bacteria
Presentation Author: Dr. Malik Raynor

MHSRS-19-02110 - SESSION 1 - #366
Development of Durable Fixed Phage Cocktails as Therapeutics against Multidrug Resistant Gram-negative Wound Infections
Presentation Author: Dr. Mikeljon Nikolich

MHSRS-19-02117 - SESSION 1 - #367
Antimicrobial Efficacy of Peptide-based Wound Dressings – from Ex Vivo to in Vivo Models
Presentation Author: Dr. Nina Bionda

MHSRS-19-02122 - SESSION 1 - #368
Evaluation of Cyclic Lipopeptide Formulations on the Proliferation of Methicillin Resistant Staphylococcus Aureus USA300 and Pseudomonas Aeruginosa PA09-010 in a Porcine Full Thickness Wound Model
Presentation Author: Mr. Joel Gil
MHSRS-19-02130 - SESSION 1 - #369
Clinical Characteristics of Recurrent Skin and Soft Tissue Infection among U.S. Army Infantry Trainees at Fort Benning, GA
Presentation Author: Dr. Eugene Millar

MHSRS-19-02190 - SESSION 1 - #370
Antimicrobial and Antibiofilm Effect of Chitosan Solutions against Methicillin Resistant Staphylococcus Aureus
Presentation Author: Dr. Keunseok Seo

MHSRS-19-02330 - SESSION 1 - #371
Dual-wavelength (460+405 nm) Photoinactivation of Methicillin Resistant Staphylococcus Aureus
Presentation Author: Dr. Leon Leanse

MHSRS-19-02318 - SESSION 1 - #372
Quinine Enhances Fungicidal Effects of Antimicrobial Blue Light: Implications for Treating Candidemia Resulting from Blast and Combat Related Injury
Presentation Author: Dr. Leon Leanse

MHSRS-19-02337 - SESSION 1 - #373
Elimination of Methicillin Resistant Staphylococcus Aureus through Photo-induced Chemical Bleaching of Staphyloxanthin by Antimicrobial Blue Light and Pyocyanin
Presentation Author: Dr. Leon Leanse

MHSRS-19-02345 - SESSION 1 - #374
Antimicrobial Blue Light Enhances the Effects of Antibiotics in Bacteria: Implications for the Treatment of Combat Related Multidrug Resistant Infections
Presentation Author: Dr. Leon Leanse

MHSRS-19-02362 - SESSION 1 - #375
Clinical Candidate, SPR741, in Combination with Minocycline Eradicates XDR-Acinetobacter Baumannii and Klebsiella Pneumoniae in a Pulmonary and Wound Models of Infection
Presentation Author: Dr. Daniel Zurawski

MHSRS-19-02324 - SESSION 1 - #376
The Human Monoclonal Antibody Platform: A Programmatic Effort Targeting the Gram-negative Bacteria Responsible for Wound and Osteomyelitis Infections
Presentation Author: Dr. Daniel Zurawski

MHSRS-19-02398 - SESSION 1 - #377
Wireless Electroceutical Wound Dressing Inhibits Yeast to Hyphae Transition and Biofilm Formation in Ketoconazole Resistant Candida Albicans
Presentation Author: Dr. Chandan Sen

MHSRS-19-02422 - SESSION 1 - #378
Antagonism of Eskape Pathogens by Enterococcus and Coagulase-negative Staphylococcus Isolates from the Multidrug-resistant and Other Virulent Organisms Trauma Infections Initiative
Presentation Author: LCDR Mark Simons
MHSRS-19-02441 - SESSION 1 - #379
Decacationic Chlorin-Vancomycin Conjugate Mediated Antimicrobial Photodynamic Inactivation of Methicillin-resistant Staphylococcus Aureus
Presentation Author: Dr. Xiaojing Liu

MHSRS-19-02567 - SESSION 1 - #380
Biodegradable Gel with Novel Antimicrobial Peptide: Safety, Efficacy and Potential Synergy with other Antimicrobials
Presentation Author: Dr. Jennifer Neff

OPEN - SESSION 1 - #381

ASSESSMENT AND TREATMENT OF BATTLEFIELD AUDITORY SYSTEM INJURIES

MHSRS-19-00580 - SESSION 1 - #382
Early Signs of Noise Exposure-related Auditory Injury in Service Members and Veterans
Presentation Author: Dr. Sarah Theodoroff

MHSRS-19-00970 - SESSION 1 - #383
Specialized Pro-resolving Lipid Mediator, Neuroprotectin D1, Reduces Reactive Microglial Cells Induced by Blast Wave Exposure in Cochlear Tissues
Presentation Author: Dr. Jose David Rios

MHSRS-19-01004 - SESSION 1 - #384
Objective and Subjective Auditory Effects in a Longitudinal Study of Service Members with Traumatic Brain Injury and Blast Exposure
Presentation Author: Dr. Douglas Brungart

MHSRS-19-01128 - SESSION 1 - #385
Transfer Learning in Deep Neural Networks in a Brain-computer Interface for Two-talker Attention Decoding
Presentation Author: Dr. Gregory Ciccarelli

MHSRS-19-01129 - SESSION 1 - #386
Investigating the Neurobiology of Tinnitus
Presentation Author: Dr. Jay Piccirillo

MHSRS-19-01279 - SESSION 1 - #387
Biosignatures of Accumulated Blast Exposure and Associated Symptoms of Tinnitus and Hearing Loss in Exposure to Explosive Breaching
Presentation Author: Dr. Walter Carr

MHSRS-19-01355 - SESSION 1 - #388
Population Description of Women from the Blast-related Auditory Injury Database
Presentation Author: Dr. Mary Clouser

MHSRS-19-01814 - SESSION 1 - #389
Auditory Processing Disorder in Relation to Blast Exposure: A Future in fMRI Analysis
Presentation Author: Dr. Brandi Murphy
MHSRS-19-02519 - SESSION 1 - #390
Associations between Tinnitus Severity and Mental Health Symptoms among Veterans with and without Traumatic Brain Injury: A National Survey
Presentation Author: Dr. Kathleen Carlson

MHSRS-19-02660 - SESSION 1 - #391
Noise Outcomes in Servicemembers Epidemiology (Noise) Study: Findings to Date
Presentation Author: Dr. James Henry

HOW TO PRESERVE AND RESTORE EYESIGHT AFTER COMBAT TRAUMA

MHSRS-19-00047 - SESSION 1 - #392
Reawakening the Regenerative Potential of Mammalian Müller Glial Cells to Restore Sight
Presentation Author: Dr. Ross Poche

MHSRS-19-00070 - SESSION 1 - #393
Development of a Micro-coil-based Cortical Visual Prosthesis
Presentation Author: Mr. Shelley Fried

MHSRS-19-00140 - SESSION 1 - #394
Matrix Bound Nanovesicles Protect and Repair Injured Retina and Optic Nerve after Traumatic Ocular Injury
Presentation Author: Dr. Stephen Badylak

MHSRS-19-00146 - SESSION 1 - #395
Self-reflow Corneal Prosthetic Device for Temporarily Stabilizing Traumatic Corneal Perforation: Experimental Rabbit Eye Model
Presentation Author: Dr. Espoir Kyubwa

MHSRS-19-00255 - SESSION 1 - #396
Inactive Cas9 Blocks TGF-β2-induced Expression of MDM2 and Epithelial to Mesenchymal Transition in Retinal Pigmentary Epithelial Cells
Presentation Author: Dr. Hetian Lei

MHSRS-19-00331 - SESSION 1 - #397
Development of a Corneal Puncture Model for Assessing Biomaterial Therapeutics
Presentation Author: Dr. Eric Snider

MHSRS-19-00446 - SESSION 1 - #398
Safety and Efficacy of Locally Delivered Allogeneic Mesenchymal Stem Cells for Promoting Corneal Repair (Phase I Study): Study Design Implications
Presentation Author: Dr. Charlotte Joslin

MHSRS-19-00512 - SESSION 1 - #399
Bedside Ocular Ultrasound for Retinal Detachment in the Emergency Department
Presentation Author: CAPT Kristine Jeffers

MHSRS-19-00521 - SESSION 1 - #400
Brain-derived Neurotrophic Factor as Targeting Platform to Deliver Small Molecules to the Optic Nerve
Presentation Author: Dr. Stephen Kahl
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MHSRS-19-00590 - SESSION 1 - #401
Topical Inhibition of RUNX1 Limits Cell Growth and Proliferation in a New Rabbit Model of Proliferative Vitreoretinopathy using Patient-derived Cells
Presentation Author: Dr. Leo Kim

MHSRS-19-00648 - SESSION 1 - #402
A Porcine Model of Traumatic Optic Neuropathy
Presentation Author: CPT Andrew Holt

MHSRS-19-00816 - SESSION 1 - #403
Rates and Outcomes for Pars Plana Vitrectomy Following Traumatic Ocular Injury and Initial Globe Repair, a Retrospective Analysis at a Level One Trauma Center
Presentation Author: Capt Donovan Reed

MHSRS-19-01071 - SESSION 1 - #404
Nanowafcer Therapeutic for the Rapid and Effective Treatment of Eye Injuries
Presentation Author: Dr. Ghanashyam Acharya

MHSRS-19-01132 - SESSION 1 - #405
Ocular Trauma in Operation Iraqi Freedom and Operation Enduring Freedom: 2001-2011
Presentation Author: CPT Grant Justin

MHSRS-19-01272 - SESSION 1 - #406
A Portable, Smartphone Based Slit Lamp/ophthalmoscope for use in Austere Environments
Presentation Author: Dr. Michael Browne

MHSRS-19-01377 - SESSION 1 - #407
Photophobia Associated with Traumatic Brain Injury: A Meta-analysis
Presentation Author: Ms. Natalya Merezhinskaya

MHSRS-19-01444 - SESSION 1 - #408
Terminally Sterilized Amniotic Membrane Allografts: A Comparison of Supercritical CO2 and Gamma Irradiation Methods
Presentation Author: Dr. Jennifer Wehmeyer

MHSRS-19-01571 - SESSION 1 - #409
PCL Nanoparticles for Retinal Drug Delivery of a Small Molecule Inhibitor of RUNX1
Presentation Author: Dr. Joseph Arboleda-Velasquez

MHSRS-19-01631 - SESSION 1 - #410
Bioengineered Corneal Tissue for the Surgical Repair of Sulfur Mustard-induced Ocular Injury – Quantitative Analysis of Proliferative Capacity for Component Cell Types
Presentation Author: Dr. Timothy Varney

MHSRS-19-01641 - SESSION 1 - #411
Direct-Write Electrospun Collagen Nanofibers with Integrated Sensors for Corneal Surgical Training
Presentation Author: Dr. Frank Alexander
MHSRS-19-01760 - SESSION 1 - #412
Topical Delivery of MG53 to Repair Corneal Injury and Prevent Scarring
Presentation Author: Dr. Tao Tan

MHSRS-19-02009 - SESSION 1 - #413
3D-printed Craniofacial Bone Grafts with Autologous Cells for Bone Regeneration
Presentation Author: Dr. Ethan Nyberg

MHSRS-19-02248 - SESSION 1 - #414
Monocular Reduced Vision in Pilot Performance
Presentation Author: LCDR Micah Kinney

MHSRS-19-02312 - SESSION 1 - #415
Performance Assessment of the New Military Vision Standard
Presentation Author: LCDR Hong Gao

MHSRS-19-02380 - SESSION 1 - #416
When Technology Hurts us: A Devastating Projectile Globe Injury in a Young Active Duty Soldier
Presentation Author: CPT Maxine Harvey

MHSRS-19-02506 - SESSION 1 - #417
Recent Trends in Surgical Management of the Orbital Floor Fracture at Brooke Army Medical Center
Presentation Author: CPT John Lally

MHSRS-19-02607 - SESSION 1 - #418
Drug Loading of SCCO2 Sterilized Human Amniotic Membrane
Presentation Author: Dr. David Zamora

WARFIGHTER READINESS: IMPACT OF TRAUMA

MHSRS-19-00196 - SESSION 1 - #419
Incidence of Post-traumatic Stress Disorder by Marital Status: Differential Effects in Males and Females and Implications for Military Readiness
Presentation Author: Dr. Jeffrey Cook

MHSRS-19-00635 - SESSION 1 - #420
Mindfulness Based Stress Reduction Increases Quality of Life and Occupational Readiness among Emergent Providers
Presentation Author: Ms. Dallas Ducar

MHSRS-19-00893 - SESSION 1 - #421
Longitudinal Relationship of Combat Exposure with Psychological Health Diagnoses in the Military Health System
Presentation Author: Dr. Marjorie Campbell

MHSRS-19-01106 - SESSION 1 - #422
Higher Percentage of Active Duty/Veteran Subjects in PTSD Drug Trials Predicts Lower Treatment and Placebo Response: A Meta-analysis
Presentation Author: Dr. Elyse Katz
MHSRS-19-01256 - SESSION 1 - #423
Effects of TBI and PTSD Symptoms on the Mayo-Portland Adaptability Subscales among U.S. Active Duty Service Members
Presentation Author: Mrs. Larissa Tate

MHSRS-19-01297 - SESSION 1 - #424
Assessing Primary Care Physicians' Knowledge and Confidence Related to Posttraumatic Stress Disorder among Military Populations
Presentation Author: Dr. Nida Corry

MHSRS-19-01405 - SESSION 1 - #425
Secret Stories – The Impact of Miscarriage and Abortion on Soldiers Warfighter Readiness
Presentation Author: Dr. Rita Quasten

MHSRS-19-01531 - SESSION 1 - #426
Theodicy and Spiritual Distress among Veterans Managing Posttraumatic Stress
Presentation Author: MAJ Timothy Usset

MHSRS-19-01591 - SESSION 1 - #427
Nociceptin/Orphanin FQ Receptor Antagonists Support Extinction Learning in a Rodent Model Fear Conditioning
Presentation Author: Dr. Emily Lowery-Gionta

MHSRS-19-01735 - SESSION 1 - #428
Post-traumatic Stress Disorder and Military Occupation: Identifying at-risk Occupations and Implications for Military Readiness
Presentation Author: Dr. Jeffrey Cook

MHSRS-19-01989 - SESSION 1 - #429
The Association Between Weekly Changes in Trauma-related Catastrophizing and Weekly Changes in PTSD Symptoms Among Active Duty Military Personnel Receiving Cognitive Processing Therapy
Presentation Author: CPT Brian Moore

MHSRS-19-02093 - SESSION 1 - #430
Cognitive Reappraisal Mitigates Mental Health Consequences of Combat Exposure
Presentation Author: Mr. Hunter Yates

MHSRS-19-02172 - SESSION 1 - #431
U.S. Army Medical Unit Assemblage Management in the Field
Presentation Author: Mr. Dave Wirtz

MHSRS-19-02180 - SESSION 1 - #432
Size and Weight Matter in the Field: Develop to Replace Not to Add
Presentation Author: Mrs. Mark Edgington

MHSRS-19-02182 - SESSION 1 - #433
Blue Light Therapy Differences in Sleep Quality Improvement in Military and Civilian Populations
Presentation Author: Ms. Kristin Shepard
FAR FORWARD MILITARY BEHAVIORAL HEALTH INNOVATIONS

**MHSRS-19-00032 - SESSION 1 - #434**
Changing the Tide: Psychological Outcomes among Active Duty Service Members following a Surf Therapy Program
Presentation Author: Dr. Kristen Walter

**MHSRS-19-00066 - SESSION 1 - #435**
Quality of Life for the U.S. Military Lesbian, Gay, Bisexual Service Member in Open Service
Presentation Author: CPT Karolina Przegienda

**MHSRS-19-00225 - SESSION 1 - #436**
Telehealth 2.0: Preserving Continuity of Behavioral Health Clinical Care to Patients using Mobile Devices
Presentation Author: Mrs. Amanda Schmeltz

**MHSRS-19-00283 - SESSION 1 - #437**
Development and Implementation of a 30-day Outpatient Program for Subthreshold PTSD
Presentation Author: Mrs. Larissa Tate

**MHSRS-19-00312 - SESSION 1 - #438**
Examining the Incremental Clinical Benefit of a Trial of Transcranial Magnetic Stimulation for Depression in Service Members Undergoing Residential Treatment for Dual Diagnosis
Presentation Author: Dr. Scott Mooney

**MHSRS-19-00387 - SESSION 1 - #439**
Enabling Enlisted Providers while Increasing Access and Convenience through Connected Corpsmen in the Community
Presentation Author: CAPT Valerie Riege

**MHSRS-19-00495 - SESSION 1 - #440**
Evaluating the Effectiveness of Reboot Combat Recovery: A Faith-based Combat Trauma Resiliency Program
Presentation Author: Dr. Jenny Owens

**MHSRS-19-00511 - SESSION 1 - #441**
Closed-loop Vagus Nerve Stimulation to Treat PTSD
Presentation Author: Dr. Seth Hays

**MHSRS-19-00850 - SESSION 1 - #442**
In-office, In-home, and Telebehavioral-health Cognitive Processing Therapy for Combat-related PTSD: Preliminary Results of a Randomized Clinical Trial
Presentation Author: Dr. Alan Peterson

**MHSRS-19-00904 - SESSION 1 - #443**
Assessment of Far Forward Behavioral Health Needs of Soldiers, Medics, and Leaders
Presentation Author: Dr. Joshua Wilk

**MHSRS-19-00928 - SESSION 1 - #444**
Acupuncture Helps Complex Medical Illness: Dissemination of Results
Presentation Author: Dr. Lisa Conboy
MHSRS-19-01207 - SESSION 1 - #445
Mental Health, Stress, and Resilience Correlates of Heart Rate Variability among Military Reservists and First Responders
Presentation Author: Dr. Laurel Hourani

MHSRS-19-01208 - SESSION 1 - #446
Can Mindfulness Help to Predict Veterans’ Mental Health Service Utilization? Introduction
Presentation Author: Dr. Nicholas Barr

MHSRS-19-01413 - SESSION 1 - #447
Effectiveness of the Drop Study: An Army Behavioral Health Provider Training Targeting Therapeutic Alliance and Premature Therapy Dropout
Presentation Author: Dr. Katie Nugent

MHSRS-19-01559 - SESSION 1 - #448
Means Safety for Suicide Prevention in Military Communities - Development of the “Lock To Live” Decision Aid
Presentation Author: Dr. Marian Betz

MHSRS-19-01643 - SESSION 1 - #449
Measurement Invariance and Item Response Theory Modeling of the Suicide Cognitions Scale
Presentation Author: Dr. Justin Baker

MHSRS-19-01853 - SESSION 1 - #450
Strategic Manning for Embedded Mental Health in Operational Settings: A Data-driven Approach
Presentation Author: CDR Jeffrey Millegan

MHSRS-19-01974 - SESSION 1 - #451
Effectiveness of A Mindfulness-based Group Therapy Integrative Restoration for Active Duty Personnel with Mild Traumatic Brain Injury in an Outpatient Clinic
Presentation Author: Ms. Brianna Biel

MHSRS-19-01977 - SESSION 1 - #452
Identifying Error Rates in Suppressed Emotions during Training
Presentation Author: 2LT Raul Betancourt-Perez

MHSRS-19-02036 - SESSION 1 - #453
Use of Mobile Technology Paired with Heart Rate Monitor to Remotely Quantify Behavioral Health Markers among Military Reservists and First Responders
Presentation Author: Dr. Maria Davila

MHSRS-19-02080 - SESSION 1 - #454
A Pilot Study to Examine Psychological and Neuropsychological Outcomes and a Novel Detoxification Program for Gulf War Illness
Presentation Author: Dr. Donald Graves

MHSRS-19-02284 - SESSION 1 - #455
Healthcare Utilization in Soldiers with Concussion and Other Deployment-related Injuries
Presentation Author: Ms. Kristina Clarke-Walper
MHSRS-19-02304 - SESSION 1 - #456
The Impact of Personality Disorders On CPT Treatment Outcome in Active Duty Military
Presentation Author: Dr. Sahli Cavallaro

MHSRS-19-02518 - SESSION 1 - #457
Approaches to Prevention and Treatment of High-risk Behaviors using Neuromodulation
Presentation Author: Mr. Richard Hanbury

INNOVATIONS IN PTSD PROPHYLAXIS/PREVENTION AND BIOMARKER RESEARCH IN MILITARY POPULATIONS

MHSRS-19-00412 - SESSION 1 - #458
Characterization of Pro-inflammatory and Anti-inflammatory Microglial Phenotypes in a Rat Model of PTSD
Presentation Author: CPT Thomas Cotrone

MHSRS-19-00753 - SESSION 1 - #459
Fear Memory Extinction is Blocked in Rats Following Acute Glial Cell Inhibition: Implications for Targeting Neuroinflammation in Traumatic Stress Exposure
Presentation Author: Dr. Rachel Taylor

MHSRS-19-00851 - SESSION 1 - #460
Outcomes of Intensive Outpatient Prolonged Exposure Psychotherapy for Combat-related Posttraumatic Stress Disorder: A Randomized Clinical Trial
Presentation Author: Dr. Alan Peterson

MHSRS-19-01046 - SESSION 1 - #461
Delta Opioid Receptor Biased Agonists as a New Treatment Paradigm for PTSD
Presentation Author: Dr. Mark Peterson

MHSRS-19-01254 - SESSION 1 - #462
A Novel Orally Active Triple Reuptake Inhibitor for the Treatment of Post-traumatic Stress Disorder: D-578 Attenuates Abnormal Fear Behavior in a Rodent Model of Traumatic Stress
Presentation Author: Mr. Frank Bymaster

MHSRS-19-01306 - SESSION 1 - #463
Using a Brain Biomarker Discovery to Rapidly Diagnose and Precisely Treat Post-traumatic Stress Disorder
Presentation Author: Dr. Jennifer Perusini

MHSRS-19-01538 - SESSION 1 - #464
Intravenous Ketamine Infusion Does Not Alter Long-term Fear Memory in Male Rats
Presentation Author: CDR Kennett Radford

MHSRS-19-01604 - SESSION 1 - #465
Predicting Mental Illness by Whole Genome Risk Analytics in the Vietnam Era Twin Cohort
Presentation Author: Dr. Daniel Hupalo
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

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MHSRS-19-02023 - SESSION 1 - #466
A Multivariate Prediction Model of Neuroendocrine Dysregulation in Canadian Combat Veterans with Recent versus Chronic Posttraumatic Stress Disorder
Presentation Author: Dr. Shawn Rhind

MHSRS-19-02286 - SESSION 1 - #467
Blockade of mGlu7 Receptor as a Novel Therapeutic Approach for Post-traumatic Stress Disorder: Preclinical Evidences
Presentation Author: Dr. Guillaume Duvey

MHSRS-19-02326 - SESSION 1 - #468
Altered Suppression of Beta Band Oscillations during Memory Encoding is Predictive of Lower Subsequent Recognition Performance in Mild Traumatic Brain Injury with Significant Post-traumatic Stress Disorder Symptoms
Presentation Author: Dr. Thomas DeGraba

MHSRS-19-02375 - SESSION 1 - #469
Salivary Hormone Analysis: A Useful Tool to Detect Detrimental Stress Responses during Military Deployments?
Presentation Author: MAJ Jeffrey Colburn

MHSRS-19-02432 - SESSION 1 - #470
Sex-related Differences in the Effects of Intravenous Ketamine on Dissociative Behaviors, Antinociception, and Hormone Levels in Sprague-dawley Rats
Presentation Author: Dr. Kwang Choi

COGNITIVE READINESS: BRIDGING THE GAP BETWEEN NEUROPSYCHOLOGICAL TESTS AND WARFIGHTER READINESS

MHSRS-19-00087 - SESSION 1 - #471
Presentation Author: Dr. Mark Ettenhofer

MHSRS-19-00125 - SESSION 1 - #472
Attentional Improvements Following Neurofeedback Therapy for Traumatic Brain Injury in Service Members: A Single-group Pilot Study
Presentation Author: Dr. Jamie Hershaw

MHSRS-19-00311 - SESSION 1 - #473
Service Member Experience and Patient Satisfaction Following Utilization of Military Teleneuropsychology Service
Presentation Author: Dr. Scott Mooney

MHSRS-19-00473 - SESSION 1 - #474
Attention-deficit/hyperactivity Disorder is Linked to Reduced Cognitive Resiliency to Subconcussive Head Impact: A Case-control Intervention Study
Presentation Author: Dr. Keisuke Kawata
MHSRS-19-00689 - SESSION 1 - #475
Heart Rate Variability Changes Following Live Z Score Neurofeedback Therapy
Presentation Author: Ms. Megan Loftin

MHSRS-19-00999 - SESSION 1 - #476
Post-traumatic Stress Symptoms are Associated with Worse Neuropsychological Functioning, but not Diffusion Tensor Imaging Findings, in Military Service Members following Mild Traumatic Brain Injury
Presentation Author: Dr. Rael Lange

MHSRS-19-01012 - SESSION 1 - #477
Resilience Influences Neurocognitive Performance and Neurobehavioral Symptom Reporting following Uncomplicated Mild Traumatic Brain Injury in U.S. Military Service Members
Presentation Author: Dr. Rael Lange

MHSRS-19-01103 - SESSION 1 - #478
A Review of Research into Training as a Cognitive Performance Enhancement Technique
Presentation Author: Ms. Amanda Hayes

MHSRS-19-01122 - SESSION 1 - #479
Profile of Brief Symptom Inventory-18 Scores in Civilian and Military Collegiate Athletes
Presentation Author: Dr. Thomas McAllister

MHSRS-19-01150 - SESSION 1 - #480
Normative Reference Values for National Guard Soldiers on the Automated Neuropsychological Assessment Metrics (Version 4) Battery
Presentation Author: Ms. Caitlin Haven

MHSRS-19-01915 - SESSION 1 - #481
Assessing Neurocognitive Performance using Handheld Software Defined Radios
Presentation Author: Mr. Matthew Yanagi

MHSRS-19-01950 - SESSION 1 - #482
Changes in Affordance Perception Behaviors during Exposure to Acute Military Operational Stress
Presentation Author: Ms. Alice LaGoy

MHSRS-19-02031 - SESSION 1 - #483
Cognitive Rehabilitation for the Warfighter: Application of Smart
Presentation Author: Dr. Ida Babakhanyan

MHSRS-19-02177 - SESSION 1 - #484
Using the Virtual Multiple Errands Task to Assess Executive Functioning in Traumatic Brain Injury
Presentation Author: Ms. Marielle Nagele

MHSRS-19-02425 - SESSION 1 - #485
Repetitive Transcranial Magnetic Stimulation as a Protective Measure against Early-Onset Alzheimer’s Disease: A Case Report
Presentation Author: Mr. Jared Garland
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MHSRS-19-02474 - SESSION 1 - #486
Mindfulness: An Emerging Strategy for Enhancing Health and Readiness in the Military
Presentation Author: CPT Thomas Nassif

MHSRS-19-02597 - SESSION 1 - #487
Paradoxical Effect of Stimulus Density on PVT Time-on-task Effect during Sleep Deprivation
Presentation Author: Dr. Kimberly Honn

LONG-TERM IMPAIRMENT FOLLOWING CONCUSSION: UNDERSTANDING DISCREPANCIES IN REPORTED OUTCOMES AND IMPLICATIONS FOR RETURN-TO-DUTY

MHSRS-19-00096 - SESSION 1 - #488
Does Method of Receiving A Traumatic Brain Injury Influence Care Seeking?
Presentation Author: Ms. Bianca Chavez

MHSRS-19-00116 - SESSION 1 - #489
Telerehabilitation for Combat Wounded with Traumatic Brain Injury and Post Traumatic Stress Disorders
Presentation Author: Dr. Kris Siddharthan

MHSRS-19-00342 - SESSION 1 - #490
Non-medical Predictors of Long-term TBI Outcomes
Presentation Author: Ms. Catherine Butt

MHSRS-19-00601 - SESSION 1 - #491
Task Practice Intensity Estimation in Individuals with Traumatic Brain Injury
Presentation Author: Dr. Sandeep Subramanian

MHSRS-19-00685 - SESSION 1 - #492
Medical Comorbidities Predict Psychological Health After Traumatic Brain Injury: A VA TBI Model Systems Study
Presentation Author: Ms. Emily Noyes

MHSRS-19-00761 - SESSION 1 - #493
Comorbidity Burden Contributes To Community Reintegration and Employment After TBI: A VA TBI Model Systems Study
Presentation Author: Ms. Deveney Ching

MHSRS-19-00814 - SESSION 1 - #494
Impact of Medical Comorbidities on Rehabilitation Outcomes Following TBI: A VA TBI Model Systems Study
Presentation Author: Dr. Risa Nakase-Richardson

MHSRS-19-00833 - SESSION 1 - #495
Demographic and Mental Health Predictors of Arrests 1-10 Years Post-TBI: A VA TBIMS Study
Presentation Author: Dr. Shannon Miles

MHSRS-19-00834 - SESSION 1 - #496
Obstructive Sleep Apnea and PTSD Symptoms in Veterans with TBI
Presentation Author: Dr. Leilia Abuelhiga
MHSRS-19-00837 - SESSION 1 - #497
Arrest Rates in Veterans and Military Personnel after TBI: A VA TBI Model Systems Study
Presentation Author: Dr. Elizabeth Gavin

MHSRS-19-00936 - SESSION 1 - #498
Time Interval to Follow Commands in Severe Traumatic Brain Injury Survivors with Favorable Outcomes at 2 Years
Presentation Author: Dr. Tiffany Wilkins

MHSRS-19-01125 - SESSION 1 - #499
Specific Sleep Disorder Targeted Intervention Therapy Impact on Sleep Quality and Satisfaction with Life Scale: A Team-TBI Study
Presentation Author: Dr. Matthew Mesley

MHSRS-19-01221 - SESSION 1 - #500
Prevalence of Sleep Apnea Differs by Severity of Traumatic Brain Injury in Veterans and Service Member: A VA TBI Model System Study
Presentation Author: Ms. Amanda Royer

MHSRS-19-01325 - SESSION 1 - #501
Identifying Risk Factors for Pain Related Disability in Veterans and Service Members Exposed to Mild Traumatic Brain Injury
Presentation Author: Dr. Michelle Hoot

MHSRS-19-01334 - SESSION 1 - #502
Pupillary Evidence for Impaired Neural Gain Modulation in Chronic Mild Traumatic Brain Injury
Presentation Author: Dr. Jamie Hershaw

MHSRS-19-01373 - SESSION 1 - #503
Outcome Following Concussion: Prospective Investigation into the Effects of Prior Brain Injury on Recovery in Military Personnel
Presentation Author: Dr. Jason Bailie

MHSRS-19-01436 - SESSION 1 - #504
Validation of NIH Toolbox Emotion Battery for Traumatic Brain Injury
Presentation Author: Dr. Ida Babakhanyan

MHSRS-19-01477 - SESSION 1 - #505
Functional Status Examination versus Glasgow Outcome Scale Extended as Outcome Measures in Traumatic Brain Injuries: How Do They Compare?
Presentation Author: Dr. Nancy Temkin

MHSRS-19-01565 - SESSION 1 - #506
Efficacy of Vision Therapy to Ameliorate Long Term Impairment in a MTBI Patient Population
Presentation Author: Dr. Tina Aldana

MHSRS-19-01582 - SESSION 1 - #507
Quantitative Evaluation of Visual and Auditory Dysfunction in TBI Patients: Description of Study and Characteristics of Early Participants
Presentation Author: Ms. Catherine Diethelm
MHSRS-19-01584 - SESSION 1 - #508
Cognitive Impairment, Psychological Health and Functional Status after Traumatic Brain Injury: A Team-TBI Study
Presentation Author: Ms. Allison Borrasso

MHSRS-19-01586 - SESSION 1 - #509
Lifetime Experience of mTBI Blocks Facilitated Acquisition of Eyeblink Conditioning In Anxiety-prone Veterans
Presentation Author: HM1 Richard Servatius

MHSRS-19-01677 - SESSION 1 - #510
Self-reported Sleep Quality in Persons with Chronic TBI: Can Exercise Help?
Presentation Author: Mr. Kevin Balibay

MHSRS-19-01685 - SESSION 1 - #511
Telephone-assessed Neuropsychological Performance Predicts Disability Severity Level after Traumatic Brain Injury: VA TBI Model Systems Study
Presentation Author: Ms. Erin Brennan

MHSRS-19-01742 - SESSION 1 - #512
Unmet Rehabilitation Needs Five Years Post Traumatic Brain Injury: A VA TBI Model Systems Study
Presentation Author: Dr. Elaine Mahoney

MHSRS-19-01857 - SESSION 1 - #513
Long-term Health Outcomes of Active Duty Service Members with Combat versus Non-combat Concussion
Presentation Author: CDR Lalon Kasuske

MHSRS-19-01861 - SESSION 1 - #514
Burden of Behavioral Health Comorbidities on Active Duty Service Members with a First MTBI
Presentation Author: CDR Lalon Kasuske

MHSRS-19-01903 - SESSION 1 - #515
The Effects of Fatigue and Sleep on Reported Concussion-related Symptoms
Presentation Author: Dr. Daniel Leeds

MHSRS-19-01909 - SESSION 1 - #516
MTBI and PTSD are Dissociable using Novel Virtual Reality Postural Assessments
Presentation Author: Dr. W. Geoffrey Wright

MHSRS-19-01952 - SESSION 1 - #517
Do Males and Females in the Military Differ in Terms of MTBI Reporting and Seeking Care?
Presentation Author: Dr. Sandra Escolas

MHSRS-19-02106 - SESSION 1 - #518
Comparing Acute Phase and Persistent Symptoms Following a First Mild Traumatic Brain Injury
Presentation Author: Mr. Peter Hoover

MHSRS-19-02256 - SESSION 1 - #519
Psychosis Secondary to Repetitive MTBI
Presentation Author: Lt Devon Johnston
MHSRS-19-02259 - SESSION 1 - #520
Reviewing Clinical Practice Guidelines on Patient-reported Outcome Measures Use for Individuals Diagnosed with TBI: On an Evaluative Literature Review
Presentation Author: Ms. Lauren Earyes

MHSRS-19-02353 - SESSION 1 - #521
Neck Pain and Sleep Quantity in the Etiology of Headaches in Service Members with and without Mild Traumatic Brain Injury: A Comparison
Presentation Author: Dr. Matthew Reid

FUNCTIONAL RETURN TO DUTY DECISION MAKING POST MTBI AND MUSCULOSKELETAL INJURY

MHSRS-19-00235 - SESSION 1 - #522
Gender Differences in Symptom Presentation and Functional Outcomes in a Matched Sample of Veterans with Mild TBI
Presentation Author: Dr. Maheen Adamson

MHSRS-19-00538 - SESSION 1 - #523
Vestaid: A Tablet-based Technology for Objective Exercise Monitoring in Vestibular Rehabilitation
Presentation Author: Dr. Pedram Hovareshti

MHSRS-19-01133 - SESSION 1 - #524
Adding an Objective Biomechanical Assessment into the Management of Knee Osteoarthritis for Civilian Patients Improves Pain, Function and Treatment Satisfaction: A Pragmatic Cluster Randomized Controlled Trial
Presentation Author: Dr. Alexandre Fuentes

MHSRS-19-01331 - SESSION 1 - #525
Disparity of Self-reported Injuries with Abbreviated Injury Scale Scores in Service Members Following Traumatic Brain Injury and Polytrauma
Presentation Author: Dr. Tracey Brickell

MHSRS-19-01437 - SESSION 1 - #526
The Relationship Between Vision Loss, Head Trauma, Traumatic Brain Injuries and Ocular Injuries in American Service Members from 2001 to 2015
Presentation Author: Dr. Tom Velez

MHSRS-19-01490 - SESSION 1 - #527
Visual Exploration and Gait in People with Mild Traumatic Brain Injury
Presentation Author: Dr. Samuel Stuart

MHSRS-19-01507 - SESSION 1 - #528
Recovery of Long Term Potentiation in Rat Organotypic Hippocampal Slice Cultures to Inform Return-to-duty Criteria in Soldiers Following Blast-induced Traumatic Brain Injury
Presentation Author: Mr. Nevin Varghese

MHSRS-19-01580 - SESSION 1 - #529
Traditional vs. Dynamic Reaction Time Assessments: Are We Really Evaluating Reaction Time after Concussion?
Presentation Author: Dr. Robert Lynall
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**MHSRS-19-01593 - SESSION 1 - #530**
Subdural Infusion of Anti-inflammatory Proteins Targeting Coagulation and Chemokine Pathways Provides Early Neuroprotection after Spinal Cord Injury
Presentation Author: Dr. Jacek Kwiecien

**MHSRS-19-01885 - SESSION 1 - #531**
Effect of Impaired Balance by Fatigue, Reduced Plantar Sensation and Mild Traumatic Brain Injury
Presentation Author: Dr. Zachary Domire

**MHSRS-19-01928 - SESSION 1 - #532**
Evaluating the Effect of Varying Muscle Activation on Head Kinematics During Non-injurious Head Impacts in Human Volunteers
Presentation Author: Ms. Kristen Reynier

**MHSRS-19-01939 - SESSION 1 - #533**
Most- A Multi-site Observational Study Comparing Combined Intensive Concussion and Pain Management Interdisciplinary Outpatient Programs to Usual Care
Presentation Author: Ms. Dawn Collins

**MHSRS-19-01992 - SESSION 1 - #534**
Comparison of Subjects with MTBI and Healthy Control Group in the Development of the Powar-total: A Test of Return-to-duty Readiness Following MTBI
Presentation Author: Ms. Larysa Petrenko

**MHSRS-19-02131 - SESSION 1 - #535**
Development and Validation of a Mobile Application to Detect Visual Dysfunction Following Mild Traumatic Brain Injury
Presentation Author: Dr. Susan Linder

**MHSRS-19-02160 - SESSION 1 - #536**
The Assessment of Dual-task Function Conducive for use in Military Mild Traumatic Brain Injury
Presentation Author: Dr. Susan Linder

**MHSRS-19-02273 - SESSION 1 - #537**
Characterization of Healthy Control Group in the Development of the POWAR-TOTAL- A Test of Return to Duty Readiness Following Concussion
Presentation Author: Ms. Kellie Adams

**MHSRS-19-02297 - SESSION 1 - #538**
Characteristics of Active Duty Service Members Post-concussion Referred to Physical Therapy
Presentation Author: Dr. Karen L McCulloch

**MHSRS-19-02553 - SESSION 1 - #539**
Using an Immersive 3D Scenario-based Rehabilitation Program to Enhance Daily Functioning in Veterans Surviving Traumatic Brain Injury
Presentation Author: Ms. Zhengsi Chang

**MHSRS-19-02649 - SESSION 1 - #540**
Exploring the Role of Combined Cognitive and Motor Dual-task Assessment and Rehabilitation for Individuals with Residual Symptoms after Mild Traumatic Brain Injury
Presentation Author: Dr. Margaret Weightman
MANAGEMENT AND TREATMENT OF WARFIGHTER NEUROMUSCULOSKELETAL INJURIES

MHSRS-19-00010 - SESSION 1 - #541
Assessment of Biomechanical Properties and Biocompatibility of 3D Printed Collagen Nerve Conduits: The Effects of Ruthenium versus Riboflavin Photocrosslinking
Presentation Author: Dr. Shailly Jariwala

MHSRS-19-00024 - SESSION 1 - #542
Volumetric Changes in Edentulous Alveolar Ridge Sites Utilizing Guided Bone Regeneration and a Custom Titanium Ridge Augmentation Matrix
Presentation Author: Dr. Rodney Phoenix

MHSRS-19-00777 - SESSION 1 - #543
Evaluation of Mesenchymal Stromal Cell Differentiation for Healing of Large Tissue Defects
Presentation Author: Dr. Rodney Phoenix

MHSRS-19-00030 - SESSION 1 - #544
Buccal Bone Thickness Adjacent to Virtual Dental Implants Following Guided Bone Regeneration
Presentation Author: CPT Daniel J. Phillips

MHSRS-19-00092 - SESSION 1 - #545
Tunnel Access for Guided Bone Regeneration
Presentation Author: CPT Ryan T. McGary

MHSRS-19-00095 - SESSION 1 - #546
Rational Prophylactic Antibiotic Selection for Sinus Elevation Surgery
Presentation Author: MAJ Joshua A. Akers

MHSRS-19-00138 - SESSION 1 - #547
Engineering of Volumetric Skeletal Muscle Tissue for Accelerated Restoration of Pelvic Floor Muscle Function
Presentation Author: Dr. Jihyun Kim

MHSRS-19-00142 - SESSION 1 - #548
Accelerated Innervation of 3D Bioprinted Muscle Construct with Pre-fabricated Neuromuscular Junctions and Neurotrophic Factor Release System
Presentation Author: Dr. Jihyun Kim

MHSRS-19-00192 - SESSION 1 - #549
Implementation of Direct Access Physical Therapy at Joint Base Lewis McChord: Leading the Way in Musculoskeletal Readiness
Presentation Author: CPT Casey Shutt-Hoblet

MHSRS-19-00263 - SESSION 1 - #550
A Novel BMP-2 Delivery Device Induces Superior Bone Formation in a Rabbit Posterolateral Fusion Model
Presentation Author: Dr. Yi Arnold
MHSRS-19-00293 - SESSION 1 - #551
Defining the Immune Response to Post-traumatic Osteoarthritis and Therapeutic Targeting of Inflammatory-induced Senescence Pathways to Promote Repair
Presentation Author: Ms. Hong Zhang

MHSRS-19-00332 - SESSION 1 - #552
Novel Calibrated Real-time Pressure Sensor Reveals Wide Variations in Current Nerve Crush Injury Models
Presentation Author: Dr. John Elfar

MHSRS-19-01262 - SESSION 1 - #553
Peripheral Nerve Laceration Injury in Mice: Standardized Methods Result in Reproducible Functional, Morphological, Cellular, and Molecular Characteristics in Nerve and Muscle
Presentation Author: Dr. John Elfar

MHSRS-19-01268 - SESSION 1 - #554
Purposeful Misalignment of Transected Sciatic Nerve Stumps Results in Aggravated Functional Deficit, with Unexpected Prevention of Muscle Atrophy
Presentation Author: Dr. John Elfar

MHSRS-19-01633 - SESSION 1 - #555
Transdermal Delivery of 4-aminopyridine, A Potassium Channel Blocker, Promotes Peripheral Nerve Injury Recovery with Decreased Axonal Degeneration, Improved Myelination, Faster Nerve Conduction, and Enhanced Global Motor Function
Presentation Author: Dr. John Elfar

MHSRS-19-01656 - SESSION 1 - #556
Treatment of Denervation Atrophy with 4-aminopyridine: Improved Limb Function and Intrinsic Muscle Force with Suppression of the Expression of Muscle Atrophy Genes
Presentation Author: Dr. John Elfar

MHSRS-19-00353 - SESSION 1 - #557
Dexamethasone Improves Neuromuscular Junction Recovery from Ischemia-reperfusion Injury Induced by Tourniquet Application in Mouse Hindlimb
Presentation Author: Dr. Huiyin Tu

MHSRS-19-00393 - SESSION 1 - #558
A Novel, Promising Strategy for Repairing Peripheral Nerve Defect: Nerve Graft Prefabrication
Presentation Author: Dr. Huseyin Karagoz

MHSRS-19-00639 - SESSION 1 - #559
Lower Abdominal-penoscrotal Vascularized Composite Allotransplantation
Presentation Author: Dr. Richard Redett

MHSRS-19-00677 - SESSION 1 - #560
A Human Joint Model System to Study the Pathogenesis and Treatment of Post-traumatic Osteoarthritis
Presentation Author: Dr. Melissa VonDran

MHSRS-19-00817 - SESSION 1 - #561
Desensitization using Costimulatory Blockade and Bortezomib Does Not Prevent DSA Formation and Rejection in Reconstructive Transplantation
Presentation Author: Dr. Franka Messner
MHSRS-19-00839 - SESSION 1 - #562
WISP1 Regulates Chondrogenic Differentiation in Tendon Associated Heterotopic Bone
Presentation Author: Dr. Aaron James

MHSRS-19-00860 - SESSION 1 - #563
Bone Surgery Followed by Prolonged Musculoskeletal Disuse Aggravates Atrophy: Apoptosis Concomitant with Immune Deficiency
Presentation Author: Mr. Nabarun Chakraborty

MHSRS-19-00896 - SESSION 1 - #564
Nuclear Sequestration of NFκB Delays the Inflammatory Switch in Raw 264.7 Macrophages
Presentation Author: CPT Alexander Kolb

MHSRS-19-00899 - SESSION 1 - #565
The Adapter Proteins MyD88 and TRIF are Primary Regulators of Inflammation in Bone Marrow Derived Macrophages
Presentation Author: Ms. Marinaliz Reynoso

MHSRS-19-00917 - SESSION 1 - #566
Nerve Graft Prefabrication via Lateral Axonal Sprouting into Allogeneic Epineural Sheath Conduit Induced by Adipose-derived Mesenchymal Stem Cells or Fat Graft
Presentation Author: Dr. Huseyin Karagoz

MHSRS-19-01019 - SESSION 1 - #567
A Porous Collagen-GAG Scaffold Promotes Muscle Regeneration Following Volumetric Muscle Loss Injury
Presentation Author: Dr. Adriana Panayi

MHSRS-19-01029 - SESSION 1 - #568
An Entirely New Approach to Flexor Tendon Repair
Presentation Author: Dr. Aaron Dingle

MHSRS-19-01083 - SESSION 1 - #569
The Mesh Suture Research Program: Using a Trans-discipline Research Model to Drive a Surgical Paradigm Shift
Presentation Author: LCDR Jason Souza

MHSRS-19-01084 - SESSION 1 - #570
Suturable Mesh Laparotomy Closure Outperforms Conventional Suture Closure in a Ball Burst Repetitive Stress Model
Presentation Author: LCDR Jason Souza

MHSRS-19-01185 - SESSION 1 - #571
Stem Cell and Novel Neurotrophic Factor Therapies to Improve Outcomes in Neuromusculoskeletal Injuries
Presentation Author: Dr. Shashikumar Salgar

MHSRS-19-01240 - SESSION 1 - #572
Innovative Approach to Nerve Repair
Presentation Author: Dr. Yoojeong Kim

MHSRS-19-01290 - SESSION 1 - #573
Innovative Catheter Design to Enable Safe Urinary Management of Warfighters with Neurogenic Bladder
Presentation Author: Mr. Derek Herrera
MHSRS-19-01363 - SESSION 1 - #574
Development of Biological Approaches to Improve Functional Recovery after Compartment Syndrome Injury
Presentation Author: Dr. Tracy Criswell

MHSRS-19-01440 - SESSION 1 - #575
Effects of Visual Biofeedback on Loading Symmetry in Recovery from a Multi-ligamentous Knee Injury and Dislocation
Presentation Author: Dr. Julianne Stewart

MHSRS-19-01451 - SESSION 1 - #576
Conversion of Foot Strike Pattern To Treat Service Members With Running-related Knee Pain
Presentation Author: Dr. Brittney Mazzone

MHSRS-19-01485 - SESSION 1 - #577
Point-of-Care Tomosynthesis Imaging of the Wrist
Presentation Author: Dr. Yueh Lee

MHSRS-19-01551 - SESSION 1 - #578
Articulated Joint Distraction 12-weeks after an Intra-articular Fracture Induces Cartilage and Intra-articular Soft Tissue Formation in a Minipig Model
Presentation Author: Dr. Jessica Goetz

MHSRS-19-01575 - SESSION 1 - #579
Opioid Paradoxically Exacerbates Postfracture Pain despite Evidence of Bone Union
Presentation Author: Dr. Fletcher White

MHSRS-19-01691 - SESSION 1 - #580
The Vascular Architecture in Microvascular Free Flaps: Analysis of Vessel Morphology and –Morphometry in a Murine Free Flap Model
Presentation Author: MAJ Andreas Pabst

MHSRS-19-01826 - SESSION 1 - #581
Side-to-Side Supercharging Allograft
Presentation Author: Dr. Satya Mallu

MHSRS-19-01904 - SESSION 1 - #582
Vascularized Composite Allograft Allotransplantation in Swine (Sus Scrofa) Using a Graft Implanted Immunosuppressive Protocol
Presentation Author: Dr. Jaclyn Yracheta

MHSRS-19-01963 - SESSION 1 - #583
Examining Medical Separation Rates in Infantry and Combat Support U.S. Enlisted Service Members Following Anterior Cruciate Ligament Reconstruction, a Case-control Study
Presentation Author: Ms. Veronika Pav

MHSRS-19-01966 - SESSION 1 - #584
Modulating Macrophage Phenotype to Decrease Muscle Fibrosis in Ischemia Reperfusion Injury
Presentation Author: Mr. Chase Pagani
MHSRS-19-02006 - SESSION 1 - #585
Large Gap Peripheral Nerve Repair with Photochemical Tissue Bonding and Acellular Nerve Allograft in a Non-human Primate Model
Presentation Author: Dr. Marek Hansdorfer

MHSRS-19-02027 - SESSION 1 - #586
Center for Disruptive Musculoskeletal Innovations as a Model for Rapid Advancement of Prevention, Management and Treatment Strategies
Presentation Author: LCDR Dustin Huber

MHSRS-19-02048 - SESSION 1 - #587
Blast Injury Prevention Standards Recommendation Process: Skull Fracture Blast Injury Type
Presentation Author: Dr. Matthew Downs

MHSRS-19-02073 - SESSION 1 - #588
Soft Tissue Manipulation Attenuates Inflammation, Modulates Pain and Improves Gait in Conscious Rodents with Induced Low Back Pain
Presentation Author: Dr. Mary Loghmani

MHSRS-19-02074 - SESSION 1 - #589
The Effect of Gelatin MW on Lubricating Ability of an HA-Gelatin Compound in a Tendon Injury Model
Presentation Author: Dr. Peter Amadio

MHSRS-19-02170 - SESSION 1 - #590
Viral Vector Delivery of Follistatin Enhances Recovery of Reinnervated Muscle
Presentation Author: Dr. Satya Mallu

MHSRS-19-02179 - SESSION 1 - #591
Time to Anterior Cruciate Ligament Reconstruction in the U.S. Military: Does Delay to Surgery Increase Medical Separation Risk?
Presentation Author: Ms. Veronika Pav

MHSRS-19-02210 - SESSION 1 - #592
Presentation Author: LTG Enrique Smith-Forbes

MHSRS-19-02213 - SESSION 1 - #593
Psychosocial Predictors of Outcomes in Upper Extremity Vascularized Composite Allo transplantation with Mock Patient Vignettes
Presentation Author: Dr. Simon Talbot

MHSRS-19-02217 - SESSION 1 - #594
Critical Perfusion Threshold for Segmental Tissue at Risk after Cervical Spinal Cord Injury
Presentation Author: Dr. Zin Khaing

MHSRS-19-02243 - SESSION 1 - #595
The First Preclinical Porcine Model to Study Facial Scar Contractures and their Mechanisms
Presentation Author: Dr. Sashwati Roy
MHSRS-19-02244 - SESSION 1 - #596
A Combinatorial Approach to Cartilage Repair using Fractional Laser Treatment with Dynamic Self-regenerating Cartilage
Presentation Author: Dr. Yingfang Fan

MHSRS-19-02295 - SESSION 1 - #597
A Novel Nurse-managed Stress Fracture Rehabilitation Program: A Pilot Study
Presentation Author: LTC William Brown

MHSRS-19-02298 - SESSION 1 - #598
Defining Value for Navy Medicine through Musculoskeletal Integrated Practice Units
Presentation Author: CDR Leslie Hair

MHSRS-19-02361 - SESSION 1 - #599
Weightbearing CT Scan after Pilon Fracture Fixation Demonstrates Significant Early Joint Space Narrowing
Presentation Author: Dr. Michael Willey

MHSRS-19-02363 - SESSION 1 - #600
A Novel Ceramic-binding Variant TBMP-2 Delivered on a Ceramic Fiber Carrier Exhibits Dose-dependent Superiority in Union Rate over Standard of Care in a Five-centimeter Chronic Caprine Tibial Defect Model
Presentation Author: Dr. Yi Arnold

MHSRS-19-02413 - SESSION 1 - #601
Toward the Development of Patient-reported Outcome Measures for Vascularized Composite Allotransplantation of the Hand
Presentation Author: CDR Scott Tintle

MHSRS-19-02420 - SESSION 1 - #602
Cervical Spine Motion Characteristics as Objective Indicators of Neck Health
Presentation Author: Mr. Jonathan Dufour

MHSRS-19-02482 - SESSION 1 - #603
Engineering a Hybrid Thymus to Unravel the Tolerogenic Properties of Vascularized Composite Allotransplants
Presentation Author: Ms. Jialu Wang

MHSRS-19-02498 - SESSION 1 - #604
Qualitative Evaluation of Psychosocial Predictors of Outcomes in Upper Extremity Vascularized Composite Allotransplantation
Presentation Author: Dr. Simon Talbot

MHSRS-19-02527 - SESSION 1 - #605
A Porous Collagen-glycosaminoglycan Scaffold for the Treatment of Service Members affected by Volumetric Muscle Loss Injury
Presentation Author: Dr. Kristo Nuutila

MHSRS-19-02540 - SESSION 1 - #606
Tissue Protective Immunologic Response Following Early Definitive Fixation of Femur Fractures In Polytrauma Patients
Presentation Author: Dr. Todd McKinley
MHSRS-19-02548 - SESSION 1 - #607
Transcutaneous Contrast-enhanced Ultrasound Imaging of The Post-traumatic Spinal Cord Following Laminectomy
Presentation Author: Mr. Matthew Bruce

MHSRS-19-02555 - SESSION 1 - #608
Tissue Engineering and Regenerative Medicine Technology for Restoration of Bone in Cases of Significant Bone Loss
Presentation Author: Dr. Jing Lim

MHSRS-19-02593 - SESSION 1 - #609
Validating the Mechanical Robustness of a Passive Implantable Mechanism in the Chicken Extensor Tendon Model
Presentation Author: Mr. Justin Casebier

MHSRS-19-02601 - SESSION 1 - #610
In Situ Skeletal Muscle and Bone Tissue Handheld Printers
Presentation Author: Mr. Jacob Quint

MHSRS-19-02622 - SESSION 1 - #611
A Novel Protective Role of GPNMB/Osteoactivin in Post-traumatic Osteoarthritis
Presentation Author: Dr. Fayez Safadi

MHSRS-19-02643 - SESSION 1 - #612
A Retrospective Analysis to Determine Outcomes for Active Duty Service Members Status Post Hallux Valgus Surgical Correction Performed at Brooke Army Medical Center
Presentation Author: MAJ Tyson Baynes

MHSRS-19-02657 - SESSION 1 - #613
Combination Bone Replacement Graft With Dense Polytetrafluoroethylene Barrier Membrane for Treatment of an Infrabony Periodontal Defect
Presentation Author: MAJ Joseph F. Capetillo
REHABILITATION FOLLOWING LIMB TRAUMA AND AMPUTATION

MHSRS-19-00015 - SESSION 1 - #614
Classification and Description of Outpatient Medications Prescribed Following Serious Combat Injury: A Retrospective Study
Presentation Author: Dr. Ted Melcer

MHSRS-19-00031 - SESSION 1 - #615
Correlates of Outpatient Prescription Medication Activity Following Serious Combat Injury: A Retrospective Analysis
Presentation Author: Dr. Ted Melcer

MHSRS-19-00038 - SESSION 1 - #616
IDEO Work Reliance Increases after Functional Training
Presentation Author: Mr. John Collins

MHSRS-19-00085 - SESSION 1 - #617
Presentation Author: Dr. Marc Schweizer

MHSRS-19-00186 - SESSION 1 - #618
Loading Effect of Prosthetic Feet's Anthropomorphism on Transtibial Osseointegrated Implant
Presentation Author: Dr. Mark Pitkin

MHSRS-19-00206 - SESSION 1 - #619
Prosthetic Feet Options and Balance Performance in Persons with Transtibial Amputation
Presentation Author: Dr. Amy Silder

MHSRS-19-00250 - SESSION 1 - #620
Kinesiophobia and its Associations with Self-reported Pain and Function in Individuals with Lower Limb Amputations
Presentation Author: Dr. Brittney Mazzone

MHSRS-19-00279 - SESSION 1 - #621
Development of a Balance Measure for Amputees
Presentation Author: Ms. Jennifer Johansson

MHSRS-19-00280 - SESSION 1 - #622
Tissue-engineered Electronic Nerve Interfaces: A Next-generation Technology for Amputees
Presentation Author: Dr. Jack Judy

MHSRS-19-00304 - SESSION 1 - #623
Beyond Limb Salvage: Institutional Trends in Limb Restoration Efforts Following Complex Combat-related Extremity Injuries
Presentation Author: 2LT Colin Harrington

MHSRS-19-00320 - SESSION 1 - #624
Early Clinical Evaluation of Active Cooling System for Improving Residual Limb Care
Presentation Author: Dr. Ryan Myers
MHSRS-19-00435 - SESSION 1 - #625
Developing a Combat-relevant Translatable Large Animal Model of Heterotopic Ossification
Presentation Author: Dr. Dustin Williams

MHSRS-19-00505 - SESSION 1 - #626
Mechanics of Abnormal Trunk Motion during Walking in Service Members with a Transtibial Amputation: A Whole-body Perspective
Presentation Author: Mr. Adam Yoder

MHSRS-19-00587 - SESSION 1 - #627
A Multi Domain Approach to Decision Making in O&P
Presentation Author: Dr. Sarah Chang

MHSRS-19-00799 - SESSION 1 - #628
Enabling Technology for Prosthetic Telerehabilitation and Performance Optimization
Presentation Author: Dr. David Boone

MHSRS-19-00882 - SESSION 1 - #629
In-vivo Kinetic System to Sustain Residuum Health of Service Members with Lower Limb Loss: From Proof-of-concept to Digital Twin
Presentation Author: Dr. Laurent Frossard

MHSRS-19-00939 - SESSION 1 - #630
Criteria for Advanced Prosthetic Foot Prescription: A Multi-center Clinical Trial
Presentation Author: Dr. Jason Maikos

MHSRS-19-01000 - SESSION 1 - #631
Cuff and Sieve Electrode: Proof of Principal for the Combination of Neural Electrodes for Bi-directional Peripheral Nerve Interfaces
Presentation Author: Dr. Aaron Dingle

MHSRS-19-01078 - SESSION 1 - #632
An Overview of Combat-related Extremity Injury in U.S. Service Members
Presentation Author: Ms. Katheryne Perez

MHSRS-19-01082 - SESSION 1 - #633
Developing New Items for the Extremity Trauma and Amputation Quality of Life Measurement System: Cognitive Debriefing Interviews
Presentation Author: Dr. Callie Tyner

MHSRS-19-01267 - SESSION 1 - #634
Early Outcomes of Patients Who Have Undergone Modified Amputations Incorporating Agonist-antagonist Myoneural Interface Construction
Presentation Author: Dr. Matthew Carty

MHSRS-19-01314 - SESSION 1 - #635
Early Outcomes of Skin Penetration Site Management in Osseointegrated Implants in Transhumeral and Transfemoral Amputations
Presentation Author: 2LT Colin Harrington
MHSRS-19-01336 - SESSION 1 - #636
Characterization of a Novel Shoe Testing Approach for use in Custom Orthotic Device Evaluation
Presentation Author: Dr. Jason Wilken

MHSRS-19-01464 - SESSION 1 - #637
Burn Injuries and Combat-related Amputation in U.S. Service Members
Presentation Author: Ms. Katheryne Perez

MHSRS-19-01523 - SESSION 1 - #638
Machine Learning Strategies for Automatically Determining Ground Slope and Walking Speed for Individuals with Amputation using a Robotic Knee/ankle Prosthesis
Presentation Author: Dr. Aaron Young

MHSRS-19-01546 - SESSION 1 - #639
A Bio-mimetic Adapter for Real-time Self-alignment of Prosthetic Foot
Presentation Author: Dr. Md Amanul Haque

MHSRS-19-01566 - SESSION 1 - #640
Military-specific Virtual Reality Training Improves Physical Function in Service Members with Lower Extremity Injury
Presentation Author: Ms. AuraLea Fain

MHSRS-19-01600 - SESSION 1 - #641
Development of an Integrated Platform for Performing Multi-center Extremity Trauma and Rehabilitation Research
Presentation Author: Dr. Kenton Kaufman

MHSRS-19-01616 - SESSION 1 - #642
Amputee Preference and Perception of Ankle-foot Stiffness during Walking
Presentation Author: Dr. Elliott Rouse

MHSRS-19-01629 - SESSION 1 - #643
Should I Stay or Should I Go? Identifying Systemic and Individual Factors in the Decision to Return to Duty Following Lower Extremity Injury
Presentation Author: Dr. Jonathan Wilson

MHSRS-19-01644 - SESSION 1 - #644
Bioenergetic Consequences of Lower Limb Trauma: Comparisons Between Lower Limb Reconstruction and Amputation
Presentation Author: Dr. Elizabeth Russell Esposito

MHSRS-19-01649 - SESSION 1 - #645
Enhanced Non-invasive Peripheral Nerve Stimulation for Sensory Restoration and Neuropathic Pain Treatment
Presentation Author: Mr. Andres Pena

MHSRS-19-01673 - SESSION 1 - #646
Military Culture as a Therapeutic Factor in Rehabilitation: An Ethnographic Account
Presentation Author: Dr. Seth Messinger
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

MHSRS-19-01696 - SESSION 1 - #647
Kinematic Comparison of Treadmill and Overground Walking In Persons With and Without Transfemoral Amputation
Presentation Author: Dr. Amy Silder

MHSRS-19-01703 - SESSION 1 - #648
Prosthesis Satisfaction and Quality of Life in Service Members with Deployment-related Major Traumatic Amputation
Presentation Author: Dr. Susan Eskridge

MHSRS-19-01750 - SESSION 1 - #649
Power and Work Comparisons between IDEO Users and Patients with Transtibial Amputation
Presentation Author: Mr. Trevor Kingsbury

MHSRS-19-01803 - SESSION 1 - #650
In Vitro Characterization of Osteogenic Differentiation Potential of Porcine Mesenchymal Stem Cells Derived from Multiple Integumentary Tissues for Improved Durability of the Skin/implant Interface
Presentation Author: Dr. Devaveena Dey

MHSRS-19-01818 - SESSION 1 - #651
In Vitro Adhesion of Porcine Mesenchymal Stem Cells to Percutaneous Osseointegrated Prostheses for Improved Skin/implant Therapies
Presentation Author: Dr. Devaveena Dey

MHSRS-19-01843 - SESSION 1 - #652
The Point Digit: Mechanical Design and Testing of a Ratcheting Prosthetic Finger
Presentation Author: Dr. Levin Sliker

MHSRS-19-01922 - SESSION 1 - #653
Proprioceptive Sonomyographic Control: Towards Natural and Intuitive Control of Multi-articulated Upper Extremity Prosthesis
Presentation Author: Dr. Biswarup Mukherjee

MHSRS-19-01961 - SESSION 1 - #654
Early Research Toward a Muscle-driven, Implantable Limb Prosthesis
Presentation Author: Dr. Dustin Crouch

MHSRS-19-02021 - SESSION 1 - #655
Osseointegration among Service Members with Transfemoral Limb Loss: A Preliminary Look at Functional Outcomes within the First Year
Presentation Author: Dr. Brad Hendershot

MHSRS-19-02039 - SESSION 1 - #656
Biomechanical Loading Patterns During Drop Landings among Service Members with Unilateral Transtibial Limb Loss: Toward Informing Prosthesis Prescription and Return to Duty Decisions
Presentation Author: Dr. Brad Hendershot

MHSRS-19-02043 - SESSION 1 - #657
Clinical Assessment of Trunk Postural Control within a Fall-prevention Training Program for Service Members with Lower Extremity Trauma and Limb Loss
Presentation Author: Dr. Brad Hendershot
MHSRS-19-02153 - SESSION 1 - #658
Prosthetic Care for Combat Casualties at Walter Reed National Military Medical Center
Presentation Author: Mr. Akshay Thaper

MHSRS-19-02392 - SESSION 1 - #659
Bi-directional Control and Sensory Restoration Solution for Amputees
Presentation Author: Dr. Edward Keefer

MHSRS-19-02395 - SESSION 1 - #660
The Impact of Sensory Feedback on Grasping Performance with Different Prosthetic Types
Presentation Author: Dr. Deanna Gates

MHSRS-19-02415 - SESSION 1 - #661
The Extremity Trauma Toolbox Training Program: Standardizing Assessment of Functioning, Community Reintegration and Quality of Life After Major Extremity Trauma
Presentation Author: Dr. Jerry Slotkin

MHSRS-19-02427 - SESSION 1 - #662
Influence of Strut Stiffness on the Mechanical Properties of the IDEO during Walking
Presentation Author: Mr. Trevor Kingsbury

MHSRS-19-02435 - SESSION 1 - #663
Comparison of Two Different Hydrogel Biomaterial on Tendon Friction in a Turkey Tendon Model
Presentation Author: Dr. Peter Amadio

MHSRS-19-02458 - SESSION 1 - #664
The Extremity Trauma and Amputation Quality of Life Assessments: Developing a New Measurement System for Neuromusculoskeletal Trauma
Presentation Author: Dr. David Tulsky

MHSRS-19-02462 - SESSION 1 - #665
Clinical Evaluation of the Revolutionizing Prosthetics Modular Prosthetic Limb System for Upper Extremity Amputees: Phase III Take-home
Presentation Author: Ms. Emilia-Marie Jaskot

MHSRS-19-02476 - SESSION 1 - #666
Dietary Magnesium Intake and Associated Risk for Type 2 Diabetes Mellitus in a Military Population with Traumatic Lower Traumatic Limb Loss
Presentation Author: MAJ Joetta Khan

MHSRS-19-02500 - SESSION 1 - #667
Excess Body Fatness in a Traumatic Lower Limb Loss Population is associated with Increased Cardiovascular Disease Risk
Presentation Author: MAJ Joetta Khan

MHSRS-19-02515 - SESSION 1 - #668
Rehabilitation and Clinic Utilization of Patients with Combat Related Limb Loss in the U.S. Military Health System
Presentation Author: Mr. William Roddy
BLAST, BLUNT, ACCELERATIVE EXPOSURE IN TRAINING

MHSRS-19-00073 - SESSION 1 - #669
Identifying miRNA Biomarkers For Repeated Low-level Blast-induced Traumatic Brain Injury
Presentation Author: Dr. Lanier Heyburn

MHSRS-19-00464 - SESSION 1 - #670
Validation Procedures and Experimental Testing to Simulate Behind Armor Blunt Trauma Injuries using a Finite Element Model
Presentation Author: Mrs. Madelyn Eaton

MHSRS-19-00815 - SESSION 1 - #671
Correlation of Pathophysiological Markers in the Brain with Cumulative Effects of Repeated Blast
Presentation Author: Dr. Sujith Sajja

MHSRS-19-00902 - SESSION 1 - #672
Explosive Breaching Career Personnel: Auditory, Ocular Motor, and Vestibular System Assessments
Presentation Author: MAJ Brian Johnson

MHSRS-19-00908 - SESSION 1 - #673
Examining Headache and Postural Control Variability in Serial Blast-related Training Exposure
Presentation Author: Dr. Walter Carr

MHSRS-19-01123 - SESSION 1 - #674
The Neurological Impact of Overpressure Exposure: An Examination of Major Blast Exposure and Chronic, Low-level Overpressure Exposure using Post-deployment Health Assessment Records
Presentation Author: Dr. Jennifer Belding

MHSRS-19-01455 - SESSION 1 - #675
A Prediction Model of Military Combat and Training Exposures on VA Service Connected Disability: A CENC Study
Presentation Author: Dr. Clara Dismuke-Greer

MHSRS-19-01478 - SESSION 1 - #676
Advanced Total Body Model for Impact Injury Analysis
Presentation Author: Dr. Laurel Ng

MHSRS-19-01609 - SESSION 1 - #677
High Energy Head Impacts Measured in Humans Impair Readiness and Performance
Presentation Author: Dr. Adam Bartsch

MHSRS-19-01738 - SESSION 1 - #678
A Computational Study of the Biomechanical Response of the Human Lower Extremity Subjected to High Rate Vertical Accelerative Loading
Presentation Author: Ms. Jazmine Aira

MHSRS-19-01797 - SESSION 1 - #679
Investigating Training Associated Blast Pathology in Service Members Exposed to Repeated Sub-concussive Blast Events: Design and Implementation of the Invicta Study
Presentation Author: CDR Josh Duckworth
MHSRS-19-01898 - SESSION 1 - #680
Association between Concussion Education Sources and Concussion Disclosure Knowledge, Attitudes, Perceived Norms, Intentions, and Behaviors among First-year Service Academy Cadets: Implications for Concussion Education and Training
Presentation Author: Dr. Johna Register-Mihalik

MHSRS-19-01925 - SESSION 1 - #681
Firsthand Accounts of Potential Concussive Events Experienced by Post-911 Service Members and Veterans: A Chronic Effects of Neurotrauma Consortium Study
Presentation Author: Mr. Jonathan Yee

MHSRS-19-02152 - SESSION 1 - #682
Superficial Ballistic Trauma and Subjective Pain Experienced During Force-on-Force Training with Simulated Ammunition
Presentation Author: Lt Adam Biggs

MHSRS-19-02156 - SESSION 1 - #683
Investigation of Cranial Strains and Strain Rates in a 3D Human Head Model during the Helmet Military Specification Test
Presentation Author: Dr. Chad Hovey

MHSRS-19-02242 - SESSION 1 - #684
Vertebral Level-specific Neck Forces and Moments under G-X Accelerative Loading
Presentation Author: Mr. John Humm

MHSRS-19-02280 - SESSION 1 - #685
A Qualitative Study of Concussion Reporting at the U.S. Air Force Academy
Presentation Author: Dr. Christopher D’Lauro

MHSRS-19-02303 - SESSION 1 - #686
Interdisciplinary Efforts to Test and Implement Perceived Cost-based Concussion Interventions at the US Air Force Academy
Presentation Author: Dr. Christopher D’Lauro

MHSRS-19-02387 - SESSION 1 - #687
Peripheral Markers of Operational Blast Exposure
Presentation Author: Dr. Fatemeh Haghighi

MHSRS-19-02402 - SESSION 1 - #688
Developing Multiscale Computational Models for Traumatic Brain Injury Prediction
Presentation Author: Mr. Connor Bradfield

MHSRS-19-02407 - SESSION 1 - #689
Optimization of Structural Imaging on Chinchilla Lanigera as a Pre-clinical Model of Blast TBI.
Presentation Author: Dr. Vijaya Prakash Krishnan Muthaiah

MHSRS-19-02468 - SESSION 1 - #690
Interview and Biosample Analysis of Blast Overpressure Exposure among Service Members
Presentation Author: Dr. Michael Egnoto
MHSRS-19-02472 - SESSION 1 - #691
The Characterization of Flashbangs used by Law Enforcement and Military Personnel
Presentation Author: Dr. Michael Egnoto

MHSRS-19-02479 - SESSION 1 - #692
Acoustic Exposure Comparison on Instructors that are Experienced During Heavy Wall Explosive Breaching, Ballistic Breaching, and Grenades Training
Presentation Author: Dr. Michael Egnoto

MHSRS-19-02508 - SESSION 1 - #693
Design of Helmet Liner for Mitigating Blast Induced Traumatic Brain Injury
Presentation Author: Mr. Xiancheng Yu

ANCILLARY TOPICS

PRECISION MEDICINE FOR ACUTE AND TRAUMA AND CRITICAL CARE

MHSRS-19-00710 - SESSION 1 - #694
A Random Forest Model to Predict Bacteremia in Combat Trauma Patients
Presentation Author: Dr. Vivek Khatri

MHSRS-19-00847 - SESSION 1 - #695
Stimulating Mitochondrial Energetics Resuscitates Life-threatening Shock Syndromes
Presentation Author: Dr. Charles McCall

MHSRS-19-01066 - SESSION 1 - #696
Infusensor: A “Smart” Catheter and Platform for Dynamic, “Closed-loop” Sedation and Anesthesia
Presentation Author: Dr. Edward Chaum

MHSRS-19-01104 - SESSION 1 - #697
Continuing Towards Early Prediction of Vasospasm and Mortality Following Severe Traumatic Brain Injury
Presentation Author: Dr. Vivek Khatri

MHSRS-19-01131 - SESSION 1 - #698
Predicting Severe Sepsis in Surgical ICU Patients
Presentation Author: Dr. Seth Schobel

MHSRS-19-01287 - SESSION 1 - #699
Predicting Acute Respiratory Distress Syndrome in Surgical ICU Patients
Presentation Author: Dr. Seth Schobel

MHSRS-19-01294 - SESSION 1 - #700
Trauma Patients Wound Infection and the Relations with Injury and Clinical Progress
Presentation Author: Dr. Mingqing Song

MHSRS-19-01353 - SESSION 1 - #701
Joint Trauma System Developing a Robust Performance Improvement Model to Optimize Trauma Outcomes
Presentation Author: Dr. Kimberly Smith
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**MHSRS-19-01412 - SESSION 1 - #702**
Serum Metabolites Linked to Mitochondrial Dysfunction and Mortality in a Combat-relevant Polytrauma Porcine Model
Presentation Author: Dr. Manjula Darshi

**MHSRS-19-01503 - SESSION 1 - #703**
3D Bioprinted Bone Tissue Construct for Craniomaxillofacial Reconstruction
Presentation Author: Dr. Sang Jin Lee

**MHSRS-19-01504 - SESSION 1 - #704**
Tissue-engineered Small Diameter Blood Vessels for Limb Reconstruction
Presentation Author: Dr. Sang Jin Lee

**MHSRS-19-01506 - SESSION 1 - #705**
3D Bioprinted Human Skeletal Muscle Tissue Constructs for Restoration of Muscle Function
Presentation Author: Dr. Sang Jin Lee

**MHSRS-19-01521 - SESSION 1 - #706**
Estimating the Development of Heterotopic Ossification in Combat-related Extremity Trauma
Presentation Author: Dr. Felipe Lisboa

**MHSRS-19-01614 - SESSION 1 - #707**
A Novel Therapy to Improve Cognitive Recovery Following Moderate/Severe Traumatic Brain Injury
Presentation Author: Mr. Paco Herson

**MHSRS-19-01615 - SESSION 1 - #708**
Surgical Critical Care Initiative: Consensus-driven Harmonization and Standardization of Biorepository Terminology
Presentation Author: Ms. Mary-Beth Joshi

**MHSRS-19-01669 - SESSION 1 - #709**
Surgical Critical Care Initiative: Maintenance of Good Clinical Laboratory Practices through Proficiency Testing of Peripheral Blood Mononuclear Cells
Presentation Author: Ms. Robyn Osborne

**MHSRS-19-01698 - SESSION 1 - #710**
Woundx-SC2i Program for Tissue and Data Acquisition: Supporting Advances in Precision Medicine for Wound Closure in the Military and Civilian Sectors
Presentation Author: Dr. Neal Iwakoshi

**MHSRS-19-01754 - SESSION 1 - #711**
Development of a Universal, Chemically Defined, and Xeno-free Human Primary Cell Growth and Maintenance Culture Medium for Regenerative Medicine Technologies
Presentation Author: Dr. Ronald Nelson

**MHSRS-19-01883 - SESSION 1 - #712**
Patient-specific Immunotypes Correspond to Trauma Tolerance and Trauma Sensitivity in Multiple Injured Patients
Presentation Author: Dr. Todd McKinley
MHSRS-19-01947 - SESSION 1 - #713
Precision Medicine Research to Meet Military Trauma Care Requirements
Presentation Author: Dr. Debra Niemeyer

MHSRS-19-02045 - SESSION 1 - #714
Rapid, Non-invasive, Accurate Assessment of Cardiovascular Function for Screening, Acute and Chronic Care: Application of Avicena’s Vivio to Military Medicine
Presentation Author: Dr. Marie Csete

MHSRS-19-02078 - SESSION 1 - #715
Light-activated Sealing to Improve Outcomes Following Penetrating Bowel Trauma
Presentation Author: Dr. Robert Redmond

MHSRS-19-02216 - SESSION 1 - #716
Identification of Novel Agents which Inhibit Collagen Secretion using High-throughput Drug Screening against Keloid Fibroblast
Presentation Author: Dr. Yuanyuan Kang

MHSRS-19-02221 - SESSION 1 - #717
Combat Medic Testing of a Novel Monitoring Capability for Early Detection of Hemorrhage
Presentation Author: Ms. Natalie Koons

MHSRS-19-02271 - SESSION 1 - #718
Inhibition of DPP4 Suppresses Collagen Synthesis in Keloids
Presentation Author: Dr. Yuanyuan Kang

MHSRS-19-02308 - SESSION 1 - #719
Delayed Custom Synthetic Implant Cranioplasty for Host National Patients: Retrospective Case Series
Presentation Author: Dr. Peter Liacouras

MHSRS-19-02338 - SESSION 1 - #720
CMX-2043 Suppresses Mitochondrial Stress Signaling and Improves Outcomes after Focal Traumatic Brain Injury in a Large Animal Preclinical Trial
Presentation Author: Dr. Meagan McManus

MHSRS-19-02347 - SESSION 1 - #721
Understanding Disease Heterogeneity through Machine Learning Applications: High-resolution Spatial Metabolomics and Integrated Multi-omic Analysis
Presentation Author: Dr. Daniel Montemayor

MHSRS-19-02430 - SESSION 1 - #722
Apollo Lung Cancer Moonshot: Comprehensive Proteogenomic Analytics for Classification and Predicting Patient Outcome
Presentation Author: Dr. Anthony Soltis

MHSRS-19-02450 - SESSION 1 - #723
TLR4/MyD88 Signaling Pathway Mediates Peripheral Tissue Injury Induced Ileus and Systemic Inflammation
Presentation Author: Dr. Anthony Bauer
WHAT’S NEW IN GLOBAL HEALTH ENGAGEMENT RESEARCH

MHSRS-19-00084 - SESSION 1 - #724
Description of Trauma among French Service Members in the Department of Defense Trauma Registry: Understanding the Nature of Trauma and the Care Provided
Presentation Author: Dr. Marc Schweizer

MHSRS-19-00220 - SESSION 1 - #725
Previous Medical Exposure in the Israeli Air Force as a Motivator for a Medical Career
Presentation Author: Dr. Uri Manor

MHSRS-19-00345 - SESSION 1 - #726
Measuring the Strategic Impact of Tactical Programs: A Quantitative Evaluation of DHAPP in Sub-Saharan Africa
Presentation Author: Dr. Solomon Major

MHSRS-19-00416 - SESSION 1 - #727
Value and Purpose in Global Health Engagement Research: Research Futures and the USU School of Medicine’s New Division of Global Public Health
Presentation Author: LTC Eric Garges

MHSRS-19-00469 - SESSION 1 - #728
Carcinoma Ex-pleomorphic Adenoma Diagnosis during Global Health Engagement Operations – A Case Report and Review of the Literature
Presentation Author: LCDR Art Ambrosio

MHSRS-19-00491 - SESSION 1 - #729
Presentation Author: CAPT Lisa Braun

MHSRS-19-00492 - SESSION 1 - #730
Analysis of an Electronic Medical Record Platform for Military Humanitarian Assistance and Disaster Response Operations
Presentation Author: CAPT Gregory Gorman

MHSRS-19-00684 - SESSION 1 - #731
The African Cohort Study: A MIL-MIL and MIL-CIV Collaboration Evaluating HIV Outcomes in Resource Limited Settings
Presentation Author: LTC Julie Ake

MHSRS-19-00728 - SESSION 1 - #732
Alcohol Use and its Association with Sexual Risk Behaviors in the Armed Forces of the Republic of the Congo
Presentation Author: Dr. Bonnie Tran

MHSRS-19-00748 - SESSION 1 - #733
Shaping the Future of the Department of Defense Infectious Disease Surveillance Enterprise in Support of the U.S. Combatant Commands
Presentation Author: LTC Sueann Ramsey
MHSRS-19-00755 - SESSION 1 - #734
Developing and Deploying Ideal Teams for Optimal Global Health Engagement Outcomes
Presentation Author: Col Edwin Burkett

MHSRS-19-01037 - SESSION 1 - #735
Big Data Framework for Predicting Impact of Disasters on Human Health
Presentation Author: Dr. Kajal Claypool

MHSRS-19-01074 - SESSION 1 - #736
Leptospirosis and Rickettsial Diseases Sero-conversion Surveillance among U.S. Military Personnel in Honduras
Presentation Author: Dr. Chien-Chung Chao

MHSRS-19-01226 - SESSION 1 - #737
An Update on the Development of Novel Anthelmintic Medications
Presentation Author: Dr. Belinda Jackson-Thompson

MHSRS-19-01265 - SESSION 1 - #738
Expanded Fever Surveillance among Provincial Hospitals in the Lao People’s Democratic Republic
Presentation Author: Lt Jose Garcia

MHSRS-19-01282 - SESSION 1 - #739
Bundeswehr Medical Service Research Program - Overview
Presentation Author: COL Sabine Sauer

MHSRS-19-01311 - SESSION 1 - #740
Patterns of Pediatric Dental Care during a U.S. Navy Humanitarian Aid Provided to Populations Stressed by Venezuelan and Central American Migration
Presentation Author: Lt Courtney Clark

MHSRS-19-01321 - SESSION 1 - #741
Pediatric Outpatient Care during U.S. Humanitarian Assistance Operations in Response to Venezuelan and Central American Migration
Presentation Author: CAPT Greg Gorman

MHSRS-19-01635 - SESSION 1 - #742
Surveillance for Antibiotic Resistance in Eskape Pathogens from Latin America
Presentation Author: Mr. Paul Rios

MHSRS-19-01674 - SESSION 1 - #743
Assessing Incidence of Tropical Diseases in Deploying Peruvian Military Personnel
Presentation Author: Mr. Crystyan Siles

MHSRS-19-01788 - SESSION 1 - #744
Building Disease Surveillance Capacity in the Peruvian Navy with Mobile Data Collection and Enhanced Analytics
Presentation Author: Ms. Shraddha Patel

MHSRS-19-01838 - SESSION 1 - #745
Optimization of Medical Site Performance during USNS Comfort’s Operation Enduring Promise 2018
Presentation Author: LCDR Paul Roszko
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

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MHSRS-19-01995 - SESSION 1 - #746
Improving Infectious Disease Modeling and Prediction through Global Health Engagement
Presentation Author: CPT Suzanne Mate

MHSRS-19-02103 - SESSION 1 - #747
Development of DoD Laboratory Capability in Next Generation Sequencing and Bioinformatics for Infectious Disease Research and Public Health
Presentation Author: Dr. Irina Maljkovic Berry

MHSRS-19-02205 - SESSION 1 - #748
Detergent-enhanced Lamp for Detecting African Trypanosomes in Clinical CSF Samples
Presentation Author: Dr. Dennis Grab

MHSRS-19-02357 - SESSION 1 - #749
Leveraging Whole Genome Sequencing for Global Surveillance of Transferable Carbapenem Resistance
Presentation Author: Dr. Patrick McGann

MHSRS-19-02503 - SESSION 1 - #750
Teaching POCUS in Austere Environments – A Tool for Immediate Impact in Patient Care and Capacity Building
Presentation Author: Lt John Sullivan

MHSRS-19-02531 - SESSION 1 - #751
Battlefield Trauma Data Tool Development, Collection and Analysis for the Afghanistan National Army
Presentation Author: LTC Russell Giese

MHSRS-19-02544 - SESSION 1 - #752
Battlefield Trauma Data Development, Collection and Analysis for the Afghanistan National Army, 203rd Corps
Presentation Author: LTC Russell Giese
TOPICS IN RESEARCH SUPPORT, COMPLIANCE, AND ETHICS

MHSRS-19-00351 - SESSION 1 - #753
Eliminating Threats to Scientific Validity: Identifying Careless and Insufficient Effort Responders from Self-report Databases
Presentation Author: Mr. Michael Andrews

MHSRS-19-00894 - SESSION 1 - #754
Role-out of the DoD-mandated eIRB Platform
Presentation Author: Dr. Christine Carter

MHSRS-19-01048 - SESSION 1 - #755
Fostering Readiness Investigation in Graduate Medical Education
Presentation Author: Ms. Jessica Cromheecke

MHSRS-19-01687 - SESSION 1 - #756
Motivations for Participation in Clinical Research: A Survey
Presentation Author: 2LT Nicholas Dulin

MHSRS-19-02049 - SESSION 1 - #757
Human Research Protection Program Compliance Trends in the Department of the Navy
Presentation Author: Mrs. Chidima Ioanou

MHSRS-19-02235 - SESSION 1 - #758
Department of Defense Small Molecule Antibiotic Development Effort Coordination – The Integrated Product Team Approach
Presentation Author: Dr. Jason Rohde

MHSRS-19-02282 - SESSION 1 - #759
Exploring the 99MDG Regional Clinical Investigation Program
Presentation Author: Ms. Jill Clark
Poster Session 2
INNOVATIVE APPROACHES TO PREVENT, DIAGNOSE AND TREAT SEPSIS DURING PROLONGED FIELD CARE

**MHSRS-19-00165 - SESSION 2 - #001**

*Saving Lives by Sensing Sepsis: Tissue-integrating Lactate/oxygen Sensor for Continuous Wireless Monitoring of Sepsis Onset, Recovery, and Reoccurrence*

Presentation Author: Dr. Elizabeth Gadsby

**MHSRS-19-00643 - SESSION 2 - #002**

*An Analysis of the Effectiveness of High Level Disinfection for Surgical Instruments Used By DoD Austere Surgical Teams*

Presentation Author: Col Mark Ervin

**MHSRS-19-00654 - SESSION 2 - #003**

*Hemoperfusion to Protect the Endothelium during Sepsis: Removal of Sepsis Mediators and Pathogens*

Presentation Author: Dr. Keith McCrea

**MHSRS-19-00859 - SESSION 2 - #004**

*Metabolite Panel to Diagnose Sepsis Days before the Standard Clinical Diagnosis: A Longitudinal Study in Burn Patients*

Presentation Author: Mr. Nabarun Chakraborty

**MHSRS-19-01348 - SESSION 2 - #005**

*Metabolite Panel to Diagnose Sepsis Days before the Standard Clinical Diagnosis: A Longitudinal Study in Burn Patients*

Presentation Author: Mr. Ross Campbell

**MHSRS-19-00873 - SESSION 2 - #006**

*Monoclonal Antibody-mediated Inhibition of Activated FXII Reduces Inflammation, Coagulopathy and Death in Primates Challenged with Staphylococcus Aureus*

Presentation Author: Dr. Sven Olson

**MHSRS-19-01931 - SESSION 2 - #007**

*Portable, Handheld Device for Rapid Sepsis and Infection Diagnosis in the Field*

Presentation Author: Dr. Alan Fine

**MHSRS-19-01938 - SESSION 2 - #008**

*Evaluation of Sepsis Using Compensatory Reserve Measurement*

Presentation Author: CPT Avishai Tsur
MHSRS-19-02201 - SESSION 2 - #009
Improving Soldier Performance, Readiness and Care through Application of Mass Spectrometry Technologies
Presentation Author: Dr. Jon Jacobs

MHSRS-19-02311 - SESSION 2 - #010
Sepsis in Austere Environments: Derivation of Clinically Relevant Patient Subgroups From Locally Available Data
Presentation Author: Dr. Deborah Striegel

MHSRS-19-02351 - SESSION 2 - #011
Identifying Protein Expression Phenotypes in Sepsis Patients from Austere Settings Using Topological Data Analysis
Presentation Author: Dr. Joost Brandsma

MHSRS-19-02496 - SESSION 2 - #012
Diagnosis of Sepsis Using the FcMBL ELISA
Presentation Author: Dr. Michael Super

ACUTE LIFESAVING TRAUMA INTERVENTIONS

MHSRS-19-00224 - POSTER SESSION 2 - #013
Seeing is Believing—Evaluation of Life Saving Surgical Procedures under Black Out Conditions
Presentation Author: CPT Daniel Lammers

MHSRS-19-00372 - POSTER SESSION 2 - #014
Outcomes of Casualties without Airway Trauma Undergoing Prehospital Airway Interventions: A Department of Defense Trauma Registry Study
Presentation Author: MAJ Steven Schauer

MHSRS-19-00420 - POSTER SESSION 2 - #015
A Consensus-based Recommendation for Oxygenation Targets in Critically Injured Patients
Presentation Author: MAJ Steven Schauer

MHSRS-19-00421 - POSTER SESSION 2 - #016
An Analysis of the Pediatric Casualties Undergoing Massive Transfusion in Iraq and Afghanistan
Presentation Author: MAJ Steven Schauer

MHSRS-19-00422 - POSTER SESSION 2 - #017
Incidence of Hyperoxia in Combat Wounded in Iraq and Afghanistan: A Potential Opportunity for Oxygen Conservation
Presentation Author: MAJ Steven Schauer

MHSRS-19-00898 - POSTER SESSION 2 - #018
Optimal Initial Positioning of Chest Tubes to Prevent Retained Hemothorax Using a Novel Steerable Chest Tube with Extendable Infusion Canula
Presentation Author: Dr. John Fortune

MHSRS-19-00972 - POSTER SESSION 2 - #019
Improving the Military–Civilian Taxonomy and Process to Determine Prehospital Injury Survivability
Presentation Author: COL Brian Eastridge
MHSRS-19-01014 - POSTER SESSION 2 - #020
Hemodynamic Effects of Acute Over-ventilation in a Swine Hemorrhage Model
Presentation Author: Dr. Megan Blackburn

MHSRS-19-01090 - POSTER SESSION 2 - #021
Stimulating Mitochondrial Energetics Reverses Shock Syndromes
Presentation Author: Dr. Charles McCall

MHSRS-19-01159 - POSTER SESSION 2 - #022
Emergency Department Intubation Success with Succinylcholine versus Rocuronium: A National Emergency Airway Registry Study
Presentation Author: Lt Col Joseph Maddry

MHSRS-19-01166 - POSTER SESSION 2 - #023
The Arai Auto-injector Platform – Setting a New Standard of Care at the Point Of Need and in Prolonged Field Care
Presentation Author: Mr. Amir Genosar

MHSRS-19-01174 - POSTER SESSION 2 - #024
Compact Infusion Pump for the Delivery of Drugs, Fluids and Blood at the Point-of-Injury, and During En-route Care, Prolonged Field Care and Forward Surgical Care
Presentation Author: Dr. Stephane Bibian

MHSRS-19-01198 - POSTER SESSION 2 - #025
Wound Trauma Aggravates Radiation-induced Brain Hemorrhage that is Mitigated by Ghrelin Therapy with Pegylated G-CSF
Presentation Author: Dr. Juliann Kiang

MHSRS-19-01201 - POSTER SESSION 2 - #026
Creating Intravenous Oxygen
Presentation Author: Dr. Brian Polizzotti

MHSRS-19-01218 - POSTER SESSION 2 - #027
Ounces Make Pounds, Pounds Make Pain–An Assessment of the Medic Aid Bag
Presentation Author: Ms. Nguvan Uhaa

MHSRS-19-01249 - POSTER SESSION 2 - #028
Training Simulator for Mechanical Circulatory Support for Extra Corporeal Membrane Oxygenation in Adult Patients
Presentation Author: Dr. Pramod Chembrammel

MHSRS-19-01288 - POSTER SESSION 2 - #029
Successful Transplants of Whole Functioning Mouse Hearts After 24-hour Subzero Storage Using Biomimetic Ice-interactive Polymers
Presentation Author: Dr. Xiaoxi Wei

MHSRS-19-01470 - POSTER SESSION 2 - #030
Chest Decompression for Chest Injuries: What Can Be Learned from Fluctuating Trends in the Past Decade?
Presentation Author: CPT Avishai Tsur
MHSRS-19-01474 - POSTER SESSION 2 - #031
Time Trends in Rate and Quality of Prehospital Documentation in the Israel Defense Forces Trauma Registry, 2010-2018
Presentation Author: CPT Avishai Tsur

MHSRS-19-01483 - POSTER SESSION 2 - #032
The Use of Different Types of Supraglottic Airway Devices by Medics on a Manikin Under Tactical Conditions: A Proof of Concept Trial
Presentation Author: CDR Christoph Jaenig

MHSRS-19-01590 - POSTER SESSION 2 - #033
A Descriptive Study of U.S. Special Operations Command Fatalities, 2001-2018
Presentation Author: Dr. Russ Kotwal

MHSRS-19-01597 - POSTER SESSION 2 - #034
Injury Severity Validation with Bronchoalveolar Lavage Cell Analysis: Expression of HMGB1 and TLR4 after Smoke Inhalation Injury and Burns Treated with Extra Corporeal Life Support
Presentation Author: Dr. Andriy Batchinsky

MHSRS-19-01605 - POSTER SESSION 2 - #035
Local Expression of HMGB1, TLR4, AQ5 and TGFβ1 in ARDS Due to Smoke Inhalation and Burns in Swine Treated with Minimally Invasive Extracorporeal Life Support
Presentation Author: Dr. Andriy Batchinsky

MHSRS-19-01606 - POSTER SESSION 2 - #036
Systemic Expression of Damage Associate Molecule Pattern in ARDS Due to Smoke Inhalation and Burns in Swine Treated with Extracorporeal Life Support
Presentation Author: Dr. Andriy Batchinsky

MHSRS-19-01612 - POSTER SESSION 2 - #037
Effects of Humerus Intraosseous Administration of Epinephrine in a Normovolemic and Hypovolemic Cardiac Arrest Model
Presentation Author: Col Arthur Johnson

MHSRS-19-01625 - POSTER SESSION 2 - #038
Investigation of Intraosseous, Endotracheal, and Intravenous Administration of Epinephrine in a Hypovolemic, Cardiac Arrest Swine Model
Presentation Author: Prof. Voicu Popescu

MHSRS-19-01661 - POSTER SESSION 2 - #039
Predicting Need for Trauma Center Admission Emergency Intubation: Comparison of Field Glasgow Coma Scale with In-flight Patient Vital Signs
Presentation Author: Dr. Peter Hu

MHSRS-19-01693 - POSTER SESSION 2 - #040
Prehospital Continuous Vital Signs Data Analysis Outperforms Lactate for the Prediction of Lifesaving Interventions in Patients with Traumatic Shock
Presentation Author: Dr. Peter Hu
MHSRS-19-01879 - POSTER SESSION 2 - #041
Introducing Tattoos to Advanced Trauma Life Support: A Process Improvement Initiative
Presentation Author: Dr. Luis Llerena

MHSRS-19-02169 - POSTER SESSION 2 - #042
See-What-I-Do: Increasing Mentor and Trainee Sense of Co-presence in Trauma Surgeries with the Star Platform
Presentation Author: CDR Thomas Douglas

MHSRS-19-02403 - POSTER SESSION 2 - #043
A Porcine Model of Combined Burn and Traumatic Brain Injury
Presentation Author: Capt Marguerite Spruce

MHSRS-19-02626 - POSTER SESSION 2 - #044
Novel Endotracheal Tube Design Utilizing Novel Architectured Materials and Feedback Sensors
Presentation Author: Mr. David Berard

ACUTE LUNG INJURY IN TRAUMA AND CRITICAL ILLNESS

MHSRS-19-00115 - POSTER SESSION 2 - #045
Ventilator-induced Lung Injury: A Unifying Hypothesis
Presentation Author: Mr. Gary Nieman

MHSRS-19-00278 - POSTER SESSION 2 - #046
Understanding the Time Controlled Adaptive Ventilation Protocol for Acute Lung Injury
Presentation Author: Mr. Gary Nieman

MHSRS-19-00803 - POSTER SESSION 2 - #047
Metabolic and Bioenergetic Maladaptation in Non-resolving Lung Fibrosis
Presentation Author: Dr. Jaroslaw Zmijewski

MHSRS-19-00923 - POSTER SESSION 2 - #048
Addressing Post Intensive Care Syndrome
Presentation Author: Dr. Samuel Brown

MHSRS-19-00973 - POSTER SESSION 2 - #049
Effects of Acinar Interdependence in a Computational Model of the Acutely Injured Lung
Presentation Author: Dr. David Kaczka

MHSRS-19-01043 - POSTER SESSION 2 - #050
Lung Sealing and Hemostasis without Compression: Evaluation of Visco-liquid Polyhedral Oligomeric Silsesquioxane in a Swine Model
Presentation Author: Dr. Drew Hildebrandt

MHSRS-19-01236 - POSTER SESSION 2 - #051
Heparin-free ECLS: Developing New Material Solutions for Next Generation Extracorporeal Life Support
Presentation Author: Dr. Teryn Roberts
MHSRS-19-01251 - POSTER SESSION 2 - #052
Inhalation of a RNA Biodrug Targeting Extracellular Histones Protects from Acute Lung Injury
Presentation Author: Dr. Francis Miller

MHSRS-19-01264 - POSTER SESSION 2 - #053
Tissue Resident Alveolar Macrophages Have a Distinct Metabolism Compared to Recruited Monocyte Derived Macrophages and Do Not Undergo Glycolytic Reprogramming During Activation
Presentation Author: Dr. Gokhan Mutlu

MHSRS-19-01293 - POSTER SESSION 2 - #054
An in-vitro Model of the Alveolar-capillary Barrier for Screening Potential Therapeutics for Acute Respiratory Distress Syndrome
Presentation Author: Ms. Lucero Alvarado

MHSRS-19-01390 - POSTER SESSION 2 - #055
Developing MG53 as a Novel Protein Therapeutic for Acute Lung Injury
Presentation Author: Dr. Jianjie Ma

MHSRS-19-01779 - POSTER SESSION 2 - #056
Mysterious Presentation of Pediatric Respiratory Failure and Multilobar Atelectasis
Presentation Author: 2LT Gerrit Davis

MHSRS-19-01837 - POSTER SESSION 2 - #057
Nanoparticle-facilitated Inhalational Delivery of Antisense Erythropoietin Receptor cDNA Mitigates Murine Acute Lung Injury
Presentation Author: Dr. Connie Hsia

MHSRS-19-01847 - POSTER SESSION 2 - #058
Reflactance and Spectralfim Imaging in the Upper Airways
Presentation Author: Dr. Gianluca Turcatel

MHSRS-19-01895 - POSTER SESSION 2 - #059
4MDM is a Potential Small Molecule Therapeutic Agent for Acute Lung Injury that Modulates the Enzyme Kinetic Mechanism of Pro-gly-pro Hydrolysis by the Leukotriene A4 Hydrolase Enzyme
Presentation Author: Dr. Mikell Paige

MHSRS-19-01926 - POSTER SESSION 2 - #060
Handheld Ultrasound Training and Use for Sepsis in an Austere Environment
Presentation Author: CAPT Dennis Faix

MHSRS-19-02301 - POSTER SESSION 2 - #061
Injury and Biomarkers from Pigs Following Isolated Open-field Blast Exposure Depend on Ballistic Protection Level
Presentation Author: Lt Col Nicolas Prat

MHSRS-19-02504 - POSTER SESSION 2 - #062
Heme Released After Trauma Increases Susceptibility to Bacterial Pneumonia
Presentation Author: Ms. Ghee Rye Lee
ADVANCES IN BURN WOUND MANAGEMENT DURING PROLONGED CARE

MHSRS-19-00067 - POSTER SESSION 2 - #064
Mitigating Burn Injury Severity and Infection by Using a Novel Dressing that Targets Oxidative Stress Pathways
Presentation Author: Dr. Jahnabi Roy

MHSRS-19-00131 - POSTER SESSION 2 - #065
A Plasma-alginate Composite Gel Provides Improved Mechanical Support for Stem Cell Growth and Delivery
Presentation Author: Dr. Nicholas Clay

MHSRS-19-00317 - POSTER SESSION 2 - #066
Non-contact Tissue Viability Assessment
Presentation Author: Mr. Michele Pierro

MHSRS-19-00455 - POSTER SESSION 2 - #067
Myeloid-derived Suppressor Cells and the Immnoinflammatory Response to Burn Injury
Presentation Author: Dr. Martin Schwacha

MHSRS-19-00493 - POSTER SESSION 2 - #068
Hypercoagulation and Hypermetabolism in Severely Burned Adults
Presentation Author: Dr. Wenjun Martini

MHSRS-19-00670 - POSTER SESSION 2 - #069
Cerium Nitrate Stabilizes Burn Eschars and Reduces Circulating Damage-associated Molecular Pattern Molecules in a Rat Scald Burn Model
Presentation Author: Dr. Liwu Qian

MHSRS-19-00819 - POSTER SESSION 2 - #070
Improved Blood Flow Assessment in Evaluating Burn Wounds Using Multimodal Wide-field Optical Imaging
Presentation Author: Dr. Ben Lertsakdadet

MHSRS-19-00971 - POSTER SESSION 2 - #071
Fluorescence Biomodulation for the Management of Burn Injuries: Acting at a Cellular Level to Control Inflammation and Improve Healing
Presentation Author: Dr. Lise Hebert

MHSRS-19-01034 - POSTER SESSION 2 - #072
Breed Differences in a Porcine Burn Progression Model
Presentation Author: Dr. Christine Kowalczewski
MHSRS-19-01144 - POSTER SESSION 2 - #073
Assessing Polarization-sensitive Optical Coherence Tomography as a Tool to Volumetrically Map Collagen Structure in Partial Thickness Burns
Presentation Author: Dr. Nestor Uribe-Patarroyo

MHSRS-19-01278 - POSTER SESSION 2 - #074
Fibronectin-derived Peptides cP12 and cNP8 Enhance PDGF-BB-stimulated Human Dermal Fibroblast Migration in-vitro and Granulation Tissue Formation in-vivo
Presentation Author: Dr. Richard Clark

MHSRS-19-01285 - POSTER SESSION 2 - #075
Metabolomic Profiling of Burn Wounds Following Treatment with Different Skin Substitutes
Presentation Author: Dr. Hilmar Kjartansson

MHSRS-19-01555 - POSTER SESSION 2 - #076
In Situ Skin Regeneration Through Induction of Skin Allograft Chimerism by Mobilizing Host Endogenous Stem Cells
Presentation Author: Mr. Ali Ahmadi

MHSRS-19-01646 - POSTER SESSION 2 - #077
Using Pyoverdine for Rapid and Early Detection of Pseudomonas Aeruginosa in Burn Wounds
Presentation Author: Dr. Gregory Fernandes

MHSRS-19-01980 - POSTER SESSION 2 - #078
The Regulatory Environment for Tissue-engineered Products for the Treatment of Burns in the U.S.
Presentation Author: Ms. Kimberly Belsky

MHSRS-19-02051 - POSTER SESSION 2 - #079
Burncare: Virtual Tablet Training to Enhance Burn Injury Care and Treatment
Presentation Author: Dr. Austin Baird

MHSRS-19-02137 - POSTER SESSION 2 - #080
SP16 Drug, Phase II Ready for Treatment of Sepsis or Burn Wounds
Presentation Author: Dr. Cohava Gelber

MHSRS-19-02231 - POSTER SESSION 2 - #081
Ultra-wide Band RF Quantitative Diagnostics and Imaging of Burn Injuries
Presentation Author: Dr. Vladimir Makarenko

MHSRS-19-02253 - POSTER SESSION 2 - #082
Skin Function is Compromised with Biofilm Ceramidases
Presentation Author: Dr. Mithun Sinha

MHSRS-19-02255 - POSTER SESSION 2 - #083
Spatial Frequency Domain Imaging for Assessment of Burn Wound Debridement in a Porcine Model
Presentation Author: Dr. Gordon Kennedy
MHSRS-19-02319 - POSTER SESSION 2 - #084
Treatment of Full-thickness Wounds with Microfragmented Adipose Tissue and Plasma-based Hydrogels
Presentation Author: Dr. Shanmugasundaram Natesan

MHSRS-19-02348 - POSTER SESSION 2 - #085
Development of Nitric Oxide Releasing Bio-active Wound Dressing for Combat Burn Wound Infection Treatment
Presentation Author: Dr. Shanmugasundaram Natesan

MHSRS-19-02350 - POSTER SESSION 2 - #086
Reduction in Donor Skin Requirements for Full Thickness Burns After Fish Skin Treatment
Presentation Author: Dr. Randolph Stone

MHSRS-19-02573 - POSTER SESSION 2 - #087
Single-cell Sequencing Analysis of Interaction between Pathogen and CD8-positive T Cells in Burn Patients with Sepsis
Presentation Author: Ms. Chengxiao Chen

MHSRS-19-02595 - POSTER SESSION 2 - #088
Antimicrobial Efficacy Testing of a Novel Composite Dressing
Presentation Author: Dr. Mina Izadjoo

MHSRS-19-02603 - POSTER SESSION 2 - #089
A Robust Next Generation Technology for Full Thickness Skin Grafts
Presentation Author: Dr. Mina Izadjoo

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Presentation Author: Dr. Andriy Batchinsky

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Presentation Author: Dr. Andrew Mayer

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Presentation Author: Dr. Judson Edwards

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Presentation Author: MAJ Andrew Hall

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Presentation Author: Dr. Zhangsheng Yang

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Presentation Author: Dr. Pushpa Sharma

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Presentation Author: Dr. William Blakely

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Presentation Author: Dr. Thurl Harris

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Presentation Author: Dr. Marcus Kramer
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Presentation Author: Dr. Li Li

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Presentation Author: Ms. Natalie Wisniewski

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Presentation Author: Dr. Christopher Gonzales

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Presentation Author: Dr. Debbie Teodorescu

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Presentation Author: Dr. Mohsen Erfanzadeh

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Presentation Author: CPT Erick Thronson

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Presentation Author: Mr. Yusi Miao

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Presentation Author: Dr. Sridevi Nagaraja

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Presentation Author: Dr. Ivy Estabrooke

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Presentation Author: Dr. Hilmar Kjartansson

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Biodegradable Tissue Adhesives with Antibacterial Properties for Addressing Soft Tissue and Maxillofacial Trauma
Presentation Author: Dr. Abraham Joy

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Presentation Author: Dr. Ranjit Chatterjee
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Presentation Author: Dr. Sebastian Schaaf

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Presentation Author: Dr. Carlos Ordenana

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Presentation Author: Dr. Yulia Sapir-Lekhovitser

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Presentation Author: Dr. David Dean

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Presentation Author: Dr. David Dean

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Presentation Author: Mr. Steven Hansen

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Presentation Author: Dr. Dustin Williams
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Presentation Author: CPT Jacquelyn Messenger

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Presentation Author: LCDR Russell Wier

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Presentation Author: Dr. Megan Devine

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Presentation Author: Mr. Donald Belcher

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Presentation Author: Dr. Crystal Bolden-Rush
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Presentation Author: Dr. Xiaowu Wu

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Presentation Author: Dr. Daniel Darlington

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Presentation Author: Mr. Bjoern Reinhard

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Presentation Author: Dr. Cynthia Muller

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Blood Purification by Systemic Hemoabsorption Preferentially Augments Early Adaptive Reparative Responses in Muscle and Bone Wounds in an Open Fracture Model with Muscle Injury
Presentation Author: Dr. Todd McKinley

Assessing Blood Coagulation by Real-time Measurement of Viscosity Using Optical Coherence Elastography
Presentation Author: Mr. Jason Chen

Increased Oxygenation during Chronic Anemia with Pegylated Earthworm Hemoglobin
Presentation Author: Mr. Carlos Munoz

Fresh Frozen Plasma Attenuates Lung Injury in a Novel Model of Prolonged Hypotensive Resuscitation
Presentation Author: Dr. Amanda Chipman

Activation of the Complement Complex 5b-9 in Response to Physiologic Decompensation in a Pure Hemorrhage Model of Shock in Non-human Primates
Presentation Author: Dr. Madelaine Paredes

Comparison of Partial to Complete Aortic Balloon Occlusion on Survival and Indices of Shock in a Swine Model of Uncontrolled Splenic Hemorrhage with Delayed Resuscitation
Presentation Author: Dr. Michael Dubick

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Presentation Author: Dr. Prem Venugopal

Ethynyl Estradiol-3-sulfate Administration Following Severe Blood Loss Even in the Absence of Fluid Resuscitation Produces Salutary Effects on Cardiac Function: Restoration of Cell Survival Signaling, Downregulation of Apoptosis and Autophagy
Presentation Author: Dr. Irshad Chaudry

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Presentation Author: Mr. William Baker
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Presentation Author: Ms. Lynn Hallard

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Presentation Author: Ms. Irasema Terrazas

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Presentation Author: Dr. John Quan Nguyen

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A Single Analgesic Dose of a NSAID Causes Organ Failure on Rabbits Following Hemorrhagic Shock and Hypotensive Resuscitation
Presentation Author: Mr. Rodolfo De Guzman

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Presentation Author: Dr. Henry Peng

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Presentation Author: Dr. Jiepei Zhu

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Presentation Author: CDR Dana Onifer

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Presentation Author: Capt Marguerite Spruce

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Presentation Author: Dr. Wenjun Martini

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Presentation Author: Mr. Alexander Hooke

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Presentation Author: CPT Woo Do

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Presentation Author: LCDR Douglas Pokorny

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Presentation Author: Dr. Victor Convertino

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Presentation Author: Dr. Carmen Spalding

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Presentation Author: Capt Carl Beyer

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Presentation Author: Dr. Ivo Torres Filho

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Presentation Author: Dr. Ivo Torres Filho

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Tissue Hemodynamics Monitored by Noninvasive Diffuse Optical Spectroscopy in Swine during Hemorrhage, Blood Transfusion, and REBOA
Presentation Author: Mr. Jesse Lam

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Presentation Author: Mr. Theo Thomas

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Presentation Author: Dr. Yansong Li

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Presentation Author: Ms. Piyush Modak

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Presentation Author: Dr. Alexander Penn

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Presentation Author: CPT Avishai Tsur

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Presentation Author: CPT Avishai Tsur

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Presentation Author: Mr. George Philipopoulos

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Presentation Author: Dr. Scott Ferguson

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Presentation Author: Mr. Brendan McCracken

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Presentation Author: CPL Amber Voelker

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Presentation Author: Dr. Kris Rangan

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Presentation Author: Mrs. Elissa Flaumenhaft

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MHSRS-19-02011 - SESSION 2 - #241
Comparison of Fresh-made vs Lyophilized Synthoplate as a Field-deployable Platelet Surrogate Technology for Hemorrhage Control
Presentation Author: Dr. Michael Bruckman

MHSRS-19-02030 - SESSION 2 - #242
Stability of Freeze-dried Plasma after 1 Year of Storage
Presentation Author: Mrs. Elissa Flaumenhaft

MHSRS-19-02035 - SESSION 2 - #243
Trauma-associated Glycocalyx Damage and Angiopoietin Dysregulation: Is There a Link?
Presentation Author: Dr. Rindi Uhlich

MHSRS-19-02063 - SESSION 2 - #244
Effects of Quikclot Combat Gauze and Celox Rapid in Hemorrhage Control
Presentation Author: Col Arthur Johnson

MHSRS-19-02097 - SESSION 2 - #245
Evaluation of Crystalloids, Whole Blood, and Pegylated Carboxyhemoglobin-based Oxygen Carrier in a Rat Model of Severe Hemorrhagic Shock
Presentation Author: Dr. Bjorn Song

MHSRS-19-02192 - SESSION 2 - #246
Pressurized Metered Dose Inhalers as First Responder-tools During Mass Casualty Scenarios
Presentation Author: Dr. Thies Schroeder

MHSRS-19-02208 - SESSION 2 - #247
Microvascular Compensatory Response to Hypovolemic Shock: Peripheral Versus Critical Organ Oxygenation
Presentation Author: Dr. William Nugent

MHSRS-19-02288 - SESSION 2 - #248
Fluoroscopy-free Reboa Zone 1 Aortic Cannulation in Perfused Human Cadavers: How Often Do We Miss?
Presentation Author: Ms. Kathryn Jespersen

MHSRS-19-02484 - SESSION 2 - #249
Therapeutic Cardiac Arrest as an Adjunct to REBOA in an Animal Model of Hemorrhage
Presentation Author: Ms. Viviana Moreno

MHSRS-19-02501 - SESSION 2 - #250
Polyhb Maintains Cardiac Function after Extreme Anemia
Presentation Author: Mr. Alexander Williams

MHSRS-19-02535 - SESSION 2 - #251

It’s Okay to Move Your Lips When You Read: A Randomized Trial of Low-bandwidth Mentoring Versus Reading the Manufacturer Instructions Regarding Tourniquet Application
Presentation Author: Ms. Jessica Mckee

MHSRS-19-02552 - SESSION 2 - #252

Creating a Physical Tele-mentored Ultrasound Supported Medical Interventions “Box”
Presentation Author: MAJ Andrew Kirkpatrick

MHSRS-19-02564 - SESSION 2 - #253

Development of Chitosan Endoscopic Hemostatic Device to Control Severe Upper Gastrointestinal Bleeding
Presentation Author: Dr. Simon McCarthy

MHSRS-19-02568 - SESSION 2 - #254

Intelligent Point-of-Care Ultrasound for Auto-cannulation and to Enable REBOA Use
Presentation Author: Mr. Jan Berkow

MHSRS-19-02587 - SESSION 2 - #255

Self-dispersing Bioabsorbable Hemostatic Powder Non-invasively Addresses Truncal Hemorrhage in Swine
Presentation Author: Dr. Christian Kastrup

MHSRS-19-02600 - SESSION 2 - #256

Training Simulator for Resuscitative Endovascular Balloon Occlusion of the Aorta
Presentation Author: Dr. Gianluca De Novi

MHSRS-19-02645 - SESSION 2 - #257

Low Volume Resuscitation with Polyethylene Glycol-20k for Uncontrolled Severe Hemorrhagic Shock
Presentation Author: Dr. Jad Khoraki

MHSRS-19-02562 - SESSION 2 - #258

Polyethylene Glycol-20k is Superior to Hextend for Low Volume Resuscitation of Hemorrhagic Shock and Soft Tissue Injury: 24-hour Survival with Normal Neurological Assessment
Presentation Author: Dr. Jad Khoraki

CELLULAR THERAPEUTICS FOR TREATMENT OF TRAUMA-RELATED INJURIES

MHSRS-19-00008 - POSTER SESSION 2 - #259

Complement Deposition on the Surface of RBC after Trauma Serves a Biomarker of Trauma Severity: A Prospective Study
Presentation Author: LTC Jurandir Dalle Lucca

MHSRS-19-00023 - POSTER SESSION 2 - #260
Cellular Therapy to Covert Stump Skin to Palmo-plantar Skin and Enhance Prosthetic Use
Presentation Author: Dr. Luis Garza

OPEN - POSTER SESSION 2 - #261

MHSRS-19-00276 - POSTER SESSION 2 - #262
PDGFRA Marks Distinct Osteoprogenitor Populations within Adipose Tissue
Presentation Author: Dr. Aaron James

MHSRS-19-00325 - POSTER SESSION 2 - #263
In-vitro Production of Platelets for Far-forward Military Settings and Countermeasure Transfusion Needs
Presentation Author: Dr. Jonathan Thon

MHSRS-19-00405 - POSTER SESSION 2 - #264
Neural Stem Cell Therapy for Severe Traumatic Brain Injury
Presentation Author: Dr. Karl Johe

MHSRS-19-00487 - POSTER SESSION 2 - #265
Assay Development to Assess the Influence of Cell Therapy Agents on Blood Brain Barrier Endothelial Cell Function
Presentation Author: Dr. Barbara Christy

MHSRS-19-00504 - POSTER SESSION 2 - #266
Stem Cell and Shockwave Therapies to Promote Sexual Health Recovery in Pelvic Trauma Model
Presentation Author: Dr. Shashikumar Salgar

MHSRS-19-00522 - POSTER SESSION 2 - #267
Combinatorial Omics Analysis for Evaluating Adhesion and Osteogenic Differentiation Mechanisms of Human Fat-derived Mesenchymal Stem Cells on a Novel Nanocomposite Platform Technology
Presentation Author: Mr. Austin Bow

MHSRS-19-00529 - POSTER SESSION 2 - #268
Effects of TGF-beta Targeted-therapies in an in-vitro Model of Post-traumatic Heterotopic Ossification
Presentation Author: Dr. Marvin Dingle

MHSRS-19-00540 - POSTER SESSION 2 - #269
Tumorigenicity Study of Food and Drug Administration-approve for Clinical Trial Human Fetal Neural Stem Cells, Neuralstem Inc-566, in a Preclinical Model of Severe Penetrating Traumatic Brain Injury
Presentation Author: Dr. Shyam Gajavelli

MHSRS-19-00558 - POSTER SESSION 2 - #270
Heparin Attenuates Procoagulant Toxicity of Systemic Administration of Adipose Derived Mesenchymal Stromal Cells
Presentation Author: Dr. Xiaowu Wu

MHSRS-19-00565 - POSTER SESSION 2 - #271
Intraperitoneal Delivery as an Alternative Route for Systemic Administration of Bone Marrow Derived Mesenchymal Stromal Cells
Presentation Author: Dr. Xiaowu Wu
MHSRS-19-00732 - POSTER SESSION 2 - #272
Evaluation of Mesenchymal Stromal Cell Differentiation for Healing of Large Bone Tissue Defects
Presentation Author: Dr. Jessica Stukel

MHSRS-19-00914 - POSTER SESSION 2 - #273
Closed-system HMSC Working Cell Bank for Use in Scalable Stem Cell Biomanufacturing
Presentation Author: Mr. John Getz

MHSRS-19-01024 - POSTER SESSION 2 - #274
Scaling a Xeno-free Fed-batch 3D Microcarrier Suspension Bioreactor System From Development to Production Scale for HMSC Manufacturing
Presentation Author: Mr. John Getz

MHSRS-19-00919 - POSTER SESSION 2 - #275
Preconditioning in an Inflammatory Milieu Augments the Immunotherapeutic Function of Mesenchymal Stem Cells
Presentation Author: Mr. Luis Rodriguez

MHSRS-19-00966 - POSTER SESSION 2 - #276
Optimization of Stem Cell-derived Exosomes for Therapeutic Application in the Prolonged Field Care Environment
Presentation Author: Dr. Mark Hamrick

MHSRS-19-00992 - POSTER SESSION 2 - #277
Characterization of a Corneal Endothelial Injury in an Ex Vivo Rabbit Model as a Platform for Evaluation of Corneal Endothelial Cell Delivery
Presentation Author: Ms. Lauren Cornell

MHSRS-19-01013 - POSTER SESSION 2 - #278
Recruiting an “Old Hormonal Friend” for Future Skin Wound Management: Thyroxine Promotes the Re-epithelialization and Angiogenesis of Experimentally Wounded Human Skin Even Under Conditions of Severely Impaired Wound Healing
Presentation Author: Mr. Ralf Paus

MHSRS-19-01027 - POSTER SESSION 2 - #279
NGF and the Reinnervation of Wounded Human Skin Ex Vivo
Presentation Author: Mr. Jeremy Cheret

MHSRS-19-01089 - POSTER SESSION 2 - #280
Decellularized Muscle Matrix and Muscle-derived Stem Cells for Enhanced Muscle Regeneration in a Volumetric Muscle Loss Model
Presentation Author: Dr. Seok Hong

MHSRS-19-01116 - POSTER SESSION 2 - #281
Manufacturing of Engineered Bladder Tissues for Soldiers with Battlefield Injury
Presentation Author: Dr. John Jackson

MHSRS-19-01165 - POSTER SESSION 2 - #282
Human Placental Stem Cells Enhance Erectile Function Recovery in a Severe Pelvic Neurovascular Injury Rat Model  
Presentation Author: Dr. John Jackson

MHSRS-19-01183 - POSTER SESSION 2 - #283  
Clinical Translation of Tissue Engineered Urethra for Battlefield Injury  
Presentation Author: Dr. John Jackson

MHSRS-19-01186 - POSTER SESSION 2 - #284  
Clinical Translation of Engineered Penile Tissue for Battlefield Injury  
Presentation Author: Dr. John Jackson

MHSRS-19-01191 - POSTER SESSION 2 - #285  
Delivery of Modified mRNA-loaded Aligned Nanofibrillar Scaffolds for Treatment of Traumatic Muscle Injury  
Presentation Author: Dr. Ngan Huang

MHSRS-19-01214 - POSTER SESSION 2 - #286  
Tacrolimus-based Immune Suppression Following Penetrating Brain Injury Negatively Affects Cognition  
Presentation Author: Dr. Deborah Shear

MHSRS-19-01230 - POSTER SESSION 2 - #287  
Flow Cytometric Characterization of Extracellular Vesicle Surface Markers to Identify Optimal Fractions for Therapeutic Applications  
Presentation Author: Ms. Robin Kamucheka

MHSRS-19-01292 - POSTER SESSION 2 - #288  
Identification of the Ideal Mesenchymal Stem Cell Candidate to Treat Infection-induced Acute Respiratory Distress Syndrome in-vitro  
Presentation Author: Ms. Lucero Alvarado

MHSRS-19-01315 - POSTER SESSION 2 - #289  
Temporal Evaluation of Mitochondrial Redox Homeostasis Following Penetrating Traumatic Brain Injury  
Presentation Author: Dr. Jignesh Pandya

MHSRS-19-01328 - POSTER SESSION 2 - #290  
Injectable Bio-compatible Gel Composed of IPSC Derived NSC for Regeneration of Brain Tissue  
Presentation Author: Dr. Robert Chin

MHSRS-19-01337 - POSTER SESSION 2 - #291  
Manufacturing of Cellular and Cell-based Therapies at Scale  
Presentation Author: Mr. Tom Bollenbach

MHSRS-19-01344 - POSTER SESSION 2 - #292  
Magnetically-induced Self-assembly of Skin Microcolumns to Produce Full-thickness Skin Constructs  
Presentation Author: Dr. Joshua Tam

MHSRS-19-01399 - POSTER SESSION 2 - #293  
Exploiting Extracellular Matrix Dynamics to Preserve and Protect the Warfighter
MHSRS-19-01495 - POSTER SESSION 2 - #294
3D Printing Biomimetic Functional Graphenic Scaffolds for Bone Regeneration
Presentation Author: Dr. Stefanie Sydlik

MHSRS-19-01619 - POSTER SESSION 2 - #295
Use of Bone Marrow Derived-mesenchymal Stem Cells to Allow for Early Split-thickness Skin Graft and Noteworthy Overall Outcome
Presentation Author: Ms. Divya Aickara

MHSRS-19-01728 - POSTER SESSION 2 - #296
Development and in-vivo Implantation of Lego-like 3D Printed Bone Scaffolds
Presentation Author: Mr. James Jones

MHSRS-19-01744 - POSTER SESSION 2 - #297
Human Mesenchymal Stromal Cells Have a Therapeutic Window for Immunosuppression in the Mixed Lymphocyte Reaction Assay
Presentation Author: Ms. Maryanne Herzig

MHSRS-19-01757 - POSTER SESSION 2 - #298
Injectable Nanofiber Powder Mediates Enhanced Adipose Cell Engraftment and Volume Retention
Presentation Author: Ms. Ludmila Diaz-Starokozheva

MHSRS-19-01775 - POSTER SESSION 2 - #299
CTDSP1 Knockdown in Trauma-induced Mesenchymal Progenitor Cells as a Novel Strategy to Promote Peripheral Nerve Regeneration after Traumatic Injury
Presentation Author: Dr. Noreen Gervasi

MHSRS-19-01836 - POSTER SESSION 2 - #300
Tunable Biomimetic Scaffolds for Directing Stem Cell Growth and Differentiation for Tissue Regeneration Applications
Presentation Author: Dr. Mary Caldorera-Moore

MHSRS-19-01872 - POSTER SESSION 2 - #301
Controlled Assembly of 3D Nanofiber Matrices for Regenerative Medicine
Presentation Author: Dr. Mark Carlson

MHSRS-19-01882 - POSTER SESSION 2 - #302
Metabolic Profiling of Human Skeletal Muscle during Ex-vivo Normothermic Limb Perfusion
Presentation Author: Ms. Elizabeth Rohde

MHSRS-19-01968 - POSTER SESSION 2 - #303
Role of Mechanosensing and FAK Expression in a Murine Model of Traumatic Heterotopic Ossification
Presentation Author: Dr. Amanda Huber

MHSRS-19-02038 - POSTER SESSION 2 - #304
Intentional Positioning Of Cells in Decellularized Muscle Tissues
Presentation Author: Dr. Bradley Berron

MHSRS-19-02066 - POSTER SESSION 2 - #305
Human Genetic Platform for Improved Cell Therapy and Cell Therapy Manufacturing
Presentation Author: Dr. Amy Greene

MHSRS-19-02068 - POSTER SESSION 2 - #306
An Extracellular Matrix Replacement Biomaterials Approach to Skin Regeneration in Full-thickness Skin Injuries
Presentation Author: Dr. Emily English

MHSRS-19-02070 - POSTER SESSION 2 - #307
β2-adrenergic Receptor Activation Prolongs Survival of Vascularized Composite Tissue Allotransplants in a Murine Model
Presentation Author: Dr. Minhyung Kim

MHSRS-19-02146 - POSTER SESSION 2 - #308
LPS Induced Inflammation Pre-ACL Rupture Exacerbates Post-traumatic Osteoarthritis
Presentation Author: Dr. Gabriela Loots

MHSRS-19-02200 - POSTER SESSION 2 - #309
Immunodeficient State of Athymic Rats Enhances the Ability of Decellularized Muscle Matrix to Support Regeneration in a Volumetric Muscle Injury
Presentation Author: Dr. Michael McClure

MHSRS-19-02287 - POSTER SESSION 2 - #310
Targeting MHCII/self-peptide Presentation as a Method of Treating Established Autoimmunity
Presentation Author: Dr. Jason Lees

MHSRS-19-02372 - POSTER SESSION 2 - #311
Interaction of Specific Integrin Heterodimers and Fibronectin Potentially Modulate the Adhesion and Osteogenic Differentiation of Human Mesenchymal Stem Cells on Oxidized Graphene
Presentation Author: Dr. Madhu Dhar

MHSRS-19-02399 - POSTER SESSION 2 - #312
Targeting Donor Organ Dendritic Cells to Reduce Immunogenicity in Transplantation
Presentation Author: Mr. Thiago Borges

MHSRS-19-02433 - POSTER SESSION 2 - #313
Peripheral Tissue Injury and Acute Pancreatitis Cause a SIRS-induced Intestinal Microvascular Leak Triggering Ileus via a Specific Enteric Leak Factor
Presentation Author: Dr. Anthony Bauer

MHSRS-19-02442 - POSTER SESSION 2 - #314
Implantation of Bioengineered Innervated Terminal Gut as a Replacement Therapy for Injured Anus
MILITARY HEALTH SYSTEM RESEARCH SYMPOSUM

Poster Session 2

Presentation Author: Mr. Khalil Bitar

**MHSRS-19-02489 - POSTER SESSION 2 - #315**
ST266 Amnion Derived Cytokine Secretome for Polytrauma Treatment
Presentation Author: Dr. Larry Brown

**MHSRS-19-02528 - POSTER SESSION 2 - #316**
Pre-clinical Evaluation of the Efficacy and Safety of Bone Marrow Mesenchymal Stem Cells for Corneal Wound Healing
Presentation Author: Mr. Ilham Putra

**MHSRS-19-02556 - POSTER SESSION 2 - #317**
The Effect of an Autologous Keratinocyte Spray on Human Skin Wound Healing Transcriptome
Presentation Author: Dr. Kristo Nuutila

**MHSRS-19-02591 - POSTER SESSION 2 - #318**
Circulating Plasma Micrornas Trigger Innate Immune Activation in a Mouse Model of Polytraumatic Injury
Presentation Author: Dr. Andrew Suen

**CLINICAL DECISION SUPPORT, MEDICAL ROBOTICS, AND AUTONOMOUS MEDICAL SYSTEMS FOR PROLONGED CARE AND EVACUATION**

**MHSRS-19-00007 - POSTER SESSION 2 - #319**
Algorithm Directed Troop Medical Care Digital Version App
Presentation Author: Mr. James Chrosniak

**MHSRS-19-00028 - POSTER SESSION 2 - #320**
Where’s the Ondansetron? Preventing Nausea and Vomiting Without the Familiar Favorites
Presentation Author: LCDR Chad Moore

**MHSRS-19-00122 - POSTER SESSION 2 - #321**
Quantifying the Effects Of Wound Healing Risk and Potential on Clinical Measurements and Outcomes of Severely Burned Patients: A “Big Data” Approach
Presentation Author: Mr. Nehemiah Liu

**MHSRS-19-00128 - POSTER SESSION 2 - #322**
Developing an Intelligent Decision Support System to Support Tactical Combat Casualty Care and Prolonged Care
Presentation Author: Ms. Rebecca Lee

**MHSRS-19-00162 - POSTER SESSION 2 - #323**
Digitizing Air Force Medical Standards for the Creation of a Readiness Decision-support Tool
Presentation Author: Capt Colby Uptegraft

**MHSRS-19-00166 - POSTER SESSION 2 - #324**
Poster Session 2

Digital Transformation in the Bundeswehr Medical Service
Presentation Author: Lt Col Frank Balszuweit

MHSRS-19-00216 - POSTER SESSION 2 - #325
Novel Prehospital Documentation and Communication System Tested at Guardian Response 2018
Presentation Author: Ms. Alexandra Cholewczynski

MHSRS-19-00281 - POSTER SESSION 2 - #326
Classifying Burn Wound Severity Using Spatial Frequency Domain Imaging and Supervised Machine Learning
Presentation Author: Ms. Rebecca Rowland

MHSRS-19-00308 - POSTER SESSION 2 - #327
Deployed Exercise Using T6 Health Systems Web-based Application Electronic Trauma Resuscitation Documentation and Decision Support
Presentation Author: Lt Col Valerie Sams

MHSRS-19-00671 - POSTER SESSION 2 - #328
Protein Retention Levels of Fresh Frozen Plasma and Cryoprecipitate Derived from Pathogen Reduced Fresh Whole Blood
Presentation Author: Dr. Francisco Rentas

MHSRS-19-00822 - POSTER SESSION 2 - #329
Visual Perception Research for Medical Robotic and Autonomous Systems Applications
Presentation Author: Mr. Nathan Fisher

MHSRS-19-00869 - POSTER SESSION 2 - #330
Improving Prognostication of Death on the Battlefield: Development and Internal Validation of a Dynamic Bayesian Network to Enhance Decision-support and Governance
Presentation Author: Dr. Somayyeh Mossadegh

MHSRS-19-00951 - POSTER SESSION 2 - #331
Using the Low Minute Ventilation Parameter from a Non-invasive Respiratory Volume Monitor in Perioperative Management of OSA Patients in an Ambulatory Setting
Presentation Author: Dr. Vimal Desai

MHSRS-19-01076 - POSTER SESSION 2 - #332
Improved Human Machine Interface for Combat Medics to Capture and Transfer Clinical Data to an Electronic Health Record System
Presentation Author: Dr. Lauren Shluzas

MHSRS-19-01213 - POSTER SESSION 2 - #333
Using EHR Data in the Development of Machine Learning Models for Shock Identification and Differentiation
Presentation Author: Dr. Adam Amos-Binks

MHSRS-19-01247 - POSTER SESSION 2 - #334
Tactical Combat Casualty Care Decision Support for Medics, Battalion Aid Station and Field Hospital Clinicians
Presentation Author: Dr. Christopher Nemeth

MHSRS-19-01255 - POSTER SESSION 2 - #335
Active Breast Biopsy Needle for an Autonomous Needle Insertion System
Presentation Author: Dr. Bardia Konh

MHSRS-19-01324 - POSTER SESSION 2 - #336
Benefits of Telesonography in Diagnostic Support on Military Deployments Abroad
Presentation Author: Lt Col Lorenz Scheit

MHSRS-19-01352 - POSTER SESSION 2 - #337
U.S. Air Force Project ECHO Diabetes: Our Seven-year Experience
Presentation Author: MAJ Darrick Beckman

MHSRS-19-01423 - POSTER SESSION 2 - #338
Wearable Ultrasound Array for Rapid Point-of-Care Assessment
Presentation Author: Dr. Rahul Singh

MHSRS-19-01461 - POSTER SESSION 2 - #339
Morphomic Mapping of Airway Location, Dimensions and Orientation in Live Humans
Presentation Author: Dr. Stewart Wang

MHSRS-19-01508 - POSTER SESSION 2 - #340
Pulse and Respiration Rate Measurement Through RF Sensing in Search and Rescue and Through-wall 3D Imaging
Presentation Author: Mr. Hossein Ghaffari Nik

MHSRS-19-01517 - POSTER SESSION 2 - #341
Development of a Low Power Wireless Pulse Oximeter, Wearable on the Torso, for Tele-medical Monitoring
Presentation Author: Dr. Marcus Kramer

MHSRS-19-01561 - POSTER SESSION 2 - #342
Photoacoustic Transesophageal Echocardiography for Improving Early Management of Hemorrhagic Shock: Towards a Field-deployable Prototype
Presentation Author: Dr. Li Li

MHSRS-19-01663 - POSTER SESSION 2 - #343
Toward Robotic-assisted Casually Extraction in Multi-domain Operations
Presentation Author: Mr. Nathan Fisher

MHSRS-19-01704 - POSTER SESSION 2 - #344
Developing Automated Clinical Decision Support for Wound Infection Evaluation and Care: A Combined Imaging and Machine Learning Approach
Presentation Author: Dr. Petra Wilder-Smith

MHSRS-19-01799 - POSTER SESSION 2 - #345
A Wearable System Which Reduces Motion Sickness and Improves Recovery of Balance
Presentation Author: Dr. Didier Depireux

MHSRS-19-01844 - POSTER SESSION 2 - #346
Miniaturized Continuous Lactate Monitor with Additional Analyte Monitoring Capability for Real-time Injury Status Assessment  
Presentation Author: Dr. Avid Najdahmadi

MHSRS-19-01848 - POSTER SESSION 2 - #347  
Development of an Application Specific Integrated Circuit Based Field Deployable Near-infrared Spectroscopy System  
Presentation Author: Dr. Timothy Quang

MHSRS-19-01856 - POSTER SESSION 2 - #348  
Detection of Internal Bleeding Through Optical Measurements of Draining Lymph Nodes  
Presentation Author: CAPT Judith Runnels

MHSRS-19-01875 - POSTER SESSION 2 - #349  
Persistent Access to Tactical Casualty Health  
Presentation Author: Dr. Ryan Myers

MHSRS-19-01948 - POSTER SESSION 2 - #350  
Novel Monitoring of Tissue Microvasculature Oxygenation Using Resonance Raman Spectroscopy  
Presentation Author: Mrs. Amanda Pennington

MHSRS-19-01985 - POSTER SESSION 2 - #351  
From the Desk (Dexterous Surgical Skill) to the Battlefield–A Robotics Exploratory Study  
Presentation Author: Dr. Juan Wachs

MHSRS-19-02120 - POSTER SESSION 2 - #352  
Movement and Maneuver Controls for Unmanned Casevac  
Presentation Author: Mr. Mitchell Bauer

MHSRS-19-02154 - POSTER SESSION 2 - #353  
Development and Validation of Low Cost 3D Printed Anatomical Models for Pre-surgical Planning and Clinical Education  
Presentation Author: Mr. David Salazar

MHSRS-19-02158 - POSTER SESSION 2 - #354  
Bioprinting in Austere Military Environments: Results and Design Considerations  
Presentation Author: Dr. Joel Gaston

MHSRS-19-02162 - POSTER SESSION 2 - #355  
A National Survey of Radiation Oncologists and Urologists on Proton Beam Radiotherapy and Robotic Surgery for Localized Prostate Cancer  
Presentation Author: Dr. Luke Bidikov

MHSRS-19-02184 - POSTER SESSION 2 - #356  
Creating an Automated, Enhanced Lund Browder Diagram to Enable More Accurate and Timely Burn Wound
Annotations
Presentation Author: Mr. Gregory Rule

MHSRS-19-02197 - POSTER SESSION 2 - #357
Prehospital Point Of Care Testing for the Prediction of Lifesaving Interventions in Trauma Patients
Presentation Author: Dr. Shiming Yang

MHSRS-19-02228 - POSTER SESSION 2 - #358
In-flight Vital Signs Predict Emergency and Massive Blood Transfusion after Trauma
Presentation Author: Dr. Shiming Yang

MHSRS-19-02270 - POSTER SESSION 2 - #359
Modeling Healthcare: Capacity, Access and Resource Allocation
Presentation Author: COL Mary Lowe Mayhugh, USA Retired

MHSRS-19-02364 - POSTER SESSION 2 - #360
Benefits and Design Consideration of a Platform for an Autonomous Medical System
Presentation Author: Ms. Tracy Rausch

MHSRS-19-02377 - POSTER SESSION 2 - #361
Integrated Platform for Point-of-Care Testing
Presentation Author: Mr. Robert Granier

MHSRS-19-02437 - POSTER SESSION 2 - #362
Reliability and Validity of A-mode Ultrasound to Quantify Body Composition
Presentation Author: Dr. Michael Willey

MHSRS-19-02492 - POSTER SESSION 2 - #363
Convolutional-neural-network Based Machine-learning Interpretation of Lung Ultrasound Images: Ultrasound Detection of Lung Complications in Patients with Hematological Malignancies
Presentation Author: Dr. Meihua Zhu

MHSRS-19-02537 - POSTER SESSION 2 - #364
Building a “Real” Telemedicine Ultrasound Supported Medical Intervention Mousetrap: Creating a Practical Multi-modality Telementoring Capacity for Far Forward Resuscitation
Presentation Author: Ms. Jessica Mckee

MHSRS-19-02545 - POSTER SESSION 2 - #365
Noninvasive Breath Analysis Using NASA E-nose Technology for Health Assessment
Presentation Author: Dr. Jing Li

MHSRS-19-02580 - POSTER SESSION 2 - #366
Implementation of a Modified Early Warning System Real-time Clinical Decision Support Application to Evaluate Interoperable Medical System Capabilities
Presentation Author: Dr. Julian Goldman

MHSRS-19-02633 - POSTER SESSION 2 - #367
Applicability of the Automotive Levels of Automation to Autonomous Medical Systems
Presentation Author: Dr. Julian Goldman

**EN ROUTE CARE FUTURE RESEARCH CHALLENGES**

**MHSRS-19-00259 - POSTER SESSION 2 - #368**
Vibration Alone Induces the Inflammatory Response in an Experimental Animal Model
Presentation Author: CDR Carl Goforth

**MHSRS-19-00513 - POSTER SESSION 2 - #369**
Effect of Blood Flow on Platelets, Leukocytes, and Extracellular Vesicles in Thrombosis of Simulated Extracorporeal Circulation
Presentation Author: Dr. Andrew Meyer

**MHSRS-19-01006 - POSTER SESSION 2 - #370**
Development and Evaluation of a Trans-cutaneous Tissue Oxygenation Wearable Device
Presentation Author: Dr. Juan Cascales

**MHSRS-19-01031 - POSTER SESSION 2 - #371**
Validation and Training Requirements Definition for Effective Combat Casualty Care Handoff Operations
Presentation Author: Dr. Camilla Knott

**MHSRS-19-01341 - POSTER SESSION 2 - #372**
Joint Trauma System Medical Enroute Care Registry (MERCURY): A Six Month Glimpse of Data
Presentation Author: Dr. Kimberly Smith

**MHSRS-19-01610 - POSTER SESSION 2 - #373**
A Groundbreaking Method to Safely Transport Medical & Pharma Items
Presentation Author: Mr. Robert Allan Sailer

**MHSRS-19-01970 - POSTER SESSION 2 - #374**
The Effect of Experience on Critical Care Air Transport Team Coordination
Presentation Author: Dr. Frank Robinson

**MHSRS-19-01991 - POSTER SESSION 2 - #375**
A Novel Test of Night Vision Goggle Compatibility of Medical Carry On Equipment
Presentation Author: Dr. Marcy Conti

**MHSRS-19-02166 - POSTER SESSION 2 - #376**
Aeromedical-Relevant Hypobaria Exposure-Induced Oxidative Stress in Rats with Mild Traumatic Brain Injury Facilitates Homocysteine Flux Through the Transsulfuration Pathway: A Compensatory Mechanism to Mitigate the Secondary Injury Process
Presentation Author: Dr. Flaubert Tchantchou

**MHSRS-19-02379 - POSTER SESSION 2 - #377**
Space Expeditionary Medicine: Miniature, Low-power, Low-mass, Autonomous Robots for Lunar and Expeditionary Surgery
Presentation Author: Dr. Dmitry Oleynikov

**MHSRS-19-02426 - POSTER SESSION 2 - #378**
Interoperability Challenges in ERC: Exploring Combined Training and Collaborative Research Exchange Opportunities with International Partners
Presentation Author: Lt Col Sarah Huffman

**INNOVATIONS IN MEDICAL TECHNOLOGIES TO ADVANCE EN ROUTE PATIENT CARE**

**MHSRS-19-00068 - SESSION 2 - #379**
Remote Health Monitoring of Patient with Glaucoma
Presentation Author: LTC Jennifer Stowe

**MHSRS-19-00163 - SESSION 2 - #380**
Smart Threads as Sutures and Bandages for Monitoring and Treatment of Wounds
Presentation Author: Mr. Sameer Sonkusale

**MHSRS-19-00468 - SESSION 2 - #381**
Telemedicine Training for Novice Providers during Underway Naval Operations
Presentation Author: LCDR Art Ambrosio

**MHSRS-19-00622 - SESSION 2 - #382**
Rapid Reconstitution Packages for Storage and Delivery of Emergency Drugs in Combat Theater
Presentation Author: Dr. Noel Elman

**MHSRS-19-00667 - SESSION 2 - #383**
Transcontinental Dialysis at 30,000 Feet
Presentation Author: Capt Paul Pikman

**MHSRS-19-00678 - SESSION 2 - #384**
Real-time, Sensitive, Monitoring of Cholesterol Levels Using a Microfluidic Device
Presentation Author: Dr. Abhinav Bhushan

**MHSRS-19-00757 - SESSION 2 - #385**
A Novel Index from a Wearable Continuous Wave Ultrasound Patch Instantly Detects Fall In Cardiac Output
Presentation Author: Dr. Jon-Emile Kenny

**MHSRS-19-00784 - SESSION 2 - #386**
Baseline Proportions of False Negatives in Simulated 12-Core Templated Transrectal Ultrasound Prostate Biopsy
Presentation Author: Dr. Samsun Lampotang

**MHSRS-19-00964 - SESSION 2 - #387**
Assessing the Feasibility and Accuracy of a Novel Physiological Monitoring Device for Service Members
With Traumatic Brain Injury
Presentation Author: Mr. Dylan Scarton

MHSRS-19-01147 - SESSION 2 - #388
Developing and Validating an Accelerated Extracorporeal Membrane Oxygenation Course for Military Critical Care Clinicians Using Yorkshire Swine (Sus Scrofa)
Presentation Author: Lt Col Joseph Maddry

MHSRS-19-01149 - SESSION 2 - #389
Advancing Combat Casualty Evacuation: Patients Amenable to Aeromedical Evacuation via Unmanned Aerial Vehicles
Presentation Author: Lt Col Joseph Maddry

MHSRS-19-01380 - SESSION 2 - #390
Go with the Flow—Comparison of Acellular Solutions for Ultraportable Ex-vivo Perfusion of Amputated Limbs
Presentation Author: Dr. Valentin Haug

MHSRS-19-01545 - SESSION 2 - #391
Comparison of the Effects of Motion and Dirt on Hand-held and Fingertip Pulse Oximeters Accuracy
Presentation Author: CPT Avishai Tsur

MHSRS-19-01627 - SESSION 2 - #392
High-end Diagnostics in the Field and at the Point Of Care
Presentation Author: Dr. Avishay Bransky

MHSRS-19-01684 - SESSION 2 - #393
Patient Experience and Perception of Using Telehealth for Post-surgery Wound-healing Follow-ups at the AMEDD Medical Centers: Results From a Proof-of-concept Study
Presentation Author: Dr. Vahe Heboyan

MHSRS-19-01721 - SESSION 2 - #394
Micro-oxygen Sensors Measure Tissue Oxygen in a Porcine Radiation Model
Presentation Author: Mr. Scott Nichols

MHSRS-19-01824 - SESSION 2 - #395
Noninvasive Sub-organ Ultrasound Stimulation for Targeted Neuromodulation
Presentation Author: Mr. Jeffrey Ashe

MHSRS-19-01846 - SESSION 2 - #396
Administration of Purified Exosome Product for Sciatic Nerve Autograft Regeneration
Presentation Author: Dr. Chunfeng Zhao

MHSRS-19-02002 - SESSION 2 - #397
Using Modular Principles to Efficiently Design and Build New Simulators and Part Task Trainers for Different
Healthcare Procedures

Presentation Author: Dr. Samsun Lampotang

**MHSRS-19-02034 - SESSION 2 - #398**  
The Wound Healing Effects of a Next-generation Advanced Antimicrobial Silver Hydrofiber Wound Dressing on Deep Partial Thickness Wounds Using a Porcine Model  
Presentation Author: Mr. Joel Gil

**MHSRS-19-02058 - SESSION 2 - #399**  
A Light-weight, Portable CT System for Forward Surgical and En Route Care  
Presentation Author: Dr. Rajiv Gupta

**MHSRS-19-02196 - SESSION 2 - #400**  
Dependability and Adaptability in a Family of Surgical Robots  
Presentation Author: Dr. Dmitry Oleynikov

**MHSRS-19-02212 - SESSION 2 - #401**  
Continuous Blood Pressure Band-aid® Sensor for Real-time Beat-to-beat Monitoring of the Warfighter  
Presentation Author: Dr. Michelle Khine

**MHSRS-19-02269 - SESSION 2 - #402**  
Designing and Building Ruggedized Microfluidic Cards for Point Of Care Applications  
Presentation Author: Mr. Matt Coleman

**MHSRS-19-02354 - SESSION 2 - #403**  
Manufacturing of Flexible Wireless Devices for Human Health and Performance Monitoring  
Presentation Author: Dr. Azar Alizadeh

**MHSRS-19-02366 - SESSION 2 - #404**  
Development of a Point Of Care Technology for Military Medical Applications in Austere Environments  
Presentation Author: Dr. David Loftus

**MHSRS-19-02637 - SESSION 2 - #405**  
24-hour Ex Vivo Perfusion with Acellular Solution Enables Successful Replantation of Porcine Forelimbs  
Presentation Author: Dr. Valentin Haug

**EFFECTS OF CARE ENVIRONMENTS ENROUTE**
MHSRS-19-00915 - POSTER SESSION 2 - #406
Pre-surgical Environmental Stress Activates the Pituitary to Produce Increased Levels of Prolactin and Luteinizing Hormone in the Porcine Air Transport Stress Model
Presentation Author: Dr. Suizhao Wang

MHSRS-19-01016 - POSTER SESSION 2 - #407
Oxygen Supplementation of Injured Swine during Flight
Presentation Author: Dr. Francoise Arnaud

MHSRS-19-01115 - POSTER SESSION 2 - #408
Vibration Does Not Affect Short-Term Outcomes Following Traumatic Brain Injury in a Porcine Model
Presentation Author: Dr. Mackenzie Morris

MHSRS-19-01558 - POSTER SESSION 2 - #409
The Swine Distress Assessment Score Sheet Identified Pre-surgical Stress in the Porcine Air Transport Stress Model
Presentation Author: Dr. Richard Kelly

MHSRS-19-02238 - POSTER SESSION 2 - #410
Optimal Physical Space for En Route Care: Medic Posture and Injury Survey
Presentation Author: Ms. Laura Kroening

APPROACHES FOR MONITORING WARFIGHTER BLAST-RELATED EXPOSURES IN TRAINING TO DEVELOP EFFECTIVE SAFETY STANDARDS

MHSRS-19-00284 - POSTER SESSION 2 - #411
A DoD-wide Survey Study to Characterize Service Member Blast Exposure
Presentation Author: Lt Claire Modica

MHSRS-19-00533 - POSTER SESSION 2 - #412
Development of Field Deployable Technologies to Detect Persistent TBI
Presentation Author: Dr. Steven Kornguth

MHSRS-19-00631 - POSTER SESSION 2 - #413
The Effect of Peak Overpressure and Impulse on the Reflected Pressure: An Experimental Study Using 2D Planar Geometry Model with Implications for Occupational Exposure Measurements
Presentation Author: Dr. Maciej Skotak

MHSRS-19-00772 - POSTER SESSION 2 - #414
A New Innovative Sensor and Dosimeter Technology for Blunt Impact and Blast Over-pressure Exposure Measurement and Injury Prediction
Presentation Author: Mr. Stephen Pruitt

MHSRS-19-00905 - POSTER SESSION 2 - #415
Effects of Animal Orientation on Brain Responses to Primary Blast
Poster Session 2

Presentation Author: Dr. Ginu Unnikrishnan

**MHSRS-19-00929 - POSTER SESSION 2 - #416**
The Current and Potential Future Roles of Hearing Conservation Programs in Monitoring the Effects of Repetitive Blast Exposure in Military Populations
Presentation Author: Dr. Douglas Brungart

**MHSRS-19-01050 - POSTER SESSION 2 - #417**
Measurements of Infrasound Signatures from Grenade Blast During Training
Presentation Author: Dr. Alessio Medda

**MHSRS-19-01063 - POSTER SESSION 2 - #418**
How Do You Characterize “Breachers’ Brain?”
Presentation Author: Dr. Walter Carr

**MHSRS-19-01097 - POSTER SESSION 2 - #419**
Soldier Self-report in a Combat Zone: Subclinical Outcome Associations with Blast Exposure
Presentation Author: Dr. Walter Carr

**MHSRS-19-01358 - POSTER SESSION 2 - #420**
Systematic Review of Low Level Blast Exposure – Clinical Effects on Humans
Presentation Author: Dr. Heather Belanger

**MHSRS-19-01366 - POSTER SESSION 2 - #421**
Comparison of In-brain Pressure in Blast for Surrogate Headforms with Gel-fluid Interface and Gel-skull Interfaces
Presentation Author: Dr. Amit Bagchi

**MHSRS-19-01402 - POSTER SESSION 2 - #422**
Computational Models of Protein Concentrations Following Repeated Blast Overpressure Exposure
Presentation Author: Mr. Jonathan Statz

**MHSRS-19-01415 - POSTER SESSION 2 - #423**
The Role of Acoustic Signatures in Overpressure Symptomatology
Presentation Author: Dr. Sujith Sajja

**MHSRS-19-01472 - POSTER SESSION 2 - #424**
Force Preservation through Individual Blast Exposure Surveillance
Presentation Author: Dr. David Borkholder

**MHSRS-19-01516 - POSTER SESSION 2 - #425**
Experimental Models of TBI Using Novel Controlled Dynamic Rotation Devices
Presentation Author: Dr. Daniel Shedd

**MHSRS-19-01601 - POSTER SESSION 2 - #426**
Biofidelic Human Head Phantoms for Studies of Traumatic Brain Injury
Poster Session 2

Presentation Author: Dr. Suhas Vidhate

MHSRS-19-01767 - POSTER SESSION 2 - #427
Optimizing Helmet Pad Placement Using Computational Predicted Injury Pattern to Reduce mTBI
Presentation Author: Dr. Peter Matic

MHSRS-19-01800 - POSTER SESSION 2 - #428
Characterization of the Performance of Human Torso and Animal Physical Models Exposed to Underwater Impulse Acoustics
Presentation Author: Dr. Brandon Casper

MHSRS-19-01806 - POSTER SESSION 2 - #429
Formulation and Characterization of Apocynin Loaded Albumin Nanoparticle and its Pharmaco-therapeutic Effects on Animal Model of Repeated Low-level Blast
Presentation Author: Dr. Namas Chandra

MHSRS-19-01815 - POSTER SESSION 2 - #430
Delineating the Roles of Resident Microglia and Infiltrating Monocytes in Causing Chronic Neuroinflammation and Behavioral Deficits Using a Mouse Model of Blast-induced Traumatic Brain Injury
Presentation Author: Dr. Namas Chandra

MHSRS-19-01839 - POSTER SESSION 2 - #431
The Combat and Training Queryable Exposure/event Repository Operational Monitoring Program
Presentation Author: CDR Josh Duckworth

MHSRS-19-01892 - POSTER SESSION 2 - #432
The Effect of Impulse on Brain Pathology in an Animal Blast TBI Model: A Telltale Case Study for Occupational Low-level Blast Human Studies?
Presentation Author: Dr. Maciej Skotak

MHSRS-19-01893 - POSTER SESSION 2 - #433
Occupational Blast Wave Exposure during Multiday .50 Caliber Rifle Course
Presentation Author: Dr. Maciej Skotak

MHSRS-19-02150 - POSTER SESSION 2 - #434
Measuring Head Motion for TBI Detection and Prevention
Presentation Author: Mr. Ron Szalkowski

MHSRS-19-02171 - POSTER SESSION 2 - #435
Dynamic and Static Stability in Experienced Breachers
Presentation Author: LCDR F. J. Haran

MHSRS-19-02339 - POSTER SESSION 2 - #436
The VHA 4 Question TBI Screening Tool Effectively Identifies Individuals with TBI-related Multi-sensory Effects
Presentation Author: Dr. Felix Barker

MHSRS-19-02349 - POSTER SESSION 2 - #437
Bioprinted 3D In Vitro Co-cultures of the Blood-brain Barrier for Testing the Effects Of Blast-related Overpressure  
Presentation Author: Dr. Joel Gaston

MHSRS-19-02397 - POSTER SESSION 2 - #438  
Blast Part 1: Deriving Safe Exposure Thresholds from Blast Sensor Data  
Presentation Author: Dr. Tim Walilko

MHSRS-19-02429 - POSTER SESSION 2 - #439  
Blast Part 2: Establishing Safe Exposure Thresholds for Repeated Blast  
Presentation Author: Dr. Tim Walilko

MHSRS-19-02436 - POSTER SESSION 2 - #440  
Blast Part 3: Assessing Safe Exposure Thresholds after Blast Exposure  
Presentation Author: Dr. Tim Walilko

MHSRS-19-02481 - POSTER SESSION 2 - #441  
Exposure to Low-level Blast during Breacher Training—Possible Effects on Brain Health and Performance  
Presentation Author: Mr. Niclas Wisen

OCULAR INJURIES CAUSED BY EXPOSURE TO BLAST OVERPRESSURE

MHSRS-19-01124 - SESSION 2 - #442  
Analysis of Far Forward Ocular Trauma among Combat Casualties in Afghanistan  
Presentation Author: Mrs. Jennifer Trevino

MHSRS-19-01550 - SESSION 2 - #443  
Severe Ocular Injuries during LDF Low Intensity Combat and the use of Protective Eyewear  
Presentation Author: CPT Avishai Tsur

MHSRS-19-01937 - SESSION 2 - #444  
Long-term Prognosis of Patients with Ocular Blast Injuries  
Presentation Author: CPT Alexander Stoddard

MHSRS-19-02222 - SESSION 2 - #445  
Preservation of Vision Following Severe Ocular Trauma Through the Application of Nanofiber-reinforced Hydrogel Bandages  
Presentation Author: Dr. Lindsay Woodard

MHSRS-19-02391 - SESSION 2 - #446  
Low-intensity Repeated Blast Exposure Leads to Visual System Damage in Rats  
Presentation Author: Dr. James DeMar

MHSRS-19-02538 - SESSION 2 - #447  
Blast Injury Prevention Standards Recommendation Process: Ocular Blast Injury Type  
Presentation Author: Ms. Jennifer Lombardo

PAIN MANAGEMENT FOR THE FUTURE FIGHT
MHSRS-19-00322 - SESSION 2 - #448
Effects of Opioid Analgesics (Morphine, Fentanyl, and Sufentanil) and Trauma on Survival Time After Severe Conscious Hemorrhage in Rats
Presentation Author: Ms. Mariam Calderon

MHSRS-19-00350 - SESSION 2 - #449
Effect of Chronic Stress and Morphine Treatments on Spinal Nerve Growth Factor in a Rat Model
Presentation Author: Dr. Hans Linsenbardt

MHSRS-19-00463 - SESSION 2 - #450
Effect of High Omega-6 Diet on Sensory Neuron Excitability and Pain Behavior
Presentation Author: Dr. Kenneth Hargreaves

MHSRS-19-00531 - SESSION 2 - #451
Efficacy of Pulpal Anesthesia Using a Needle-less Syringe
Presentation Author: Dr. Kraig Vandewalle

MHSRS-19-00674 - SESSION 2 - #452
Reductions in Opioid Consumption with Percutaneous Medial Branch Peripheral Nerve Stimulation for Chronic Low Back Pain
Presentation Author: Dr. Steven Cohen

MHSRS-19-00690 - SESSION 2 - #453
Development and Implementation of the Military Treatment Facility Engagement Committee to Support Pragmatic Clinical Trials in the Military Health System
Presentation Author: Mr. Dylan Scarton

MHSRS-19-00788 - SESSION 2 - #454
Fentanyl Impairs but Ketamine Preserves the Microcirculatory Response to Hemorrhage–A Novel Approach to Evaluate Hemodynamic Impacts of Analgesics
Presentation Author: Dr. Lusha Xiang

MHSRS-19-00858 - SESSION 2 - #455
Metagenomic Marker of Pain Management in Mouse Model of Partial Bone Resection Followed by Prolonged Musculoskeletal Unloading
Presentation Author: Mr. Nabarun Chakraborty

MHSRS-19-00874 - SESSION 2 - #456
Sustained Analgesic and Anti-inflammatory Efficacy of a Single Dose COX-2 Inhibiting Nanomedicine in a Mouse CFA-induced Inflammatory Model
Presentation Author: Dr. Jelena M. Janjic

MHSRS-19-00887 - SESSION 2 - #457
Determining the Role of Acupuncture, Chiropractic and Yoga in Functional Restoration among Active Duty Service Members with Chronic Pain
Presentation Author: Dr. Diane Flynn
MHSRS-19-00888 - SESSION 2 - #458
Determinants of Optimal Dosage and Sequence of Functional Restoration and Integrative Therapies Study in Service Members with Neuromusculoskeletal Injury
Presentation Author: Dr. Diane Flynn

MHSRS-19-00889 - SESSION 2 - #459
Improving Primary Care Pain Management through Weekly Didactic and Case-based Telementoring
Presentation Author: Dr. Diane Flynn

MHSRS-19-00922 - SESSION 2 - #460
Effect of Midazolam on Morphine-mediated Analgesia, Tolerance, and Respiration in a Rat Model
Presentation Author: Dr. Bopaiah Cheppudira

MHSRS-19-00984 - SESSION 2 - #461
Presentation Author: Mr. Thomas Garza

MHSRS-19-01039 - SESSION 2 - #462
Pain Registry Biobank: A Protocol for a Novel Approach to Studying Pain
Presentation Author: Mr. Raymond Kroma

MHSRS-19-01067 - SESSION 2 - #463
Pilot of a Novel Online Survey to Assess Risk-benefit Profile of Pain Treatments
Presentation Author: Dr. Janetta Iwanicki

MHSRS-19-01134 - SESSION 2 - #464
Duration of Chronic Pain before Referral for Interdisciplinary Pain Care and its Relationship to Likelihood of Medical Retirement among Service Members: A Retrospective Analysis
Presentation Author: LTC Justin Stewart

MHSRS-19-01143 - SESSION 2 - #465
Naloxone Co-prescription Policy Implementation: Pilot Program to Reduce Overdose-related Mortality in Military Beneficiaries
Presentation Author: Dr. Nicholas A. Giordano

MHSRS-19-01146 - SESSION 2 - #466
Analgesics in the Pre-hospital Setting: Ketamine Does Not Alter Tolerance to Simulated Hemorrhage in Humans
Presentation Author: Dr. Craig Crandall

MHSRS-19-01177 - SESSION 2 - #467
Association of Oral or Parenteral Opioids in the ED Treatment of Back Pain with Future Opioid Aberrant Use
Presentation Author: Dr. Kennon Heard

MHSRS-19-01233 - SESSION 2 - #468
Long-lasting, Non-opioid and Drug-free Method of Treating Pain
Presentation Author: Dr. Lilit Garibyan
MHSRS-19-01281 - SESSION 2 - #469
Kerecis Fish Skin Healing of Painful Ulcers: A Case Study on Amputation Prevention and Pain Management
Presentation Author: Dr. Mark Suski

MHSRS-19-01511 - SESSION 2 - #470
Delivery of Bupivacaine from Ultra-high Molecular Weight Polyethylene and Implications for Post-arthroplasty Pain
Presentation Author: Dr. Ebru Oral

MHSRS-19-01628 - SESSION 2 - #471
Antibacterial Properties of Anesthetic-eluting Ultra-high Molecular Weight Polyethylene
Presentation Author: Dr. Ebru Oral

MHSRS-19-01579 - SESSION 2 - #472
Opioid Use and Length of Stay Significantly Reduced With Enhanced Recovery after Surgery Program Utilizing Liposomal Bupivacaine for Total Knee Arthroplasty
Presentation Author: Dr. Garen Collett

MHSRS-19-01581 - SESSION 2 - #473
Study to Identify the Genetic Variations Associated with Phantom Limb Pain
Presentation Author: Mrs. Natalie Ivanina

MHSRS-19-01617 - SESSION 2 - #474
Pain Relieving Antimicrobial Dressing for Burn Wounds
Presentation Author: Dr. Kris Rangan

MHSRS-19-01678 - SESSION 2 - #475
Chemokine Receptor Antagonists Increase Opioid Potency in Incisional Pain in Rats
Presentation Author: Dr. Toby Eisenstein

MHSRS-19-01690 - SESSION 2 - #476
Nsaid Topical Transdermal Diclofenac Epolamine Spray Film DSF100 for the Management of Acute Musculoskeletal Pain
Presentation Author: Dr. Lucille Russell

MHSRS-19-01716 - SESSION 2 - #477
Sustained Non-opioid Pain Management in Prolonged Field Care and Hospital Settings Using LBL100
Presentation Author: Dr. Lucille Russell

MHSRS-19-01752 - SESSION 2 - #478
Evaluation of Analgesia and Clotting Time of Novel Acetaminophen Analogs
Presentation Author: Mr. David Trapolsi

MHSRS-19-01822 - SESSION 2 - #479
Percutaneous Peripheral Nerve Stimulation Provides Relief of Chronic Pain to Enable Improvements in Function Following Amputation
Presentation Author: COL Steven Cohen
MHSRS-19-01865 - SESSION 2 - #480
Pain Management in the Operational Environment Using Noninvasive Neuromodulation Technology
Presentation Author: Mr. Richard Hanbury

MHSRS-19-01971 - SESSION 2 - #481
Presentation Author: Dr. Patrick Richard

MHSRS-19-02010 - SESSION 2 - #482
Arylepoxamides Receptor Targets: Potent Analgesics Lacking Side-effects
Presentation Author: Dr. Susruta Majumdar

MHSRS-19-02040 - SESSION 2 - #483
Local Immunomodulation at the Site of Neuronal Injury with Theranostic Analgesic Regenerative Gel-emulsion Technology Controls Pain and Neuroinflammation
Presentation Author: Dr. Mallory Wampler

MHSRS-19-02104 - SESSION 2 - #484
A Rat Model for Assessing Post-surgical Pain and Recovery Following Joint Replacement
Presentation Author: Dr. Yingfang Fan

MHSRS-19-02119 - SESSION 2 - #485
Low Frequency Pulsed Electromagnetic Field Acts as a Modulator of Inflammatory Signaling Pathways
Presentation Author: Dr. Tracy Criswell

MHSRS-19-02173 - SESSION 2 - #486
A Review of Casualties that Underwent Pain Management Before Reaching Role 2 in Afghanistan
Presentation Author: CPT Ian Hudson

MHSRS-19-02396 - SESSION 2 - #487
Utilizing Internal Behavioral Health Consultants to Treat Chronic Pain in Primary Care Settings
Presentation Author: Dr. Don McGeary

MHSRS-19-02547 - SESSION 2 - #488
Development of a Novel, Non-opioid, Non-NSAID, Non-hepatotoxic Analgesic for Pain Management
Presentation Author: Dr. Kevin Bunker

MHSRS-19-02561 - SESSION 2 - #489
Examining Spatial Dimensions of the Prescription Opioid Rate Across the U.S.
Presentation Author: Dr. Kyle Fluegge

MHSRS-19-02658 - SESSION 2 - #490
Focus on Epithelialized Palatal Grafts. Part 3–Methods to Enhance Patient Comfort at Palatal Donor Sites
Presentation Author: CPT Joshua P. Berridge
FRONTLINE CARE: TBI TREATMENT & MANAGEMENT IN THE PREHOSPITAL ENVIRONMENT

**MHSRS-19-00364 - SESSION 2 - #491**
Immune Modulating Nutrition Supplements in an Animal Model of Traumatic Brain Injury
Presentation Author: Dr. Angus Scrimgeour

**MHSRS-19-00856 - SESSION 2 - #492**
Cerium Oxide Nanoparticles in the Treatment of Traumatic Brain Injury and Parkinson’s Disease
Presentation Author: Dr. Beverly Rzigalinski

**MHSRS-19-00990 - SESSION 2 - #493**
Effective Inhibitors of Traumatic Brain Injury-induced Systemic Endothelial Dysfunction
Presentation Author: Dr. Fletcher White

**MHSRS-19-01351 - SESSION 2 - #494**
Alpha-methyltyrosine Inhibits the Cardiovascular and Behavioral Sequeale of Traumatic Brain Injury
Presentation Author: Dr. Ryan Woodman

**MHSRS-19-01430 - SESSION 2 - #495**
Groundbreaking Evaluation for TBI in Deployed Settings
Presentation Author: MAJ Nicholas Koreerat

**MHSRS-19-01526 - SESSION 2 - #496**
Novel Monitoring Modality of TBI Patients Using Transocular Brain Impedance
Presentation Author: Dr. Mohamad Hakam Tiba

**MHSRS-19-01783 - SESSION 2 - #497**
Protective Role of ADORA3 Agonist AST-004 in Blast and Blunt TBI Models
Presentation Author: Dr. Eda Bozdemir

**MHSRS-19-01821 - SESSION 2 - #498**
A Novel Nmda Receptor Modulator, NYX-458, Shows Therapeutic Potential for Cognitive Impairment Associated with TBI
Presentation Author: Dr. Katherine Leaderbrand

**MHSRS-19-01930 - SESSION 2 - #499**
Improving Health Outcomes for Acute Concussion Patients
Presentation Author: Dr. Kendra Jorgensen-Wagers

**MHSRS-19-01935 - SESSION 2 - #500**
Pre-hospital Whole Blood Resuscitation Reduces Fluid Requirement and Improves Cerebral Physiology Compared to Crystalloid Resuscitation in a Severe Model of TBI
Presentation Author: Dr. Zachary Bailey

**MHSRS-19-01942 - SESSION 2 - #501**
Nicotine Administration Ameliorates Motor & Cognitive Deficits in Rats Following Penetrating Brain Injury  
Presentation Author: Dr. Matthew Rice

MHSRS-19-02141 - SESSION 2 - #502  
Transcriptomic Analysis of Mouse Brain Regions after TBI Indicates Candesartan Treatment Alters Novel Molecular Pathways  
Presentation Author: LTC Peter Attilio

MHSRS-19-02211 - SESSION 2 - #503  
Curcumin Nanoparticle Therapy after TBI Prevents Memory Impairment and Depression with Reduced Tissue Loss and Neuroinflammation, and Increased Hippocampal Neurogenesis  
Presentation Author: Dr. Maheedhar Kodali

MHSRS-19-02628 - SESSION 2 - #504  
Supplementation of Itaconate to Resuscitation Fluid Improves Survival in a Combined Traumatic Brain Injury and Hemorrhagic Shock Mouse Model  
Presentation Author: Mr. Alfredo Lucas

MHSRS-19-02652 - SESSION 2 - #505  
The Effect of Fear Conditioning on Fractional Anisotropy in the Mouse Model of Mild TBI Under Implicit and Explicit Conditions and of Bicycling and Other Implicit Learning Tasks on Service Members Suffering from Mild TBI  
Presentation Author: Dr. Joachim Spiess

WHAT’S NEW IN BRAIN HEALTH FOR ELITE WARFIGHTERS

MHSRS-19-00064 - SESSION 2 - #506  
Revisiting Blast versus Non-blast Traumatic Brain Injury Profiles in an Active Duty Cohort  
Presentation Author: Dr. Lars Hungerford

MHSRS-19-00530 - SESSION 2 - #507  
USSOCOM Comprehensive Strategy and Action Plan for SOF Warfighter Brain Health  
Presentation Author: Mr. F Bowling

MHSRS-19-00781 - SESSION 2 - #508  
Randomized Controlled Trial of Allostatic Neurotechnology to Treat Mild Traumatic Brain Injury  
Presentation Author: Dr. Michael Roy

MHSRS-19-00871 - SESSION 2 - #509  
Multi-site RCT of Targeted Dietary Manipulation as an Adjunct Strategy for Managing Chronic Post-traumatic Headache  
Presentation Author: Dr. Kimbra Kenney

MHSRS-19-00891 - SESSION 2 - #510  
Poor Baseline Eye-tracking is Associated with Postconcussive Symptoms  
Presentation Author: Dr. Angela Lumba-Brown

MHSRS-19-00958 - SESSION 2 - #511
Survival among Glioma Cases in the U.S. Military Health System: A Comparative Study with Cases from the U.S. General Population in the National Surveillance, Epidemiology, and End Results Program
Presentation Author: Dr. Jie Lin

MHSRS-19-01210 - SESSION 2 - #512
Olfactory Functional MRI (FMRI) Using T2-prepared Bold FMRI at Ultra-high Field (7T)
Presentation Author: Mr. Adrian Paez

MHSRS-19-01338 - SESSION 2 - #513
A New Concussion Clinical Profiles Screening Tool: Preliminary Evidence
Presentation Author: Dr. Anthony Kontos

MHSRS-19-01999 - SESSION 2 - #514
Differences in Vestibular Ocular Motor Screening Scores between Military Personnel with Acute mTBI and Healthy Controls: Preliminary Findings
Presentation Author: Dr. Anthony Kontos

MHSRS-19-01549 - SESSION 2 - #515
Brain Gauge: Measuring Brain Health for Concussion Recovery
Presentation Author: Dr. Kendra Jorgensen-Wagers

MHSRS-19-01969 - SESSION 2 - #516
Evolution of a Study of Bilateral Prefrontal Transcranial Magnetic Stimulation to Treat the Symptoms of Mild TBI and PTSD: Research Methods, Participant Demographics, and Tolerability
Presentation Author: Mr. Jared Garland

MHSRS-19-02059 - SESSION 2 - #517
Primary Care Practices and Perceptions in Care for Service Members with Post-traumatic Headache: Does Self-reflection in a Mixed-methods Study Modify Practice?
Presentation Author: Dr. Seth Kiser

MHSRS-19-02143 - SESSION 2 - #518
Physics-based Neutralization of Threats to Human Tissues and Organs
Presentation Author: Dr. Stylianos Koumlis

MHSRS-19-02245 - SESSION 2 - #519
Healthcare among Special Operations Forces Diagnosed and Treated for Traumatic Brain Injury
Presentation Author: Dr. Heather Belanger

MHSRS-19-02246 - SESSION 2 - #520
A Prospective, Double Blind, Randomized, Sham-controlled, Clinical Trial to Evaluate the Safety and Efficacy of Biometrics-guided Magnetic EEG Resonance Therapy Treatment of Persistent Post-concussive Symptoms Following Traumatic Brain Injury
Presentation Author: Dr. David Keyser

MHSRS-19-02272 - SESSION 2 - #521
Moderate-to-severe Self-reported Insomnia and Frequent Daytime Sleepiness Increase Athletes’ Risk for Sustaining
a Sports-related Concussion  
Presentation Author: Dr. Adam Raikes

MHSRS-19-02325 - SESSION 2 - #522  
Using Trait Resilience and Heart Rate Variability to Predict Cerebrovascular Reactivity in Special Operations Forces Soldiers  
Presentation Author: Ms. Nikki Barczak

MHSRS-19-02449 - SESSION 2 - #523  
Monosodium Luminol Alleviates Brain Dysfunction in a Model of Chronic Gulf War Illness with Modulation of Oxidative Stress and Inflammation in the Brain and Circulating Blood  
Presentation Author: Mrs. Sahithi Attaluri

MHSRS-19-02574 - SESSION 2 - #524  
Cognitive Functioning Following Concussion and the Role of Sleep  
Presentation Author: Ms. Kristina Clarke-Walper

**TBI BIOMARKERS: DIAGNOSTIC AND PROGNOSTIC INDICATORS**

MHSRS-19-00089 - SESSION 2 - #525  
Assessment of Far-forward Provider Performance in Using a Hand-held Algorithmic Electroencephalogram Device to Screen Traumatic Brain Injury  
Presentation Author: Dr. Robert DeLorenzo

MHSRS-19-00230 - SESSION 2 - #526  
Towards a Cognitive Stress Test for Concussion: Normobaric Hypoxia Reveals Hidden Deficits in the Saccades of Service Members with Mild Traumatic Brain Injury History  
Presentation Author: Dr. Leonard Temme

MHSRS-19-00328 - SESSION 2 - #527  
Deployable Visually Evoked Potential Monitor for Detecting Traumatic Brain Injury at Forward Clinics (Clinical Update)  
Presentation Author: Mr. Gordon Hirschman

MHSRS-19-00333 - SESSION 2 - #528  
Impact of Shock Wave Physics in Open Air on Blast-induced Traumatic Brain Injury  
Presentation Author: Ms. Barbara Rutter

MHSRS-19-00458 - SESSION 2 - #529  
Gender Difference Of Cortical Thickness and Diffusion Properties for the Patients with Traumatic Brain Injury  
Presentation Author: Dr. Maheen Adamson

MHSRS-19-00489 - SESSION 2 - #530  
Animal Model of Multiple Low-level Blast Injury Displays a Spectrum of Neuropathological and Neurobehavioral Changes  
Presentation Author: Dr. Kakulavarapu RamaRao

MHSRS-19-00567 - SESSION 2 - #531
Widespread Dendritic Pathology is Evident Following Severe Penetrating Brain Injury in Rats
Presentation Author: Dr. Sindhu Kizhakke Madathil

MHSRS-19-00605 - SESSION 2 - #532
Neuron- and Glia-derived Exosomes as Novel Blood Biomarkers of Concussion and Subconcussive Conditions
Presentation Author: Dr. Masato Mitsuhashi

MHSRS-19-00779 - SESSION 2 - #533
A Novel Portable Venomanometer to Measure Episcleral Venous Pressure: A Biomarker for Intracranial Pressure
Presentation Author: Dr. Deepta Ghate

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MHSRS-19-00960 - SESSION 2 - #535
The Utility of Single-photon Emission Computed Tomography/computed Tomography in Mild Traumatic Brain Injury: Case Report
Presentation Author: Dr. Irma Molina-Vicenty

MHSRS-19-00985 - SESSION 2 - #536
Combat and Operational Stress Effects on Amygdala Blast Neuropathology and Behavior
Presentation Author: Dr. Michael Urban

MHSRS-19-01011 - SESSION 2 - #537
Rapid and Sensitive Detection of Glial Fibrillary Acidic Protein by Utilizing Plasmonic Nanoparticles
Presentation Author: Dr. Fei Peng

MHSRS-19-01045 - SESSION 2 - #538
Development of a Novel in-vivo Objective Retina Test to Diagnose Traumatic Brain Injury
Presentation Author: Dr. Lyndsay Randolph

MHSRS-19-01092 - SESSION 2 - #539
Mild Traumatic Brain Injury Assessment: Towards the Development of Reliable Diagnostic and Prognostic Biomarkers
Presentation Author: Dr. George Zouridakis

MHSRS-19-01102 - SESSION 2 - #540
Normalization of Brain Activity Accompanies Reduced Insomnia in Chronic Post-concussive Syndrome - A Team TBI Study
Presentation Author: Mr. Donald Krieger

MHSRS-19-01113 - SESSION 2 - #541
Toward Validation of mTBI Phenotyping with Neurocomputational Models of Static Balance and Dynamic Walking
Presentation Author: Dr. Gregory Ciccarelli

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Automated Optic Nerve Sheath Diameter Measurement
Poster Session 2

Presentation Author: Dr. Reza Soroushmehr

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Presentation Author: Dr. Davneet Minhas

**MHSRS-19-01181 - SESSION 2 - #544**

Fusion Neurocognitive Eye Tracking: Validation of an Optimized Mobile Platform for Assessment of Mild Traumatic Brain Injury in Military Medical Environments

Presentation Author: Dr. Mark Ettenhoefer

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A Novel Machine Learning Model to Disentangle Patient Heterogeneity for Accurate Prognosis of Individuals with Mild Traumatic Brain Injury

Presentation Author: Dr. Jing Li

**MHSRS-19-01273 - SESSION 2 - #546**

Virtual Reality Based Assessment of Visual and Cognitive Performance of the Warfighter

Presentation Author: Dr. Wolfgang Fink

**MHSRS-19-01307 - SESSION 2 - #547**

Associations Between White-matter Abnormalities and Clinical Outcomes in Sport-related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD Care Consortium

Presentation Author: Dr. Yu-Chien Wu

**MHSRS-19-01342 - SESSION 2 - #548**

Blood Biomarkers in Acute Sport-related Concussion: Findings from the NCAA-DoD Care Consortium

Presentation Author: Dr. Michael McCrea

**MHSRS-19-01354 - SESSION 2 - #549**

Optimization of the Concussion Assessment Battery

Presentation Author: Dr. Steven Broglio

**MHSRS-19-01381 - SESSION 2 - #550**

Longitudinal Changes in Homotopic Region Connectivity in Concussion: A FMRI Study

Presentation Author: Dr. Catherine Chong

**MHSRS-19-01386 - SESSION 2 - #551**

Post-traumatic vs Non-traumatic Headaches: Differences in Phenotype, Prognosis, and Medical Consultation

Presentation Author: Dr. Ann Scher

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Correlation of Elevated Serum MicroRNA Expression with Neurocognitive Function in Sub-concussive and
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Presentation Author: Dr. Manish Bhomia

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Cumulative Adversity May Predict the Development of Persistent Symptoms Following Mild Traumatic Brain Injury
Presentation Author: Dr. Matthew Reid

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The UCD-DGMC TBI Precision Medicine Network for Complex Trauma
Presentation Author: Dr. Ryan Martin

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Exploring Genomic Signatures of Neural Regeneration to Assess Long-term Recovery from Blast Brain Injury and Mechanical Neurotrauma
Presentation Author: Dr. Stan Svetlov

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Injury Severity Profile of Repeated Closed-head Concussions on Cognitive Outcome and White Matter Pathology
Presentation Author: Dr. Adem Can

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Alterations in Brain Microrna Expression Following Closed-head Concussive Injury
Presentation Author: Dr. Bernard Srambical Wilfred

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Systolic Target Assessment Tool
Presentation Author: Mr. Justin Massey

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Understanding Headaches Characteristics in the VA Traumatic Brain Injury Population
Presentation Author: Ms. Nytzia Licona

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Presentation Author: Dr. Kirtley Thornton

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Blood Based Biomarkers of Neurodegeneration Predict Disordered Sleep in Mild Traumatic Brain Injury Warfighters
Presentation Author: LCDR J. Kent Werner

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Presentation Author: Dr. Nicholas Davenport

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Presentation Author: Dr. Nam Tran

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Subacute HDAC Inhibition Reduces the Long-term Neuropathology and Behavior Dysfunction in Mouse CCI Model of Traumatic Brain Injury
Presentation Author: Dr. Samba Reddy

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A Novel Device for Modeling Blast Traumatic Brain Injury Pressures in Laboratory
Presentation Author: Dr. Ricardo Mejia-Alvarez

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In Vitro Quantitative Analysis of Neuronal-structural and Electrophysiological Changes Following Mechanical Loading
Presentation Author: Dr. Ann Mae DiLeonardi

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Presentation Author: Dr. Katie Edwards

MHSRS-19-02132 - SESSION 2 - #569
A Novel Algorithm That Integrates Clinical Data, Electroencephalogram, and Neuroimaging Biomarkers in TBI Diagnosis
Presentation Author: Mr. Santosh Srinivasaiah

MHSRS-19-02175 - SESSION 2 - #570
Neurophysiological Bases of Human Neurofunctional Assessments of mTBI
Presentation Author: Dr. Oleg Favorov

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RNA Sequencing Following Multiple Traumatic Brain Injuries in a Closed-head Mouse Model
Presentation Author: Dr. Kartik Balachandran

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Impact of Blue-wavelength Light Therapy on Cortical Volume and Simple Reaction Time Following Mild TBI
Presentation Author: Dr. Sahil Bajaj

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Acute Biomarkers in Military Cadets Sustaining Concussions Outside of Varsity Sports Participation
Presentation Author: Dr. Christopher Giza

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Moderate Traumatic Brain Injury Leads to Acute Changes in Cardiac Function In Rats
Presentation Author: Mr. Alfredo Lucas

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Presentation Author: Mr. Suhas Vidhate

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Presentation Author: Dr. Avril Genene Holt

**MHSRS-19-02400 - SESSION 2 - #577**
Ultra-high Performance Head Gradient for Assessment of Brain Microstructure Changes in Mild Traumatic Brain Injury at 3.0 Tesla: Initial Imaging Tests  
Presentation Author: Dr. Thomas Foo

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Automated Pupillary Screening and a Portable Headset for Ocular Monitoring  
Presentation Author: Dr. Dogancan Temel

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Presentation Author: Dr. Manish Bhomia

**MHSRS-19-02497 - SESSION 2 - #580**
Plasma Levels of Neurotrophic Factors in Mild Traumatic Brain Injury Compared to Gulf War Illness  
Presentation Author: Dr. Brahma Mulugu

**MHSRS-19-02505 - SESSION 2 - #581**
Progressive Structural and Functional Neurodegeneration in Veterans with Mild Traumatic Brain Injury  
Presentation Author: Dr. Casey Gilmore

**MHSRS-19-02549 - SESSION 2 - #582**
Middle Cerebral Artery Flow Velocity, a Measure of Cerebral Blood Flow, Measured Acutely Following Sports Related Concussion, May Predict Symptom Burden and Cognitive Functioning 30 and 90 Days after Injury  
Presentation Author: Dr. Tonia Sabo

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Presentation Author: Capt Paul Elsbernd

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Presentation Author: Mr. Carlos Torres-Quinones

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COMBAT CASUALTY CARE FOR THE NAVY: CHALLENGES AT SEA

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Presentation Author: Dr. Win Liu

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Maritime Capabilities to Conduct Damage Control Surgical Interventions
Presentation Author: Ms. Domenique Selby

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Presentation Author: CDR David Barrows

MHSRS-19-01689 - POSTER SESSION 2 - #590
U.S. Navy Search and Rescue Patient Transport and Care Missions at Sea, 2009–2018
Presentation Author: Ms. Stephanie McWhorter

MHSRS-19-02606 - POSTER SESSION 2 - #591
Trauma Knowledge, Confidence, and Stress Assessments at Navy Trauma Training Center: Preliminary Analyses
Presentation Author: CDR Tony Torres
WARFIGHTER PERFORMANCE

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Reinforced Pelvic Protection Mitigates the Effects of Dismounted Pelvic Blast Injury
Presentation Author: Dr. Iain Rankin

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Fitforce Planner: Data-driven Physical Training Programming for Reducing USMC Musculoskeletal Injuries
Presentation Author: Mr. Timothy Clark

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New Training System Based on the Discovery of Subperiosteal Transmission of Pressures between Joint Capsules
Presentation Author: Dr. Mark Pitkin

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U.S. Service Member Fall Injuries, 2001-2018: A Descriptive Study with Implications for Prevention
Presentation Author: Ms. Jessica Liendo

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Presentation Author: LTC David Kauvar

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Presentation Author: Mr. Manuel Caballero

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Presentation Author: CPT John Harless

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A Software Platform for Dynamic Simulation of Anatomically Realistic Warfighter Avatars during Military-relevant Tasks
Presentation Author: Dr. Nathan Pickle

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Presentation Author: Dr. Zhiqing Cheng
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Shoulder Proprioception Quantification for Injury Prevention and Return To Duty Decision-making
Presentation Author: LTC Margaret Nowicki

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The Prevalence of Bunion Deformity in the Active Duty Military
Presentation Author: LTC Deanna Duran

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A Non-inferiority Study Comparing a Photobiologic Therapy Kiosk to Oral Vitamin D Supplementation to Optimize Serum 25(OH)D
Presentation Author: Dr. Mary McCarthy

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A Retrospective Study of Foot Biomechanics and Injury History in Elite Athletes at the U.S. Naval Academy
Presentation Author: Mr. Joshua Jeffries

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Associations between an Integrated Musculoskeletal Injury Risk Mitigation Program and Self-reported Pain during U.S. Military Training
Presentation Author: Ms. Carolyn Dartt

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Novel Approaches to Get Ahead of Neuro-musculoskeletal Injuries in Conventional Military Forces through Embedded Multi-disciplinary Teams
Presentation Author: MAJ Nicholas Koreerat

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Loss Of Hypoxia Signaling Limits Skeletal Muscle Response To Aerobic Exercise In Aging
Presentation Author: Dr. Yori Endo

MANAGEMENT OF SLEEP AND FATIGUE FOR MAXIMIZATION OF SOLDIER OPERATIONAL READINESS

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Self-report Insomnia Symptoms Robustly Predicts Posttraumatic Stress across the Deployment Cycle in an Armored Brigade Combat Team
Presentation Author: CAPT Ashlee McKeon

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Presentation Author: MAJ Angela Yarnell

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Presentation Author: Dr. Toby Elliman

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Presentation Author: Mr. Richard Hanbury

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Presentation Author: Lt Col Claire Goldie

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Presentation Author: Dr. Nita Shattuck

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**Daily Administered Blue Light Therapy Reduces Daytime Sleepiness and Improves Somatic Symptoms Following Mild Traumatic Brain Injury**
Presentation Author: Dr. Adam Raikes

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Presentation Author: Ms. Anna Burns

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Presentation Author: Dr. Cristobal S. Berry-Caban

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Presentation Author: Col John Sladky

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Presentation Author: Dr. Ryan Mayes

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Presentation Author: Ms. Sabrina Drollinger

SECURING WARFIGHTER DOMINANCE IN THE FUTURE AIR BATTLESPACE

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Presentation Author: Lt Aditya Prasad

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Presentation Author: Mr. Matthew Pierce

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Presentation Author: COL Steven Hadley
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Pilot Questionnaire to Characterize Neck Pain Related to Forward Helmet Center of Gravity (A Pilot Venture Focused on the Air National Guard)
Presentation Author: Mr. Anthony Turner

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Presentation Author: Mr. Steven Williams

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Presentation Author: Dr. Harsha T. Garimella

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Presentation Author: Dr. Hoon Choi

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Presentation Author: Dr. Fayez Safadi

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mTBI Detection using Coordination of Vocal Dynamics in a Deep Learning Context
Presentation Author: Ms. Sophia Yuditskaya
EXPEDITIONARY NURSING

MHSRS-19-00072 – POSTER SESSION 2 - #669
Perioperative Deployment Readiness Guide
Presentation Author: CPT Julia Catanese

MHSRS-19-00785 – POSTER SESSION 2 - #670
Nonbattle-related Deaths among U.S. Service Members Deployed in Iraq and Afghanistan: Etiology and Trends
Presentation Author: Dr. Tuan Le

MHSRS-19-00941 – POSTER SESSION 2 - #671
Evaluation of Clinical Nurse Transition Program at United States Army Hospitals
Presentation Author: LTC Pedro Oblea

MHSRS-19-00965 – POSTER SESSION 2 - #672
Military Surgical Team Communication: Implications for Safety
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Combat Casualty Care Readiness Achieved Following Level 1 Trauma/burn Clinical Exposure
Presentation Author: Mrs. Krystal Valdez-Delgado

MHSRS-19-01832 – POSTER SESSION 2 - #674
A Theory for Expeditionary Nursing Practice – Service Beyond Self
Presentation Author: Dr. Mona Pearl Treyball

MHSRS-19-01842 – POSTER SESSION 2 - #675
Practical Obesity Management Course Improves Obesity Treatment Skills in Healthcare Providers
Presentation Author: Dr. Magdalena Pasarica

MHSRS-19-02109 – POSTER SESSION 2 - #676
Antibiotics in Active Duty Appendicitis Population Trial
Presentation Author: LCDR Mary Arbuthnot

MHSRS-19-02608 – POSTER SESSION 2 - #677
Options for Maintaining Clinical Proficiency during Peacetime
Presentation Author: Dr. Heather Krull

MHSRS-19-02646 – POSTER SESSION 2 - #678
Risk Factors for Pressure Injury Development in Non-critical Aeromedical Evacuation Trauma Patients
Presentation Author: Ms. Darcy Mortimer
UPDATES ON MILITARY WOMEN’S HEALTH

MHSRS-19-00120 - POSTER SESSION 2 - #679
The Impact of Safe Passages Training on the Incidence of Perineal Trauma During Childbirth
Presentation Author: Col Barton Staat

MHSRS-19-00236 - POSTER SESSION 2 - #680
Long-term Health Consequences of Preeclamptic Pregnancies in the United States Armed Forces:
A Case-control Study in Progress
Presentation Author: Dr. Andrea Loewendorf

MHSRS-19-00258 - POSTER SESSION 2 - #681
Germline Testing in African American Women with Invasive Breast Cancer
Presentation Author: Dr. Rachel Ellsworth

MHSRS-19-00260 - POSTER SESSION 2 - #682
Evaluation of Surgical Disparities between African American and European American Women Treated for Breast
Cancer within an Equal-access Military Health Care System
Presentation Author: Dr. Rachel Ellsworth

MHSRS-19-00261 - POSTER SESSION 2 - #683
Pathology and Survival of Breast Cancer within the Active Duty Servicewoman Population
Presentation Author: Dr. Rachel Ellsworth

MHSRS-19-00266 - POSTER SESSION 2 - #684
Pathologic Characteristics of African American Women with Breast Cancer Treated at the DoD's Murtha Cancer
Center: Understanding Why Survival Cancer is not Disparate to European American Women When Treated Within
the U.S. Military Healthcare System
Presentation Author: Dr. Rachel Ellsworth

MHSRS-19-00385 - POSTER SESSION 2 - #685
An Analysis of Concussion Injuries During the First Three Years of Mandatory Boxing for Female Cadets at the
U.S. Air Force Academy
Presentation Author: Dr. Joel Robb

MHSRS-19-00442 - POSTER SESSION 2 - #686
Relationship of Prenatal Anxiety and Deployment on Maternal Inflammatory Cytokines: Machine Learning
Provides Insight to Highly Dimensional Data
Presentation Author: Dr. Karen Weis

MHSRS-19-00452 - POSTER SESSION 2 - #687
Differentiating Compensatory Mechanisms Associated to Low Tolerance to Central Hypovolemia in Women
MHSRS-19-00591 - POSTER SESSION 2 - #688
Peptide-based Nanohydrogels for Urinary Incontinence in Women
Presentation Author: Dr. Eun Ji Chung

MHSRS-19-00699 - POSTER SESSION 2 - #689
Female Military Officers Report a Desire for Menstrual Suppression During a 6-month Military Training Course
Presentation Author: Dr. Emily Southmayd

MHSRS-19-00703 - POSTER SESSION 2 - #690
Interrelationship between Sex, Age, Blood Volume and VO2max
Presentation Author: Dr. Mithun Suresh

MHSRS-19-00704 - POSTER SESSION 2 - #691
Capacity to Compensate for Central Hypovolemia and Effects of Menstrual Cycle Phases
Presentation Author: Dr. Taylor Schlotman

MHSRS-19-00901 - POSTER SESSION 2 - #692
Sex Differences on Postconcussion Symptom Reporting in Military Service Members Following Mild Traumatic Brain Injury are Moderated by Post Traumatic Stress Symptoms
Presentation Author: Dr. Rael Lange

MHSRS-19-00935 - POSTER SESSION 2 - #693
Time to Surgery and Overall Survival after a Breast Cancer Diagnosis in the Military Health System
Presentation Author: Dr. Yvonne Eaglehouse

MHSRS-19-01621 - POSTER SESSION 2 - #694
Implementation of Obstetrical Emergency in-situ Team Simulation Drills with Novel Reporting and Analytical System for all United States Military Hospitals
Presentation Author: Col Barton Staat

MHSRS-19-01707 - POSTER SESSION 2 - #695
Menstrual Practices in Operational Military Women
Presentation Author: MAJ Angela K. Phillips

MHSRS-19-01828 - POSTER SESSION 2 - #696
Evaluation of Laser Microdissected Primary Breast Tumors for RNA-seq Over Bulk Processing
Presentation Author: Dr. Praveen-Kumar Raj-Kumar

MHSRS-19-02075 - POSTER SESSION 2 - #697
Survival Outcomes in Epithelial Ovarian Cancer Patients in an Equal Access Health System Compared with the National Surveillance, Epidemiology, and End Results Program
Presentation Author: MAJ David Anderson

MHSRS-19-02124 - POSTER SESSION 2 - #698
Gender Differences in Gulf War Illness: A Re-analysis of Data from the CDC Air Force Study Using CDC and Kansas
Case Definitions
Presentation Author: Dr. Vahe Heboyan

MHSRS-19-02187 - POSTER SESSION 2 - #699
Sex Differences in Risk-taking Behavior and Brain Morphometry in Healthy Individuals
Presentation Author: Dr. Sahil Bajaj

MHSRS-19-02194 - POSTER SESSION 2 - #700
Frequency of Symptoms among Female Veterans of the 1991 Gulf War Era: Results from the Cooperative Studies Program 585 Gulf War Era Cohort and Biorepository
Presentation Author: Dr. Stacey Iobst

MHSRS-19-02408 - POSTER SESSION 2 - #701
Age, Histology and Stage Predict Survival Following Adjuvant Chemotherapy and Radiation versus Radiation Therapy Alone in High-risk Endometrial Cancer: An Observational Study of 20,015 Patients Based on PORTEC-3 Criteria
Presentation Author: Lt Col Yovanni Casablanca

MHSRS-19-02475 - POSTER SESSION 2 - #702
Perceptions of Race and Gender Equality in Leadership and Career Advancement among Military Family Physicians
Presentation Author: MAJ Mariama Massaquoi

MHSRS-19-02522 - POSTER SESSION 2 - #703
Factors to Explain Racial Disparity in Survival for Women with Uterine Cancer: Further Investigations by Histologic Subtype
Presentation Author: Dr. Kathleen Darcy

MHSRS-19-02536 - POSTER SESSION 2 - #704
Histology Matters in Developing a Framework For Explaining Racial Disparity in Cervical Cancer Survival
Presentation Author: Dr. Kathleen Darcy

MHSRS-19-02526 - POSTER SESSION 2 - #705
Contraceptive Use and Childbirth Rates by Service Branch During the First 24 Months on Active Duty in the United States Military from 2013 to 2018: A Retrospective Cohort Analysis
Presentation Author: MAJ Joshua Smalley

MHSRS-19-02571 - POSTER SESSION 2 - #706
Longitudinal Influence of Military Policy on Contraceptive Use and Childbirth among Female Recruits
Presentation Author: MAJ Joshua Smalley
PREDICTIVE ANALYTICS WITHIN THE MILITARY HEALTH SYSTEM

MHSRS-19-00027 - POSTER SESSION 2 - #707
Factors Related to Re-excision Following Primary Breast Conserving Surgery for Women with Breast Cancer in the U.S. Military Health System
Presentation Author: Dr. Yvonne Eaglehouse

MHSRS-19-00927 - POSTER SESSION 2 - #708
Racial Comparisons in Receipt of Recommended Colon Cancer Treatment in an Equal-access Health System
Presentation Author: Dr. Yvonne Eaglehouse

MHSRS-19-00151 - POSTER SESSION 2 - #709
Evaluation of a High-utilizer Case Management Pilot Program
Presentation Author: Ms. Shing Lai Cheng

MHSRS-19-00176 - POSTER SESSION 2 - #710
Genetic Testing to Reduce Musculoskeletal Injuries in SOF
Presentation Author: Dr. Stuart Kim

MHSRS-19-00453 - POSTER SESSION 2 - #711
Presentation Author: Dr. Yll Agimi

MHSRS-19-01796 - POSTER SESSION 2 - #712
Estimates of Long-term Disability among U.S. Service Members with Traumatic Brain Injuries
Presentation Author: Dr. Yll Agimi

MHSRS-19-00509 - POSTER SESSION 2 - #713
Artificially Genetic: Using Precision Operational Health and Performance Principles to Predict Risk, Outcomes, and Utilization in the Military Health System
Presentation Author: Dr. Richard Chapleau

MHSRS-19-00808 - POSTER SESSION 2 - #714
Proportion of Non-adenomatous Pathology on Colonoscopic Biopsy among Patients Treated in a Military Treatment Facility
Presentation Author: ENS Samuel Billingslea

MHSRS-19-00920 - POSTER SESSION 2 - #715
Prevalence of Sleep Disorders and Medication Use Among Active Duty Army for Fiscal Year 2018: Impact on Deployability
Presentation Author: Dr. Jaime Devine

MHSRS-19-00925 - POSTER SESSION 2 - #716
Determining the Appropriate Follow-up Times for Apollo Studies from TCGA Data
Poster Session 2

Presentation Author: Mr. Jianfang Liu

**MHSRS-19-00948 - POSTER SESSION 2 - #717**
**Individualized Avatar with Complete Anatomy: Repositioning and Animating**
Presentation Author: Dr. Zhiqing Cheng

**MHSRS-19-00949 - POSTER SESSION 2 - #718**
**Brain Cancer Incidence: A Comparison of ACTUR and SEER Populations**
Presentation Author: Ms. Julie Bytnar

**MHSRS-19-00991 - POSTER SESSION 2 - #719**
**Comparative Study of Survival, Diagnosis and Treatment among Small Cell Lung Cancer Cases in the U.S. Military Health System and Cases from the U.S. National Surveillance, Epidemiology, and End Results Program**
Presentation Author: Dr. Jie Lin

**MHSRS-19-00995 - POSTER SESSION 2 - #720**
**Comparison of Survival among Colon Cancer Cases in the U.S. Military Health System and Cases from the U.S. General Population in the National Surveillance, Epidemiology, and End Results Program**
Presentation Author: Dr. Jie Lin

**MHSRS-19-01141 - POSTER SESSION 2 - #721**
**The Burden of Skin Disease on Deployed Servicemembers**
Presentation Author: CPT Elizabeth Taylor

**MHSRS-19-01227 - POSTER SESSION 2 - #722**
**Predicting Day Length of Duty Restriction Using Text Mining and Machine Learning Algorithms**
Presentation Author: Mr. Aron Trevino

**MHSRS-19-01283 - POSTER SESSION 2 - #723**
**Predictive Analytics to Identify Patients with Rising Risks of Chronic Conditions for Disease Management**
Presentation Author: Mr. Lemma Regasa

**MHSRS-19-01309 - SESSION 2 - #724**
**Similarity Analysis Using Deep Learning And Latent Semantic Indexing Techniques**
Presentation Author: Dr. Bernardo Buenviaje

**MHSRS-19-01339 - POSTER SESSION 2 - #725**
**Development of a Predictive Healthcare Tool Using Electronic Health Record Bioinformatics to Inform Personalized Evidence-based Pressure Injury Management for Veterans With Spinal Cord Injury**
Presentation Author: Dr. Kath Bogie

**MHSRS-19-01375 - POSTER SESSION 2 - #726**
**External Validation of PATHFx Version 3.0 in Patients Treated Surgically and Non-surgically for Symptomatic Skeletal Metastases**
Presentation Author: Lt Ashley Anderson
MHSRS-19-01383 - POSTER SESSION 2 - #727
Racial and Service Connected Disability Disparities in Civilian Assault and Firearm TBI Injury and Costs among U.S. Military Veterans: Evidence from a Level One Trauma Center
Presentation Author: Dr. Clara Dismuke-Greer

MHSRS-19-01393 - POSTER SESSION 2 - #728
Clarity Bioanalytics: Applications of Machine Learning for Biological Cell Image Analysis
Presentation Author: Dr. Patrick McLendon

MHSRS-19-01397 - POSTER SESSION 2 - #729
Pharmacogenomics and Readiness in the Military Health System
Presentation Author: Ms. Lydia Hellwig

MHSRS-19-01446 - POSTER SESSION 2 - #730
Five Year Risk of Hypertension after Combat Injury: A Predictive Model
Presentation Author: Lt Col Ian Stewart

MHSRS-19-01484 - POSTER SESSION 2 - #731
Identification of Candidate Biomarkers for Head and Neck Cancer Using Targeted Proteomics and Longitudinal Samples from the DoD Serum Repository
Presentation Author: Dr. Tao Liu

MHSRS-19-01524 - POSTER SESSION 2 - #732
Predictors of Overdose, Chronic Opioid Use and Suicide Related Behaviors in Veterans: Why We Need DoD Data to Understand the DoD-VA Transition
Presentation Author: Dr. Mary Jo Pugh

MHSRS-19-01525 - POSTER SESSION 2 - #733
Medical Utilization as a Measure of Return on Investment for Traumatic Brain Injury Care in Europe
Presentation Author: Dr. Stephanie Maxfield-Panker

MHSRS-19-01527 - POSTER SESSION 2 - #734
Clinical Utility of Heart Chest Pain Protocol at NMCP
Presentation Author: Lt Michael Lloyd

MHSRS-19-01536 - POSTER SESSION 2 - #735
Predictors of Attrition from Combat Training: The IDF Perspective
Presentation Author: CPT Avishai Tsur

MHSRS-19-01542 - POSTER SESSION 2 - #736
Predictive Modeling for Cardiovascular Event Prevention
Presentation Author: Ms. Patricia Nguyen

MHSRS-19-01655 - POSTER SESSION 2 - #737
Predictive Modeling for Cardiovascular Event Prevention
Developing Models To Predict Performance on Selected HEDIS® Diabetes Quality of Care Measures in the MHS Population
Presentation Author: Mrs. Brooke Asbury

Non-invasive Measurement of Carotid Plaque Composition to Improve Risk Assessment of Stroke
Presentation Author: Dr. Russell Fedewa

Contribution of Department of Defense Cancer Information to the Oncology Research Information Exchange Network Avatar Research Program
Presentation Author: Ms. Kimberly Murtha

Predicting the Future Occurrence of Hemorrhage Using a Noninvasive Approach
Presentation Author: Mr. Navid Rashedi

Homeland Explosive Consequence Assessment Tool Medical Mitigation Model: Assessing the Benefits of the Public Health Response to an Explosive Terrorism Attack
Presentation Author: Mr. Kevin Wegman

Utilization, Cost and Clinical Outcomes Before and After Implementation of Separate Pediatric Protocols for Care of the Febrile Child Younger than 160 Days
Presentation Author: LT Megan Halliday

The Establishment and Implementation of Murtha Cancer Center Biobank as a Participating Member of the Oncology Research Information Exchange Network
Presentation Author: Ms. Nicole Wolf

Discrete Event Simulation for Modeling of Military Medical Center Response to a Mass Casualty Incident
Presentation Author: CPT Christopher Marenco

Noninvasive Enabling Technology, New Physiological Monitoring, and Big Data
Presentation Author: Dr. Joseph Chaiken
MHSRS-19-02206 - POSTER SESSION 2 - #748
An Informatics Infrastructure Task Force for the Applied Proteogenomics Organizational Learning and Outcomes Consortium as Part of the Cancer Moonshot Program
Presentation Author: Mr. Leonid Kvecher

MHSRS-19-02240 - POSTER SESSION 2 - #749
Predictors of Psychological Well-Being among Junior Enlisted Sailors in the Navy Nuclear Propulsion Training Pipelines
Presentation Author: Dr. Justin Handy

MHSRS-19-02322 - POSTER SESSION 2 - #750
Presentation Author: Mr. Benjamin Clapp

MHSRS-19-02323 - POSTER SESSION 2 - #751
Utilization of the Emergency Department in a Universally Covered Population
Presentation Author: Dr. Tomas Andriotti

MHSRS-19-02368 - POSTER SESSION 2 - #752
Admissions from the Emergency Department in a Universally Covered Population
Presentation Author: Dr. Tomas Andriotti

MHSRS-19-02373 - POSTER SESSION 2 - #753
Identifying Risk Factors for Opioid Abuse and Misuse in Outpatient Active Duty Air Force
Presentation Author: Dr. Paul Schroeder III

MHSRS-19-02409 - POSTER SESSION 2 - #754
Developing an Asplenic Patient Registry for Air Force Readiness
Presentation Author: Dr. Paul Schroeder III

MHSRS-19-02416 - POSTER SESSION 2 - #755
Predicting Deployability from Modifiable Behaviors in Active Duty Air Force Service Members
Presentation Author: Dr. Paul Schroeder III

MHSRS-19-02383 - POSTER SESSION 2 - #756
AMSARA/DSAR: Leveraging Epidemiological Research and Predictive Analytics for Military Stakeholders
Presentation Author: Mrs. Caitlin Rushin

MHSRS-19-02384 - POSTER SESSION 2 - #757
Trends in Prediabetes Prevalence in the U.S. Active Duty Military Population
Presentation Author: Capt Courtney Clutter
MHSRS-19-02401 - POSTER SESSION 2 - #758
Predictive Modeling for Differential Diagnosis and Mortality Risk Assessment
Presentation Author: Dr. Tony Lindsey

MHSRS-19-02631 - POSTER SESSION 2 - #759
Does Objective, Adjunctive Information from EEG Change Prescribing in Depression?
Presentation Author: Mr. George Carpenter

MHSRS-19-02634 - POSTER SESSION 2 - #760
Centralization of Pathology Consultations at the Joint Pathology Center Permits the Tracking and Trending of Diagnoses and Quality across the DoD and VA Healthcare Systems
Presentation Author: COL Joel Moncur

MHSRS-19-02640 - POSTER SESSION 2 - #761
Analysis of Joint Pathology Center Consultations from 2018 Identifies the Most Common Diagnostic Challenges across DoD and VA Healthcare
Presentation Author: COL Joel Moncur
### MHSRS 2019 Exhibits by Booth Number

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*as of 31 July 2019*
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

MHSRS 2019 EXHIBITS BY CATEGORY

**Blood and Coagulation Systems**
Beeken Biomedical
Cellphire, Inc.
CFD Research Corporation
CytoSorbents
EMIT Corporation
ICON GPHS Inc.
Leidos Life Sciences
Military & Health Research Foundation

**Drug Delivery Systems**
Battelle
Neurowave Systems
NuShores Biosciences LLC
PCI
Walter Reed Army Institute of Research

**Education**
ArchieMD
DHA/J-9/Research & Development Directorate
Elsevier
Indiana University
Laerdal Medical
Operative Experience
Phacon Inc.
SonoSim
VCOM

**Emergency Medical Equipment**
Belmont Instrument LLC
Chinook Medical Gear, Inc.
Combat Medical
EMIT Corporation
Essex Industries
Ferno Military Systems
Fujifilm Sonosite
Getinge
Goldbelt
Iron Bow Technologies
Masimo
Neural Analytics
North American Rescue, LLC
Panakeia
PCI
Pelican BioThermal
RDT, a Philips Company
Thornhill Medical
TransLite
ZOLL Medical Corporation

**Environmental & Occupational**
Diversified Technical Systems (DTS)

**Health Readiness**
Air Force Medical Evaluation Support Activity
DHA SBIR/STTR
DHA/J-9/Research & Development Directorate
Iron Bow Technologies
Naval Health Research Center
nScrip Inc.
Shoreland

**Hearing & Vision**
Diversified Technical Systems (DTS)
USAMRDC

**Human Performance**
ADS, Inc.
BioLab Sciences
Cera Products, Inc.
CFD Research Corporation
Drip Drop Hydration
Emovi, Inc.
Henry M. Jackson Foundation for the Advancement of Military Medicine
KBR
Naval Health Research Center
nScrip Inc.
Panakeia
U.S. Army Aeromedical Research Laboratory
University of Pittsburgh

**Hydration**
ADS, Inc.
Arcos
Cera Products, Inc.
Drip Drop Hydration

**Imaging**
Aseptico
Federal Interagency Traumatic Brain Injury Informatics System (FITBIR)
Fujifilm Sonosite
GE Healthcare
MolecuLight Inc.

**Infectious Disease - Diagnostics, Treatments**
Cera Products, Inc.
CytoSorbents
Henry M. Jackson Foundation for the Advancement of Military Medicine
Exhibits by Category

MHSRS 2019 EXHIBITS BY CATEGORY

Information Technology - Health
Air Force Medical Evaluation Support Activity
Arcos
Federal Interagency Traumatic Brain Injury Informatics System (FITBIR)
GE Healthcare
InTouch Health
Iron Bow Technologies
KCI, An Acelity Company
Leidos Life Sciences

Musculoskeletal Injury Prevention
Emovi, Inc.
U.S. Army Aeromedical Research Laboratory
USAF - AFRL

Nutrition
Drip Drop Hydration

Osteopathy
VCOM

Other
4D Bio3
Argentum Medical
DHA/J-9/Research & Development Directorate
Ferno Military Systems
Fujifilm SonoSite
InTouch Health
KCI, An Acelity Company
Leidos Life Sciences

Medical Technology Enterprise Consortium
Neural Analytics
Osteopore Int’l Ptd Ltd.
Rho, Inc.
The Metis Foundation
Two Rivers Medical
Wake Forest Institute for Regenerative Medicine

Pain Management
AcelRx
Electromedical Products International, Inc.
NDRI
Rho, Inc.

Patient Transport/En Route Care
Belmont Instrument LLC
Chinook Medical Gear, Inc.
Essex Industries
Ferno Military Systems
Getinge
H&H Medical Corporation
Joint Operational Medicine Information Systems (JOMIS)
Masimo
Military & Health Research Foundation
PCI
Pelican BioThermal
Tactical Medical Solutions
Thornhill Medical
U.S. Army Aeromedical Research Laboratory
Z-Medica

Post Traumatic Stress Disorder
Electromedical Products International, Inc.

Prosthetics
nScrypt Inc.

Psychological Health
Electromedical Products International, Inc.
National Intrepid Center of Excellence (NICOE)
Rho, Inc.
Walter Reed Army Institute of Research

Rehabilitation - Craniomaxillofacial, Limb, Neuromusculoskeletal
Emovi, Inc.
NuShores Biosciences LLC
University of Pittsburgh

Simulations - Medical Training
ArchieMD
CFD Research Corporation
DHA SBIR/STTR
Goldbelt Frontier
Laerdal Medical
Marketing Assessment
North American Rescue, LLC
Operative Experience
Phacon Inc.
MHSRS 2019 EXHIBITS BY CATEGORY

**Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care**

- Air Force Medical Evaluation Support Activity
- Arcos
- Battelle
- Beeken Biomedical
- Belmont Instrument LLC
- BioDirection
- Chinook Medical Gear, Inc.
- Combat Medical
- Coreleader Biotech
- CytoSorbents
- DHA SBIR/STTR
- EMIT Corporation
- Essex Industries
- Goldbelt Frontier
- H&H Medical Corporation
- Henry M. Jackson Foundation for the Advancement of Military Medicine
- Indiana University
- Joint Operational Medicine Information Systems (JOMIS)
- Laerdal Medical
- Marketing Assessment
- Masimo
- Military & Health Research Foundation
- Next Science
- North American Rescue, LLC
- NuShores Biosciences LLC
- Operative Experience
- Panakeia
- Pelican BioThermal
- Prometheus Medical
- Prytime Medical Devices
- RDT, a Philips Company
- Rho, Inc.
- Tactical Medical Solutions
- The Geneva Foundation
- The Janz Corporation
- Thornhill Medical
- TransLite
- Trauma Insight
- TraumaFX Solutions
- University of Pittsburgh
- USAMRDC
- Z-Medica

**Traumatic Brain Injury**

- Battelle
- BioDirection
- BrainScope
- Diversified Technical Systems (DTS)
- Federal Interagency Traumatic Brain Injury Informatics System (FITBIR)
- ICON GPHS Inc.
- Indiana University
- National Intrepid Center of Excellence (NICoE)
- NDRI
- Neural Analytics
- Osteopore Int’l Ptd Ltd.
- Rho, Inc.
- The Geneva Foundation

**Wound Management**

- ADS, Inc.
- Argentum Medical
- Beeken Biomedical
- BioLab Sciences
- Combat Medical
- Coreleader Biotech
- H&H Medical Corporation
- KCI, An Acelity Company
- Marketing Assessment
- MolecuLight Inc.
- NDRI
- Next Science
- Trauma Insight
- USAMRDC
- Z-Medica
EXHIBITS

Join us in the Florida Exhibit Hall (Hall DEF–Lower Level) to learn about the latest equipment and services to benefit your research.

MONDAY, 19 AUGUST: 1800-2100
(Includes the Grand Opening Reception)
TUESDAY, 20 AUGUST: 0900-1630
WEDNESDAY, 21 AUGUST: 0900-1630

4D Bio3 | Booth 812 | www.usuhs.edu/4dbio3
4D Bio3 is a program of the Uniformed Services University (Bethesda, Maryland) that advances the readiness, health, and well-being of America’s Warfighters, veterans, and their families through innovation and translation of state-of-the-art biomedical technologies.
**Categories: Other**

AcelRx | Booth 1100 | www.acelrx.com
AcelRx Pharmaceuticals is a specialty pharmaceutical company focused on innovative therapies for the treatment of acute and breakthrough pain. Our lead products utilize sufentanil sublingual tablets, designed to address moderate-to-severe acute pain in hospital and/or medically supervised settings.
**Categories: Pain Management**

ADS, Inc. | Booth 706 | www.adsinc.com
ADS, Inc. provides equipment, procurement, logistics, and supply chain solutions. We offer access to the largest product and service selection, the broadest array of procurement and contract options, and world-class expertise and support to assist you every step of the way.
**Categories: Human Performance, Hydration, Wound Management**

AFMESA conducts operational tests and market research for organizations throughout DoD. Our mission is to advance Air Force healthcare through rapid independent operational testing of medical technologies and information systems. We identify risk to the warfighter. Since 2001, AFMESA has provided operational test support for government and COTS technology solutions that enhance the capabilities of deployed and fixed-facility medical personnel. Our 12-acre test site at Fort Detrick features EMEDS tents for operationally realistic test conditions.
**Categories: Health Readiness, Information Technology - Health, Trauma Care - Point of Injury/Prehospital/ Prolonged Field Care/Forward Surgical Care**

ArchieMD | Booth 1006 | www.archiemd.com
ArchieMD is a physician-led company that creates innovative educational products for a wide range of audiences within the health sciences.
**Categories: Education, Simulations - Medical Training**
Arcos | Booth 408 | www.burnnav.net
Arcos, Inc. is dedicated to the development of innovative medical technologies to improve the care, recovery and survivability of critical injuries. Arcos makes Burn Navigator, a clinical decision support app that guides fluids for severe burns. Burn Navigator uses a unique algorithm developed by the U.S. Army Burn Center to avoid over- and under-resuscitations. In USAISR's study of 70 patients, use of Burn Navigator resulted in less 24-hour fluids given, fewer ventilator days and reduction in mortality. Burn Navigator tablet apps are available via DISA Mobility, Google Play and the App Store. Phone apps coming soon!
Categories: Hydration, Information Technology - Health, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Argentum Medical | Booth 300 | www.silverlon.com
Silverlon's family of advanced 7-day use silver plated antimicrobial dressing have long been considered the "Gold Standard" to the military over the last two wars to treat blast injuries, massive complex wounds and burn injuries. Silverlon dressings are effective against a broad spectrum of wound pathogens, easy to use (particularly by inexperienced personnel), easy to store and easy for patient transport. Silverlon can be used for multiple indications and is considered a true force multiplier and an ideal product for both military and civilian (disaster response) applications.
Categories: Other, Wound Management

Battelle | Booth 901 | www.battelle.org
Battelle accelerates the medical product development timeline from ideation to evaluation to commercialization. We are redefining what's possible in drug delivery, usability testing and human centered design (HCD), molecular imaging, in vitro diagnostics, medical sensor development, neurotechnology, cybersecurity, mobile health, and big data analytics. Our multidisciplinary, cross-industry teams advance innovation by integrating world-class expertise across a wide range of science and engineering disciplines.
Categories: Drug Delivery Systems, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury

Beeken Biomedical | Booth 303 | www.beekenbiomedical.com
Beeken Biomedical/NuStat Hemafiber Technology
Categories: Blood and Coagulation Systems, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

Belmont Instrument LLC | Booth 412 | www.belmontmedtech.com
Belmont Medical Technologies is a leading provider of fluid management and patient temperature management solutions for use worldwide in medical facilities, military combat fields, and EMS settings. Belmont's technology is credited with saving thousands of lives globally by infusing warm blood and fluid into patients experiencing massive blood loss. Belmont's premier products include The Belmont® Rapid Infuser RI-2 and close-to-patient, portable and battery-operated buddy lite™ blood and fluid warmer.
Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

BioDirection | Booth 414 | www.biodirection.com
BioDirection is a privately held medical device company developing novel, cutting-edge and rapid point-of-care technologies for the objective diagnosis and management of concussion and other forms of traumatic brain injury (TBI).
Categories: Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury
BioLab Sciences | Booth 1013 | www.biolabsciences.net
MyOwn Skin is a unique product that BioLab Sciences owns, an exclusive U.S. license to grow a patient’s own skin in 5 to 7 days.

Categories: Human Performance, Wound Management

Bound Tree Medical | Booth 1102 | www.boundtree.com
Curaplex EMS products, chest, tourniquets

BrainScope | Booth 912 | www.brainscope.com
BrainScope® is a medical neurotechnology company that is pioneering the assessment of traumatic brain injury (TBI), including concussion. The company’s innovative BrainScope One system is an easy-to-use, non-invasive, hand-held platform that empowers clinicians to quickly make accurate head injury assessments at the point-of-care. The benefits could include diversion from the emergency department (ED), a major reduction in unnecessary CT scans, and early intervention for patients with functional injuries, including concussion—contributing to the best possible outcomes in the shortest possible time.

Categories: Traumatic Brain Injury

Cellphire, Inc. | Booth 606 | www.cellphire.com
Cellphire, Inc. is a Rockville, Maryland-based biotechnology company developing next-generation therapeutics. The company is applying its proprietary cell stabilization technology to all cell types, including platelets, to develop lifesaving products. Its lead product, Thrombosomes®, a freeze-dried hemostatic agent derived from human platelets, is currently in a Phase I clinical trial. Cellphire’s technology has potential applications across a wide range of medical applications from trauma to wound care, imaging, targeted drug delivery, and regenerative medicine.

Categories: Blood and Coagulation Systems

Cera Products, Inc. | Booth 1002 | www.ceraproductsinc.com
CeraLyte and CeraSport are performance rice-based oral rehydration solution (ORS) and sports drinks developed along with physicians from the renowned Johns Hopkins University. Clinical studies proved Cera’s rice patented ORS products have a significant advantage over glucose (sugar)-based hydration products, medically proven to correct and prevent dehydration during exercise or high heat conditions. Our products have medical NSNs and are used by all branches of the military, including Army Rangers and Navy SEALs.

Categories: Human Performance, Hydration, Infectious Disease - Diagnostics, Treatments

CFD Research Corporation | Booth 506 | www.cfdrc.com
CFD Research Corporation specializes in engineering simulations, advanced prototypes, and innovative designs for aerospace, defense, life sciences, materials, energy, and other industries using our software tools in multi-physics, bio-dynamics and computational pharmacology. We have developed innovative solutions for warfighter health and medical diagnostics; prediction and mitigation of combat injury due to crash, ejection, blast, noise, and non-lethal weapons; rehabilitative technology for vestibular injury; and cellular behavior during drug delivery.

Categories: Blood and Coagulation Systems, Human Performance, Simulations - Medical Training

Chinook Medical Gear, Inc. | Booth 608 | www.chinookmed.com
Chinook Medical Gear is a veteran-owned, minority owned 8(a), small business based in Durango, Colorado that provides medical supplies and custom first aid and trauma kits for the harshest environments. Chinook’s staff includes former US Marine Corp and Army experts and USAF Pararescue operators who design cutting-edge medical gear to save lives and aid the injured.

Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care
Combat Medical | Booth 703 | www.combatmedical.com
At Combat Medical, we are driven in our MARCH to Zero—the goal to eliminate preventable deaths on the battlefield. We empower medical operators of all skill levels to reduce pre-hospital mortality and eliminate preventable deaths everywhere tactically possible. We do this by developing and delivering mission critical products that simplify tactical medicine from the point of injury though evacuation. We understand these needs because we’ve been there, that’s why we only deliver the best products.
Categories: Emergency Medical Equipment, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

Coreleader Biotech | Booth 1007 | www.coreleaderbio.com
Coreleader Biotech Co. Ltd. is a GMP MFG focusing on bio material dressings for hemostasis, burns, wounds & chronic ulcers. HEMO-bandage is an innovative woven gauze in fish-net structure with US patent. Instead of coating, we incorporate the chitosan in the fiber to be used for the gauze production aiming at lethal bleeding control. Hence, it is strong and effective. Above all, it is side-effect free.
Categories: Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

CytoSorbents | Booth 907 | www.cytosorbents.com
CytoSorbents is a leader in critical care immunotherapy. Its flagship product, CytoSorb®, is a unique blood purification therapy to control deadly inflammation in life threatening illnesses in the ICU and cardiac surgery. The product is currently approved in the European Union and distributed in 55 countries around the world.
Categories: Blood and Coagulation Systems, Infectious Disease - Diagnostics, Treatments, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

DFND | Booth 411
DFND is a Berry Compliant Graduated Compression company. DFND was created to help reduce the injury rate within the US Military as well as any Post Op-Rehab Recovery needs.

DHA SBIR/STTR | Booth 511 | https://sbir.defensebusiness.org/?AspxAutoDetectCookieSupport=1
The Defense Health Agency (DHA) Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs are the DoD’s largest source of high-risk funding able to catalyze small business R&D breakthroughs to meet the medical needs of warfighters in the future battlespace. Stop by if you would like to meet with SBIR/STTR transition subject matter experts from the Tri-Service acquisition community.
Categories: Health Readiness, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

The Defense Health Agency Research and Development Directorate (J-9) leads the discovery, development, and delivery of enhanced pathways to military health and readiness. The J-9 Vision: Bridging Towards the Future of Military Health and Readiness.
Categories: Education, Health Readiness, Other
DTS manufactures sensors, data recorders and dosimeters for biomechanics, blast and high shock environments. DTS specializes in miniature, rugged, low-power systems used by researchers for laboratory and field test of human injury factors including blunt trauma, TBI, over-pressure. DTS was named the prime contractor for the US Army WIAMan vertical load blast test dummy with SLICE6 in-dummy DAS and is involved in ongoing testing. DTS is a private engineering company headquartered in Seal Beach, CA.  
**Categories:** Environmental & Occupational, Hearing & Vision, Traumatic Brain Injury

Drip Drop Hydration | Booth 1103 | www.dripdrop.com
Drip Drop Hydration contains a proven ratio of sodium, sugar, and other electrolytes that absorb quickly and hydrate more effectively than other hydration products, increases performance and is a great tasting hydration solution (ORS) with a class VIII AMEDD approved NSN. Drip Drop Hydration treats and prevents dehydration resulting from excessive sweating, diarrhea, and vomiting, and has great success in lowering the need for IV-fluids and reduction of heat illness.  
**Categories:** Human Performance, Hydration, Nutrition

Alpha-Stim® is a FDA-cleared handheld, prescription medical device to treat acute, post-traumatic, and chronic pain, along with anxiety, insomnia, and depression and can be used alone or as an adjunct to medication (without the risk of drug interactions). Proven fast, safe and effective by more than 100 clinical trials over 37 years proving the effectiveness of this low level electrical prescription brain therapy. Try it at our booth or view studies at alpha-stim.com  
**Categories:** Pain Management, Post Traumatic Stress Disorder, Psychological Health

Elsevier | Booth 715 | www.elsevier.com/clinical-solutions
Elsevier is a global information analytics business whose overarching vision is to improve the delivery of healthcare by empowering physicians and nurses to make better decisions. For over 140 years healthcare professionals have trusted our content to support education, training, development, and decisions about patient care. We offer solutions and services that help customers utilize and integrate content to improve practice, reduce care variability, engage patients and promote a culture of quality, safety and satisfaction.  
**Categories:** Education

EMIT Corporation | Booth 604 | www.emitcorp.com
EMIT Corporation designs, manufactures and sells products for prevention and reversal of hypothermia. HypothermX® HX100 and LG are patented, FDA-cleared, CE-marked, fast, simple, portable, compact, light, fully-disposable, and long-term use IV fluid and blood warming devices. The devices utilize a flameless/spark-free hydrocarbon combustion process fueled with Isobutane/Propane for heating. Our system is the only one capable of delivering large volumes of warm blood to your patient quickly!  
**Categories:** Blood and Coagulation Systems, Emergency Medical Equipment, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Emovi, Inc. | Booth 1015 | www.emovi.ca
EMOVI manufactures the KneeKG system, a cutting edge medical device allowing 3D assessment of knee joint function while in motion and weight bearing. It objectively identifies and quantifies mechanical markers known to be linked with disease progression and patient symptoms. KneeKG results allow the healthcare team to personalize the treatment plan and accurately monitor its progression for an optimal functional recovery.  
**Categories:** Human Performance, Musculoskeletal Injury Prevention, Rehabilitation - Craniomaxillofacial, Limb, Neuromusculoskeletal
Essex Industries | Booth 915 | www.essexindustries.com
Essex Industries is a leading producer of low pressure liquid oxygen storage and distribution hardware for Military Life Support and Aero-Medical Evacuation applications. We’ve pioneered patient life support system since 1963 and today provide premier products including the MMOS, BMOS, NPTLOX and BMOS-Fill Station as well as the 50 Gallon LOX Cart and 500 Gallon LOX Trailer. Our LOX systems improve the capability to manage oxygen flow to the patient from the battlefield to field hospital.

Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

The Federal Interagency Traumatic Brain Injury Research (FITBIR) informatics system was developed to share data across the entire TBI research field and to facilitate collaboration as well as interconnectivity with other informatics platforms. Sharing data, methodologies, and associated tools, rather than summaries or interpretations of this information, can accelerate research progress by allowing re-analysis of data, as well as re-aggregation, integration, and rigorous comparison with other data.

Categories: Imaging, Information Technology - Health, Traumatic Brain Injury

Ferno Military Systems | Booth 913 | www.fernomilitarysystems.com
Ferno Military Systems specializes in Aeromedical and Tactical Evacuation Equipment. We provide ready-made solutions, as well as, rapid concepting, prototyping and production services for custom, mission specific applications.

Categories: Emergency Medical Equipment, Other, Patient Transport/En Route Care

Fujifilm SonoSite | Booth 713 | www.sonosite.com
SonoSite helped pioneer the concept of portable, point-of-care ultrasound with funding from a DARPA grant, and continues to be a world-leading manufacturer and innovator of bedside ultrasound systems. SonoSite’s portable, compact systems are expanding the use of ultrasound across the clinical spectrum by cost-effectively bringing high-performance ultrasound to the point of patient care.

Categories: Emergency Medical Equipment, Imaging, Other

GE Healthcare | Booth 905 | www.gehealthcare.com
We provide medical technologies, digital infrastructure, data analytics and decision support tools that help healthcare professionals in the VA, DoD, and other federal entities diagnose, treat and monitor their patients.

Categories: Imaging, Information Technology - Health

George Mason University | Booth 413 |
Innovation Research Park Anchored by George Mason University

Getinge | Booth 1101 | www.getinge.com
Getinge is a leading global provider of innovative solutions for operating rooms, intensive-care units, hospital wards, sterilization departments and for life science companies and institutions. Based on first-hand experience and close partnerships, Getinge offers innovative healthcare solutions that improve every-day life for people, today and tomorrow.

Categories: Emergency Medical Equipment, Patient Transport/En Route Care
Goldbelt Frontier | Booth 306 | https://www.goldbelt.com
Goldbelt Frontier, LLC is a wholly owned subsidiary of the Alaskan Native Corporation Goldbelt. Frontier places an emphasis on research and development, behavioral health, and medical and technological support services. Goldbelt Frontier’s leadership offers specific expertise related to medical staffing, behavioral health, and program development CONUS and OCONUS.
Categories: Emergency Medical Equipment, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

H&H Medical Corporation | Booth 609 | www.buyhandh.com
H&H Medical is one of the leading innovators in pre-hospital trauma treatment for military and civilian users.
Categories: Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

Henry M. Jackson Foundation for the Advancement of Military Medicine | Booth 508 | https://www.hjf.org/
The Henry M. Jackson Foundation for the Advancement of Military Medicine is a global, nonprofit organization created to serve as a link between the military medical community and warfighters, veterans, their families and civilians. HJF offers scientific, administrative and program management services to investigators and clinicians.
Categories: Human Performance, Infectious Disease - Diagnostics, Treatments, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

ICON GPHS Inc. | Booth 406 | ICONgphs.com
ICON GPHS is the federal business unit of the top five global contract research organization, ICON plc. ICON is an experienced DoD partner offering federal contract management and technical solutions with global resources. ICON provides full service clinical trials execution and staffing solutions at DoD laboratories and military treatment facilities. ICON solutions include a turnkey phase 1 Clinical Research Unit in San Antonio and site networks throughout sub-Saharan Africa, South East Asia, and South America.
Categories: Blood and Coagulation Systems, Infectious Disease - Diagnostics, Treatments, Traumatic Brain Injury

Indiana University | Booth 1012 | https://research.iu.edu/
Indiana University’s world-class researchers have driven innovation and creative initiatives that matter for nearly 200 years. IU has earned its reputation as a world-class research institution from collaborating with the DOD and partners on a long-term concussion study to hearing restoration research. Supported by $604 million last year from 868 partners, IU researchers are building collaborations and uncovering new solutions that improve lives in Indiana and around the globe.
Categories: Education, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury

InTouch Health | Booth 909 | www.intouchhealth.com
InTouch Health, ranked 2019 Best in KLAS for Virtual Care Platforms, is a telehealth services company that offers health systems solutions to efficiently deliver virtual care for a broad array of use cases and healthcare environments. InTouch Health provides a reliable, dedicated cloud-based network and virtual care solutions designed to ensure connectivity for health systems, providers, and patients at all times.
Categories: Information Technology - Health, Other

Iron Bow Technologies | Booth 404 | www.ironbowhealthcare.com
Iron Bow Technologies is a leading IT solution provider that transforms clients’ technology investments into robust business capabilities. Our depth of technical expertise, strategic technology partnerships and domain knowledge, results in technology solutions that assists clients in achieving desired business outcomes.
Categories: Emergency Medical Equipment, Health Readiness, Information Technology - Health
Joint Operational Medicine Information Systems (JOMIS) | Booth 611 | www.health.mil/dhms

JOMIS, underneath the Program Executive Office, Defense Healthcare Management Systems, maintains the currently deployed operational medicine information systems (known as TMIP-J), and develops and will deploy the MHS GENESIS theater build for use by deployed forces. JOMIS also will modernize operational medicine capabilities for patient movement, medical command and control, medical situational awareness, and medical logistics.

**Categories:** Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

KBR | Booth 500 | www.kbr.com

KBR Government Solutions ensures mission success for customers on land, at sea, in the air, and in space and cyberspace. We create value and drive innovation by combining engineering, technical and scientific expertise with our full life cycle capabilities, mission knowledge and future-focused technologies. We are known for excelling in complex and extreme environments and trusted to overcome the nation's most pressing challenges. When it's mission critical, customers call KBR first - We Deliver.

**Categories:** Human Performance

KCI, An Acelity Company | Booth 314 | www.acelity.com

KCI, an Acelity Company, the most trusted brand in advanced wound care, is committed to developing innovative healing solutions for customers and patients across the care continuum. Our unsurpassed product portfolio delivers value through solutions that speed healing and lead the industry in quality, safety and customer experience.

**Categories:** Information Technology - Health, Other, Wound Management

Kerecis | Booth 403 | www.kerecis.com

Kerecis develops patented fish-skin products to heal human wounds and tissue damage because no disease-transfer risk exists between cold-water fish and humans. The Kerecis fish skin is only gently processed and retains its similarity to human skin, making it an ideal substitute for human skin.

Laerdal Medical | Booth 1003 | www.laerdal.com/us/

Laerdal Medical is the most experienced military simulation product provider, and has the most comprehensive continuous development, support, and service record in the industry. Through extensive operational testing over multiple generations of products, Laerdal Medical has maintained an unprecedented standard of reliability and consistency. Laerdal Medical also has maintained best value pricing as an industry standard. For those reasons, military and commercial customers alike continue to select Laerdal Medical as their preferred vendor.

**Categories:** Education, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Leidos Life Sciences | Booth 503 | www.leidos.com/health/life-sciences

Leidos is a Fortune 500® information technology, engineering, and science solutions and services leader working to solve the world's toughest challenges. Leidos Life Sciences executes a diverse portfolio of medical science, biopharmaceutical, and grant/program review contracts with services that span the full spectrum of the biomedical product lifecycle, from discovery through post-marketing surveillance. We deliver customized solutions that support groundbreaking medical research, optimize business operations, and expedite the discovery of safe and effective medical treatments.

**Categories:** Blood and Coagulation Systems, Infectious Disease - Diagnostics, Treatments, Information Technology - Health
Marketing Assessment | Booth 709 | www.marketingassessment.com
Marketing Assessment has a 40-year history providing the medical soldier with the most appropriate technology to produce the best outcomes. We introduced many of the currently deployed patient care technologies, and contribute to on-going research. Our mission is to return a healthy soldier back to active duty. We provide basic splinting capability, nanomaterial technology science, POC laboratory devices, advanced bio-load reduction systems, and breakthrough products for successful treatment of difficult wounds.
Categories: Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

Masimo | Booth 1000 | www.masimo.com
Masimo is a global medical technology company responsible for the invention of award-winning noninvasive technologies, medical devices, and sensors that are revolutionizing patient monitoring, including SET® pulse oximetry, rainbow® Pulse CO-Oximetry, noninvasive and continuous hemoglobin (SpHb®), acoustic respiration rate (RRa®), Patient SafetyNet™, SedLine® brain function monitoring, O3® regional oximetry, NomoLine™ capnography, and a variety of connectivity solutions.
Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Mayo Clinic | Booth 1107 | www.mayoclinic.org
Mayo Clinic is the nation’s leading medical center. Combining clinical practice, research, and education, Mayo Clinic delivers the best care to all patients. We are proud to serve our active duty soldiers and their families, veterans and their caregivers.

Medical Technology Enterprise Consortium | Booth 814 | www.mtec-sc.org
The Medical Technology Enterprise Consortium (MTEC) is a 501(c)(3) biomedical technology consortium.
Categories: Other

Military & Health Research Foundation | Booth 906 | www.militaryhealthresearch.org
The Military & Health Research Foundation (MHRF) is a 501(c)(3) nonprofit foundation dedicated to advancing transformative medical and military research to build lasting medical solutions. With a range of subject matter expertise and extensive Research and Development past performance, MHRF can deliver customized management through all the critical phases of technology development.
Categories: Blood and Coagulation Systems, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

MolecuLight Inc. | Booth 410 | us.molecuLight.com
MolecuLight offers point of care solutions for wound care diagnostics. The MolecuLight i:X allows clinicians to visualize fluorescence in real-time & measure wounds automatically. In clinical studies, the MolecuLight i:X has been shown to detect bacteria at moderate-to-heavy loads, improving wound assessment and helping clinicians make evidence-based treatment decisions.
Categories: Imaging, Wound Management

The National Intrepid Center of Excellence (NICOE) Directorate at the Walter Reed National Military Medical Center (WRNMMC) is dedicated to improving the lives of patients and families impacted with traumatic brain injury (TBI) and associated health conditions. With a vision to become a leader in TBI care, research, and education, the NICOE utilizes a holistic, interdisciplinary approach to clinical care.
Categories: Psychological Health, Traumatic Brain Injury
**Naval Health Research Center** | Booth 505 | https://www.med.navy.mil/sites/nhrc/Pages/default.aspx
The Naval Health Research Center (NHRC) optimizes the operational readiness and health of our armed forces by conducting research, development, testing, and evaluation to inform Department of Defense (DoD) policy. We have been designated the DoD Deployment Health Research Center since 1999. We conduct science that spans the spectrum from physical readiness to joint medical planning, to wounded warrior recovery and behavioral health interventions, all focusing on the health, readiness, and well-being of our nation’s military members and their families. We conduct research that is operationally relevant and driven by fleet requirements. Our core research areas include Operational Readiness and Health, Military Population Health, and Operational Infectious Diseases.

**Categories:** Health Readiness, Human Performance, Infectious Disease - Diagnostics, Treatments

**NDRI | Booth 903 | www.ndiresource.org**
For biomedical researchers, NDRI is a trusted global leader and a reliable source for high-quality human biospecimens. Human biospecimens serve as a critical resource for scientists seeking a viable alternative to animal models to validate research findings in a more physiologically relevant human model. Our multidisciplinary team provides customized human biospecimens from all body systems for small to large-scale projects with varying degrees of complexity better than any other provider due to our over 35 years of mission-driven history and success. Scientific and technical expertise. Extensive nationwide network of suppliers. 24/7/365 availability of highly qualified consultative support experts • On-site logistics capabilities • Accreditation by the College of American Pathologists (CAP). Decades-long funding collaboration with the National Institutes of Health (NIH). Consistent citation in over 150 peer-reviewed scientific publications annually.

**Categories:** Pain Management, Traumatic Brain Injury, Wound Management

**Neural Analytics | Booth 1115 | www.neuralanalytics.com**
Neural Analytics is a medical robotics company developing and commercializing technologies to measure and track brain health. The company’s Lucid Robotic System is a robotically assisted ultrasound system for brain health assessment. It combines an all-in-one neurovascular ultrasound device, designed to non-invasively measure and display brain blood flow information. The company’s technology integrates ultrasound, robotics and machine learning to empower neurologists with critical information about brain health to make clinical decisions and improve patient outcomes.

**Categories:** Emergency Medical Equipment, Other, Traumatic Brain Injury

**Neurowave Systems | Booth 1001 | www.neurowavesystems.com**
NeuroWave is dedicated to improving patient safety, outcome and quality of life in anesthesia, sedation, critical care and military medicine with innovative monitoring and drug delivery systems using advanced neurophysiological signal processing and control system engineering. The AutoTIVA™ will provide an intravenous anesthesia “autopilot” for military and civilian operating rooms, while the AutoSED™ is being developed as an intravenous sedation delivery system for ICUs and en-route care.

**Categories:** Drug Delivery Systems

**Next Science | Booth 908 | www.nextscience.com**
Next Science develops next-level technologies that help eliminate bacterial biofilms that contribute to the burden of antimicrobial resistance. This technology is ground breaking and is providing the DoD Medical community a needed tool in Surgery, Burns, and Prolonged Field Care. From a Surgical Lavage and Gel, to Wound Gel and Lavage this technology gives the medic and surgeon the ability to treat and inhibit the regrowth of MDR Bacteria Biofilm, Fungal, and Flora infections.

**Categories:** Infectious Disease - Diagnostics, Treatments, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management
North American Rescue, LLC | Booth 601 | www.narescue.com
North American Rescue is dedicated to increasing survivability in the line of fire by empowering today's warfighters, tactical healthcare professionals and law enforcement personnel with innovative medical and rescue equipment to manage traumatic injuries and decrease preventable death in combat and the tactical environment.
Categories: Emergency Medical Equipment, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

nScrypt Inc. | Booth 711 | www.nscrypt.com
nScrypt designs and manufactures award-winning, next-generation, high-precision Micro-Dispensing, and Direct Digital Manufacturing equipment and solutions for industrial applications, with unmatched accuracy and flexibility. Serving the 3D printed electronics, electronics packaging, solar cell metallization, communications, printed antenna, life science, chemical/pharmaceutical, defense, space, and 3D printing industries, our equipment and solutions are widely used by the military, academic and research institutes, government agencies and national labs, and private companies. The nScrypt BAT Series Bioprinter will travel to the International Space Station in 2019, in a joint project with Techshot.
Categories: Health Readiness, Human Performance, Prosthetics

NuShores Biosciences, LLC | Booth 407 | www.nushores.com
Today there is no satisfactory solution for major bone injuries caused by accidents, warfare and disease, especially complex and large segmental bone loss. NuShores' NuCress™ bone scaffolds have been shown to promote healing of bone breaks (>2.5 cm) tested in 200+ large models in addition to 60 small models – with no infections, inflammation, rejection or adverse bone response. NuShores has exclusive global license to patented bone and tissue regeneration technologies developed at University of Arkansas.
Categories: Drug Delivery Systems, Rehabilitation - Craniofacial, Limb, Neuromusculoskeletal, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Operative Experience | Booth 415 | operativeexperience.com
Operative Experience (OEI) is a leading manufacturer of high-fidelity human patient simulators for training of healthcare practitioners, first responders and military personnel including, TCCS, a full-body, hyper-real, ruggedized and wireless simulator for comprehensive TC3 training; TCCS Plus, a high-fidelity, medical provider level simulator for prolonged field care training; and TCCS Female, the world's first high-fidelity tactical simulator for the female patient. Learn more at operativeexperience.com.
Categories: Education, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Osteopore Int'l Ptd Ltd. | Booth 409 | www.osteopore.com
Osteopore International is a Singapore medical device manufacturer of biomimetic, bioresorbable implants that empower natural tissue regeneration. Our products are US FDA cleared and have 20,000 successful implants globally.
Categories: Other, Traumatic Brain Injury

Panakeia | Booth 402 | www.panakeiausa.com
Panakeia is a verified Service-Disabled Veteran-Owned Small Business (SDVOSB) which specializes in marketing, distributing advanced medical products, and identifying solutions for the global medical community, which includes (but not limited to), DoD, Fire/Rescue, EMS and Veterans Health Administration. The goal at Panakeia is to provide unique and innovative products that not only transform patient care but also focus on saving lives.
Categories: Emergency Medical Equipment, Human Performance, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care
PCI | Booth 502 | www.pcigases.com
PCI is a producer of air separation equipment. Specially PCI produces oxygen generation, storage & distribution products in support of deployable Medical Hospitals.
Categories: Drug Delivery Systems, Emergency Medical Equipment, Patient Transport/En Route Care

Pelican BioThermal | Booth 302 | www.pelicanbiothermal.com
Pelican BioThermal is a global leader in providing the life sciences industry with the most comprehensive suite of patented and award winning thermal protection packaging solutions for the safe transport and storage of pharmaceuticals, clinical trials, diagnostics, tissue, vaccines and blood supplies.
Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Phacon Inc. | Booth 1111 | www.phacon.us
Anatomy Models for surgical training and education. ENT, Neurology, Spine
Categories: Education, Simulations - Medical Training

Prometheus Medical | Booth 100 | www.prometheusmed.com
Prometheus is a leading supplier of pre-hospital emergency medical equipment and high-quality medical training courses for a wide audience. We are delighted to showcase the SIMBODIES range at MHSRS. SIMBODIES are a believable simulated patient training tool for medical educators and clinicians using manikin based education training. They have the look and feel of real skin and are weighted accurately with movable limbs.
Categories: Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Prytime Medical Devices | Booth 600 | www.prytimemedical.com
At Prytime Medical Devices, Inc. we believe that no one should bleed to death and the sooner you stop bleeding, the better. The ER-REBOA™ Catheter, our flagship product used in over 250 hospitals, is designed specifically for the emergency/critical care environment to support rapid and immediate hemorrhage control.
Categories: Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

RDT, a Philips Company | Booth 507 | www.rdtltd.com
RDT, a Philips Company. We provide Ruggardised Military Spec Pre-Hospital vital signed Monitors operating advanced Telemedicine and Data Management from the Point of Injury all the way throughout the Patient Pathway.
Categories: Emergency Medical Equipment, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Rho, Inc. | Booth 1008 | www.rhoworld.com
Rho, a contract research organization (CRO) located in Chapel Hill, NC, provides a full range of services across the entire drug development process. For more than 30 years, Rho has been a trusted partner to leading pharmaceutical, biotechnology, and medical device companies as well as academic and government organizations. Our commitment to excellence, innovative technologies, and therapeutic expertise accelerate time to market, maximize returns on investment, and lead to an exceptional customer experience.
Categories: Infectious Disease - Diagnostics, Treatments, Other, Pain Management, Psychological Health, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury
Shoreland | Booth 917 | www.shoreland.com
Shoreland is a medical publishing and research company focused on providing health care professionals with near-real-time data and recommendations for preventive and protective measures related to international health risks and location-specific medical and environmental threats. We provide data on resources available in local environments to meet the needs of traveler and expatriate populations.

Categories: Health Readiness

Smith & Nephew | Booth 1014 | http://www.smith-nephew.com/
Smith & Nephew is a leading portfolio medical technology company, operating in around 100 countries globally. Our purpose: Life Unlimited. Smith & Nephew exists to restore people's bodies, and their self-belief. Our franchises are Advanced Wound Management, Orthopedics, Trauma & Extremities, Sports Medicine and ENT.

Categories: Education, Simulations - Medical Training

SonoSim | Booth 501 | www.sonosim.com
SonoSim is transforming medical care and contributing to better patient outcomes through collaboration with over 500 medical institutions; 30,000 medical professionals; and 36 distributors worldwide. By serving as a global leader in ultrasound education and training, SonoSim has created the easiest way to learn ultrasonography, The SonoSim® Ultrasound Training Solution.

Categories: Education, Simulations - Medical Training

Tactical Medical Solutions | Booth 801 | www.tacmedsolutions.com
Tactical Medical Solutions® is a global leading developer and manufacturer of pre-hospital medical gear for the tactical and civilian world. We were founded in 2003 by a Special Forces medic who created the SOF® Tactical Tourniquet. Our tourniquet is now one of only two windlass tourniquets approved for use by the Department of Defense, one of only two tourniquets approved for use by the Committee on Tactical Combat Casualty Care, and is the tourniquet of choice for the American Red Cross. While our original purpose was supporting the military, environments changed and TacMed progressed in to servicing law enforcement, fire, EMS, rescue, and now even civilians. As a result, our product line has expanded greatly and is constantly evolving.

Categories: Patient Transport/En Route Care, Simulations - Medical Training, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

The Geneva Foundation | Booth 811 | www.genevaUSA.org
The Geneva Foundation is a 501(c)3 non-profit organization that advances military medicine through innovative scientific research, exceptional program management, and a dedication to U.S. service members and veterans, their families, and the global community. Geneva is proud to have over 25 years of experience in delivering full spectrum scientific, technical, and program management expertise in the areas of federal grants, federal contracts, industry sponsored clinical trials, and educational services. www.genevaUSA.org

Categories: Infectious Disease - Diagnostics, Treatments, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury

The Metis Foundation | Booth 712 | www.metisfoundationusa.org
The Metis Foundation is a 501(c)(3) organization dedicated to advancing clinically relevant medical research, especially within the Department of Defense. We seek to foster collaboration among government, academic, and industry entities by providing scientific, educational, financial and project management support during the conduct of federally and privately sponsored research, clinical trials, and education. We are researchers and are committed to the success, impact, development, and longevity of your research.

Categories: Other
Thornhill Medical | Booth 1009 | www.thornhillmedical.com
Thornhill Medical makes innovative healthcare devices. MOVES SLC portable life support system, MADM field anesthesia delivery
Categories: Emergency Medical Equipment, Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

TransLite | Booth 810 | www.veinlite.com
Veinlite® transilluminators – the most practical and cost effective portable vein finders. Clinically proven to reduce vein access failures, Veinlites work on patients of all ages and sizes. With dual-colored LEDs, Veinlites are effective on all skin tones. By reducing failed IV access attempts, Veinlites prevent the pain/anxiety of multiple sticks.
Categories: Emergency Medical Equipment, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care

Trauma Insight | Booth 602 | www.traumainsight.com
Trauma Insight commercializes novel medical technologies that have military relevance yet greater application to the commercial healthcare market. Our mission is to develop technologies to save lives and improve patient treatment in the ER, OR, and on the battlefield. How would your product help soldiers, veterans, and patients? How will you navigate through the FDA towards commercialization of your technology? Trauma Insight is your commercialization partner to bring technologies to the market and improve lives.
Categories: Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Traumatic Brain Injury, Wound Management

Two Rivers Medical | Booth 603 | www.tworiversmedical.com
Two Rivers Medical is a full service medical material solutions provider in Medical & Surgical materials, equipment, dental & veterinary products. Our team specializes in aligning customers with the right products at the right price, on time. The customers we support come from Federal Agencies, DoD, State Agencies, local municipalities & physician practices.
Categories: Other

U.S. Army Aeromedical Research Laboratory | Booth 615 | www.usaarl.army.mil
The U.S. Army Aeromedical Research Laboratory conducts RDT&E in the areas of cognitive and sensory workload, displays and automation, unmanned systems, task saturation, noise, medical standards, crashworthiness, wearable sensors, head and spine injury, aeromedical transport, and MEDEVAC interior space. The Laboratory provides the Army’s Cross Function Teams, military developers and commanders with expertise and data-driven information that advances the Army’s modernization priorities and enhances the performance and safety of Warfighters operating complex Army systems.
Categories: Human Performance, Musculoskeletal Injury Prevention, Patient Transport/En Route Care

University of Pittsburgh | Booth 807 | www.pitt.edu
University of Pittsburgh’s research is making a difference. Pitt researchers have beaten polio, pioneered TV and heavier-than-air flight, and turned Pittsburgh into the world’s organ-transplantation capital, among other breakthroughs. Today’s Pitt researchers carry on that tradition in areas ranging from literary criticism to the quest for quantum computers. With 16 schools, thriving multidisciplinary centers, and close ties to UPMC, Pitt research reaches across disciplines. Pitt researchers also collaborate with colleagues from 80-plus other universities—including nearby Carnegie Mellon University—and corporate partners near Pitt’s urban campus. The following are multidisciplinary research areas where Pitt is a current or emerging leader: Aging, Bioengineering, Computer Modeling, Drug Discovery, Energy, Global Health, Humanities, International Studies, Nanoscience, National Preparedness, Neuroscience, Philosophy, Translational Medicine: Biochemistry & Organ Transplantation.
Categories: Human Performance, Rehabilitation - Craniofacial, Limb, Neuromusculoskeletal, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care
USAMMDA is a subordinate command of the U.S. Army Medical Research and Development Command, under the Army Futures Command. As the premier developer of world-class military medical capabilities, USAMMDA is responsible for developing and delivering critical products designed to protect and preserve the lives of Warfighters across the globe. These products include drugs, vaccines, biologics, devices and medical support equipment intended to maximize survival of casualties on the battlefield.
Categories: Musculoskeletal Injury Prevention

USAF - AFRL | Booth 401 | www.wpafb.af.mil/afrl/711hpw/hpi/
USAF's AFRL booth will exhibit the latest trends in industrial commercial-off-the-shelf exoskeleton technology to target potential USAF users who are interested in learning more about the use of systems in their occupation. Personnel from AFRL's Human Systems Integration (HSI) Laboratory will man the booth to provide subject matter expertise on job task optimization and system implementation considerations.
Categories:

The U.S. Army Medical Research and Development Command's Technology Transfer Office coordinates all intellectual property licensing on behalf of all USAMRMDC's subordinate laboratories from the federal sector to nonfederal parties. In 2019, the accomplishments of 3 USAMRMDC labs (USACEHR, USAISR, and USAMMDA) were recognized with the one of the most prestigious honors in the T2 field, the FLC Excellence in Tech Transfer Award. You can be a one person startup or a global corporation, we want to hear your ideas about developing federal inventions into new products and services.
Categories: Hearing & Vision, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

VCOM | Booth 914 | www.vcom.edu
The Edward Via College of Osteopathic Medicine (VCOM) is a four-year osteopathic medical school offering the Doctor of Osteopathic Medicine (DO) degree.
Categories: Education, Osteopathy, Simulations - Medical Training

Wake Forest Institute for Regenerative Medicine | Booth 613 | www.wakehealth.edu/wfirm
The Wake Forest Institute for Regenerative Medicine is recognized as an international leader in translating scientific discovery into clinical therapies, with many world firsts, including the development and implantation of the first engineered organ in a patient. Through international partnerships and collaborations, the institute, which is driven by the urgent needs of patients, is making a global difference in the world of regenerative medicine with research on more than 40 different tissues and organs.
Categories: Other

Walter Reed Army Institute of Research | Booth 610 | www.wrair.army.mil
The Walter Reed Army Institute of Research is the largest biomedical research laboratory in the DoD and is based in Maryland with facilities throughout the world. The Institute is committed to innovation and excellence with a military-specific focus to protect the health and readiness of the Warfighter. It develops countermeasures to infectious disease threats and conducts research that promotes psychological resilience, enhances neurological functioning, and improves operational readiness among our service members.
Categories: Drug Delivery Systems, Infectious Disease - Diagnostics, Treatments, Psychological Health
Z-Medica | Booth 714 | QuikClot.com/Military
Z-Medica is a medical device manufacturer of hemostatic products. QuikClot® is used by all five branches of the US military. The Committee on Tactical Combat Casualty Care (CoTCCC) chose QuikClot Combat Gauze® as the hemostatic dressing of choice on the battlefield for compressible hemorrhage not amenable to tourniquet use or as an adjunct to tourniquet removal if evacuation time is anticipated to be longer than 2 hours. QuikClot products are manufactured in the United States.

**Categories:** Patient Transport/En Route Care, Trauma Care - Point of Injury/Prehospital/Prolonged Field Care/Forward Surgical Care, Wound Management

ZOLL Medical Corporation | Booth 701 | www.zoll.com
ZOLL® Medical Corporation, a leader in medical devices and software solutions, helps military professionals manage, treat, and save lives while also increasing operational efficiency. With innovative products for defibrillation, circulation, pacing, temperature management, and ventilation, ZOLL provides a comprehensive set of technologies, including Real CPR Help® and See-Thru CPR®, that help improve patient outcomes. All ZOLL products provide the ruggedness, durability, and advanced functionality that military professionals require across the continuum of care.

**Categories:** Emergency Medical Equipment
Wireless internet access available in all guestrooms and hotel atrium areas.

HOW TO FIND YOUR ROOM
X 345
FLOOR
ROOM #

DIRECTIONS TO...
HEMINGWAY and SANCHEZ BOARDROOMS: Level 4, via Emerald Bay Elevator B
EMERALD MEETING ROOMS: Lower Level, via Emerald Bay Elevator A

Elevators
Restrooms
Meeting Rooms
Bus

ATM
Phones
Registration
Taxi

Restaurants
Information
Guest Laundry
Car Rental

Cocktails / Bar
Coffee Shop
Frozen Yogurt
Bell Stand

Shopping:
1. Mallory Square
2. Island Paradise
3. Marketplace News & Sundries
4. PGA Tour Shop
5. Brighton Collectibles
6. Alligator Alley
7. Relâche Spa Boutique

*Gaylord Palms is a smoke-free environment. Outdoor smoking areas are available.