

MEETING THE CHANGING THREAT THROUGH MILITARY MEDICAL RESEARCH

+
MHSRS
2024



Program Guide

26-29 August 2024

Gaylord Palms Resort & Convention Center
Kissimmee, FL

MHS

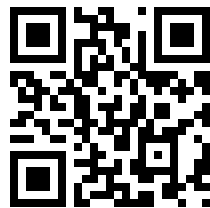
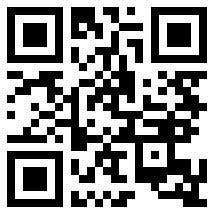
Military Health System
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Download the Mobile App Today!

Download the app today and keep the program guide at your fingertips.

Search for “Event Pilot” in the App Store or Google Play and enter code MHSRS24 to get started.



The 2024 MHSRS app is your all-in-one tool for managing your time and maximizing your experience at the meeting:

- View the Agenda
- Build a Custom Schedule
- Plan Your Exhibit Hall Visit
- Connect with Attendees
- Get Directions & Room Locations
- Search for Everything!

NEED ASSISTANCE?

If you have any questions or need help, please stop by the App Help Desk, City Hall Lobby near Registration, during the following hours:

Monday, 26 August
0800 - 1800

Tuesday, 27 August
0700 - 1700

Wednesday, 28 August
0700 - 1700

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WELCOME LETTER



THE ASSISTANT SECRETARY OF DEFENSE
1200 DEFENSE PENTAGON WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

Dear MHSRS Attendee,

Welcome to the 2024 Military Health System Research Symposium!

The Department of Defense is pleased to present the MHSRS, the Nation's premier scientific meeting focused on the unique medical needs of the warfighter. Since its inception, this Symposium has been recognized as a scientific hub for prominent researchers to forge and strengthen partnerships between the Services, academia, industry, and our international partners.

No mission is more important than taking care of our people. This meeting acknowledges the value of research in confronting the medical challenges faced by our deployed warfighters. It showcases research driven data and explores novel solutions to improve pre-deployment readiness and provide state-of-the-art care before and after battlefield injury.

Our 2024 theme is *Meeting the Changing Threat through Military Medical Research*. As Harry Truman said "...Progress occurs when courageous and skillful leaders seize the opportunity to change things for the better..." We need your expertise, your insights, your deep understanding of the research landscape - from mature approaches to those on the front edge of emerging capabilities - to help meet the ever-evolving medical needs of the warfighter.

The 530 oral talks spanning 72 scientific topic areas 1,470 poster presentations, and more than 100 vendor booths featured at this year's meeting is your opportunity to learn about the challenges that face us, how our medical research is addressing those challenges, and how you can contribute your expertise to achieve the full power of collaborative research to create real solutions. We owe this to those who serve.

It is an honor to be the sponsor of this meeting. Thank you for your ongoing support of our warfighters and welcome to the 2024 MHSRS!



Sincerely,

Lester Martínez López, M.D.
Assistant Secretary of Defense for Health Affairs

MHSRS IMPORTANT INFORMATION

Welcome to the 2024 MHSRS!

Complimentary Wi-Fi:

Network: MHSRS 2024

Password: 2024mhsrs

FOR YOUR INFORMATION

- **A 2024 MHSRS badge is required to access all sessions and the exhibit hall.**
 - This includes the (invite only) Navy Dinner on Tuesday night.
- Buses will be running to Disney Springs on Tuesday and Wednesday nights for those wanting an alternate dining option. See page 6 for details.
- Be a Donor! With the Armed Forces Blood Program, the 2024 MHSRS is co-sponsoring a blood drive on Tuesday (1000 – 1700) and Wednesday (1000 – 1600) in the Exhibit Hall.
- Parking. The Gaylord will offer a 25% discount on overnight self-parking to registered MHSRS overnight guests and a 25% discount on daily self-parking for MHSRS attendees.

MESSAGE TO U.S. GOVERNMENT EMPLOYEES

As a reminder, all Government employees are bound by the Standards of Ethical Conduct. Please be cognizant of the rules regarding acceptance of gifts from outside sources, as well as from other federal employees. Seek guidance from your ethics counselor if you have questions about the ethical rules applicable to you as a government employee.

GIVEAWAYS & GIFTS

Federal government employees may not directly or indirectly solicit, or accept a gift from a prohibited source, with certain limited exceptions. Before deciding if a gift meets an exception, employees should consider declining otherwise permissible gifts if they believe that a reasonable person with knowledge of the relevant facts would question the employee's integrity or impartiality as a result of accepting the gift.

A federal government employee may accept unsolicited gifts having an aggregate market value of \$20 or less per source per occasion, provided that the aggregate market value of individual gifts received from any one person does not exceed \$50 in a calendar year. (Modest items of food and nonalcoholic refreshments, such as soft drinks, coffee, and donuts, offered other than as part of a meal, and items with little intrinsic value, which are intended primarily for presentation are excluded as gifts under the rule). Even though acceptance of a gift may be permitted by one of the exceptions, it is never inappropriate, and frequently prudent, for an employee to decline a gift. Federal employees should contact their Agency's Ethics Counsel for further guidance.

MEALS

Military Active Duty and GS/Equivalent Federal Employees: Nine meals are included as part of the MHSRS registration fee. Breakfast and lunch are offered Monday -Thursday. Dinner/heavy hors d'oeuvre will be provided on Monday night as part of the Assistant Secretary of Defense for Health Affairs Reception. Do not claim per diem for these meals.

The dress code for the Monday night reception is business casual for all. For those not staying at the Gaylord who wish to change clothes before the Health Affairs reception, the buses to the overflow hotels will be running on a continuous loop starting at 1630.

Meals are for registered attendees only and may not leave the rooms where they are served.

Thursday Lunch Note. For those having lunch at the Gaylord, boxed lunches can be picked up in the Osceola Foyer with seating in the Osceola Ballroom. Boxed lunches will also be available to those leaving for the airport and can be picked up in the Gaylord Palms Convention Center Transportation Loop foyer (Exhibit Hall/Level 1). Important! You need your badge to pick up a boxed lunch.

LUGGAGE STORAGE

All buses going to the airport during the week leave from the Gaylord Palms Convention Center Transportation Loop (Exhibit Hall/Level 1). On Thursday, 29 August, luggage storage will be available in the Osceola Ballroom 1 (Ballroom/Level 2) from 0630 – 1400.

LOST & FOUND

Conference Registration (Ballroom/Level)

SHUTTLE INFORMATION

SHUTTLES TO AIRPORT

From Gaylord Palms to Orlando International Airport (MCO)

Boarding Location:

Gaylord Palms Convention Center Transportation Loop (Exhibit Hall/Level 1)

Monday, 26 August	Tuesday, 27 August	Wednesday, 28 August	Thursday, 29 August
1230 – 2130* Departs every hour	0900 – 2100* Departs every hour	0900 – 1800* Departs every hour	0500 – 1700* Departs every 20 minutes

*Last Departure

SHUTTLES – INTER-HOTEL

Shuttle Service to Gaylord Palms

Route 1: Delta Hotel > Melia Hotel > Gaylord Palms

Route 2: Marriott Village > Gaylord Palms

Monday, 26 August	Tuesday, 27 August	Wednesday, 28 August	Thursday, 29 August
0600 – 1000* 1700 – 2130* Departs every 15 minutes	0600 – 1000* 1700 – 2130* Departs every 15 minutes	0600 – 0900* 1700 – 2130* Departs every 15 minutes	0530 – 0900* 1230 – 1530* Departs every 15 minutes

*Last Departure

Shuttle Service from Gaylord Palms

Boarding Location:

Gaylord Palms Convention Center Transportation Loop (Exhibit Hall/Level 1)

Route 1: Gaylord Palms > Melia Hotel > Delta

Route 2: Gaylord Palms > Marriott Village

Monday, 26 August	Tuesday, 27 August	Wednesday, 28 August	Thursday, 29 August
0630 – 0930* 1630 – 2200* Departs every 15 minutes	0630 – 0930* 1630 – 2200* Departs every 15 minutes	0630 – 0930* 1630 – 2200* Departs every 15 minutes	0630 – 0930* 1200 – 1500* Departs every 15 minutes

*Last Departure

SHUTTLES – DISNEY SPRINGS

Shuttle Service to/from Gaylord Palms

Shuttles available Tuesday and Wednesday evenings:
First-come, first-served!

Boarding Location:

Gaylord Palms Spa Entrance (Everglades Atrium)

Hours:

First bus departs the Gaylord: 1730
Last bus departs Disney Springs: 2215

Shuttles run on a continuous loop

Additional Shuttle Service

Shuttles available Tuesday and Wednesday evenings:
Reservations can be made 2 hours prior to departure time.

Shuttle Service to/from the Delta Hotel

Book online: www.deltaorlandobus.com

Shuttle Service to/from the Melia Hotel

Book online: www.themeparkbus.com

Shuttle Service to/from Marriott Village

Book online: www.maingate.net

CONTINUING EDUCATION

Jointly provided by Postgraduate Institute for Medicine (PIM) and the Principal Deputy Assistant Secretary of Defense (Health Affairs)

TARGET AUDIENCE

The CE activities are targeted to military providers with deployment experience and research and academic scientists.

EDUCATIONAL OBJECTIVES

After completing this activity, the participant should be better able to:

- Understand the depth and quality of DoD sponsored medical research
- Understand the outcomes of DoD sponsored medical research in approximately 60 research categories
- Have worked to foster a better collaborative environment between military, academic and industry partners

PROGRAM AGENDA

Please refer to the printed agenda pages 8-14.

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.



JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

CREDIT DESIGNATION

Please refer to the Continuing Education page on MHSRS.net for information on credit designation as it becomes available.

DISCLOSURE OF CONFLICTS OF INTEREST

Postgraduate Institute for Medicine (PIM) requires faculty, planners, and others in control of educational content to disclose all their financial relationships with ineligible companies. All identified conflicts of interest (COI) are thoroughly mitigated according to PIM policy. PIM is committed to providing its learners with high quality accredited continuing education activities and related materials that promote improvements or quality in healthcare and not a specific proprietary business interest of an ineligible company.

The faculty reported relevant financial relationships with ineligible entities related to the educational content of this CE activity. These faculty disclosures will be listed on MHSRS.net for anyone to review.

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.

DISCLOSURE OF UNLABELED USE

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the U.S. Food and Drug Administration (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

To obtain your CME/CE certificate, please follow the steps below at the conclusion of the activity:

1. Go to www.cmeuniversity.com
2. Select 'Login' or 'Create a New Account' (will take less than 1 minute)
 - If you receive a message when creating a new account that "the email you entered is already in use", please click the 'Forgot my Username or Password' link to have your Username and Password sent to you via email.
 - After logging in, you may be asked to verify/update your information; after doing so, click 'Save' at the bottom of the page.
3. Type in 18496 at the top of the page, "Find Post-Test/Evaluation by Course", and click enter.
4. Click on the activity title when it appears.
5. Choose the type of credit you desire.
6. Complete the online assessment.
7. Receive an immediate CME/CE Certificate to download and/or print for your file.

If you have questions regarding the certification of this activity, please contact PIM at inquiries@pimed.com.

AGENDA

Monday, 26 August

TIME	SESSION	LOCATION
0630 – 1930	Registration Open	City Hall Lobby
0630 – 0830	Breakfast	Florida Exhibit Halls A-C
0800 – 1145	Plenary Session	Osceola Ballroom
	<p>0800 – 0815 Welcome Honor Guard and National Anthem</p> <p>0815 – 0830 Honorable Lester Martínez López, M.D., M.P.H Assistant Secretary of Defense for Health Affairs</p> <p>0830 – 0900 The White House Initiative on Women’s Health Research Carolyn M. Mazure, Ph.D. Chair, The White House Initiative on Women’s Health Research</p> <p>0900 – 0915 2024 MHSRS Awards Ceremony Individual and Team Awards</p> <p>0915 – 0945 Break</p> <p>0945 – 1115 Combat Casualty Care Across the Continuum – Penetrating Traumatic Brain Injury and Repeated Concussive Events - Operational Vignettes Panel Discussion Moderators: John B. Holcomb, M.D., Terry M. Rauch, Ph.D.</p> <p>1115 – 1145 Keynote Address COL Gregory D. Gadson, USA (Ret)</p>	
1130 – 1330	Lunch	Florida Exhibit Halls A-C
1300 – 1400	Breakout Sessions	
	<p>Experimentation – Beyond the Bench Moderators: Joan Cmarik, Ph.D., COL Denise Milhorn, USA</p> <p>Cellular Therapeutics for Treatment of Shock and Trauma Moderator: Barbara Christy, Ph.D.</p> <p>Directed Energy Health Effects Research for the Warfighter Moderators: Martin LaFrance, OD, Ph.D., CDR Rachel L. Werner, USN</p>	<p>Coastal A</p> <p>Coastal C</p> <p>Sun A</p>

AGENDA

Monday, 26 August

TIME	SESSION	LOCATION
	Research and Training in Military Medicine in the Age of AI – Strategies and Perspectives from HA, DHA, and USUHS Moderator: Jesus J. Caban, Ph.D.	Sun B
	Scientific Abstracts of Distinction Plenary Moderator: Farrukh Rizvi, Ph.D.	Sun C
1345 – 1445	Break	
1430 – 1630	Young Investigator Competition Moderators: Michael J. Morris, M.D., Lt Col Adam M. Willis, USAF	Coastal 4
1430 – 1730	Breakout Sessions	
	Lessons Learned from Current Conflicts in Ukraine and Israel to Improve Combat Casualty Care Strategies Moderators: Kimberly B. Pope, Ph.D., CAPT Travis M. Polk, USN, Brig. Gen. Elon Glassberg, IDF	Coastal C
	Women's Health and Readiness: Health Focused Updates Moderators: Maj Angela Phillips, USAF, Lynette Hamlin, Ph.D., RN	Sun A
	Advances in Diagnosis of TBI: Biomarkers and Beyond Moderators: Stacey Harcum, MPH, M.S., Stephanie S. Sloley, Ph.D., Manish Bhomia, Ph.D.	Coastal 9
	Military Exposures and Subsequent Long-term Outcomes Moderator: Col Ian J. Stewart, USAF	Sun C
	Casualty Care During Multi-Domain Operations, Large Scale Combat Operations, and Prolonged Care Moderators: Jose Salinas, Ph.D., Nathan Fisher, M.S., Kathy Grochowski, B.A.	Coastal A
	Innovative Tools and Technologies for Predicting and Assessing Musculoskeletal Injuries of the Warfighter Moderators: Pinata H. Sessoms, Ph.D., CDR Joshua Swift, USN	Sun B
	Big Data and Machine Learning for Full Spectrum Military Health Readiness, Performance, and Care Moderators: Dominic E. Nathan, Ph.D., Tracey K. Koehlmoos, Ph.D., Kent Etherton, Ph.D.	Sun 4
1730 – 2100	Opening of Exhibits/Assistant Secretary of Defense (Health Affairs) Reception 1730 – 1900 Cash Bar 1900 – 2100 Reception	Florida Exhibit Halls D-F

AGENDA

Tuesday, 27 August

TIME	SESSION	LOCATION
0630 – 0830	Breakfast	Florida Exhibit Halls A-C
0700 – 1700	Registration Open	City Hall Lobby
0800 – 1000	Breakout Sessions	
	An Ounce of Prevention: Next Generation Vaccines and Passive Immunoprophylaxis to Enhance Warfighter Readiness Moderators: COL Julie Ake, USA, MAJ Gina Griffith, USA	Coastal A
	Severe Burn Injury: Strategies to Accelerate Casualty Functional Recovery Moderators: Robin K. Walker, Ph.D., Anne McKeague, Ph.D., Bonnie J. Woffenden, Ph.D.	Coastal 9
	TBI Management: Epidemiology and Down Range Management Moderator: Caryn Stern, DrPH, MPH	Coastal C
	Moving the Needle on Preventing Harmful Behaviors in the Military Community – Implementing Cross Agency Research Priorities – Current and Future State Moderators: Tim Hoyt, Ph.D., MBA, Fuad Issa, M.D., Melissa Mehalick, Ph.D., Sharmila A. Chari, Ph.D.	Sun A
	Solutions to Accelerate Recovery from Neuromusculoskeletal Injury Moderators: Elizabeth Russell Esposito, Ph.D., Brad D. Isaacson, Ph.D.	Sun B
	Force Health Protection: Operational Exposure Research and Predictive Risk Methods Moderator: David R. Mattie, Ph.D., DABT	Sun C
	Human Performance Optimization in Polar Environments Moderators: Christopher Santee, MBA, PPM, Ronald Wayne Matheny, Ph.D., Camila Mauzy, Ph.D., Doug Jones, Ph.D.	Coastal 4
	Military Female Health Research Aimed at Overcoming the Challenges and Barriers Impacting Optimal Warfighter Performance & Operational Readiness Moderators: Genny M. Cook, MPH, Ava Marie S. Conlin, DO, MPH	Sun 4
0900 – 1800	Exhibit Hall Open	Florida Exhibit Halls D-F
0945 – 1045	Break	
1000 – 1200	Poster Session 1	Osceola Ballroom
1000 – 1700	2024 MHSRS Blood Drive	Exhibit Hall - Back of 1200 Aisle
1130 – 1330	Lunch	Florida Exhibit Halls A-C
1300 – 1500	Breakout Sessions	
	Improving Traumatic Wound Healing and Recovery Moderator: Prem Yadav, Ph.D.	Coastal 9
	Organ Support in Trauma Moderators: Maj Liz Powell, USAF, Lt Col Richard Betzold, USAF, Col Ian J. Stewart, USAF	Sun A

AGENDA

Tuesday, 27 August

TIME	SESSION	LOCATION
	Warfighter Brain Health: Advances in Optimizing and Sustaining Cognitive Performance Moderators: Malena B. Rone, Ph.D., Tim Dunn, Ph.D., Lars Hungerford, Ph.D.	Coastal A
	From Theory to Practice: Transitioning S&T Findings into Actionable Knowledge Moderators: Kasey E. Moritz, Ph.D., James B. Phillips, Ph.D.	Coastal 4
	Advances in Regenerative Medicine from Point of Injury to Definitive Care and Beyond Moderators: Jenifer Ojeda, Ph.D., Stephen M. Goldman, Ph.D.	Sun B
	Assuaging Agony: Novel Pain Therapeutics Moderators: Carmen Hinojosa-Laborde, Ph.D., MAJ Nathan Davidson, USA	Sun C
	Case Records of the Joint Trauma System Moderators: Col Valerie Sams, USAF, CAPT Matthew Tadlock, USN	Sun 4
	Congressionally Directed Medical Research Programs and Defense Health Program Medical Research Funding Opportunities Moderators: Rebecca A. Fisher, Ph.D.	Coastal C
1500 – 1600	Break	
1530 – 1730	Breakout Sessions	
	Non-traditional Treatments and Delivery Strategies for Wound Infections and Sepsis Moderator: COL Robert J. Cybulski, USA	Coastal A
	Remote Damage Control Resuscitation: Innovations to Prolong the "Golden Hour" Moderators: Robert T. Gerhardt, M.D., MPH, Col Joseph Maddry, USAF	Coastal C
	Far Forward Battlefield Diagnostic Imaging Moderator: Jonathan D. Monti, DSc, PA-C	Sun A
	Protecting the Warfighter from Nuclear Threats: Acute Radiation Syndrome and Radiation Polytrauma Moderators: Whitney Greene, Ph.D., David W. Evans, MPM, MSIT	Coastal 4
	Brain Impact of Sub-concussive Blast Exposure in Military Service Members: Implications for Prevention and Health Moderators: Michael J. Roy, M.D. MPH, Raj K. Gupta, Ph.D.	Coastal 9
	Optimizing the Human Weapon System: Utilizing Wearable Sensors to Inform Readiness across the Joint Force Moderators: Malena B. Rone, Ph.D., Andrew Midzak, Ph.D., James Christensen, Ph.D.	Sun B
	Food and Drug Administration Regulated Activities and Collaborations with DoD Moderators: LTC Stuart Hobbs, USA, Chandar S. Thakur, Ph.D.	Sun C
	From Benchtop to Battlefield – Transitioning Research to Fielded Products Moderator: Kathleen L. Berst, MBA	Sun 4
1530 – 1730	Poster Session 2	Osceola Ballroom

AGENDA

Wednesday, 28 August

TIME	SESSION	LOCATION
0630 – 0830	Breakfast	Florida Exhibit Halls A-C
0700 – 1700	Registration Open	City Hall Lobby
0800 – 1000	Breakout Sessions	
	New Approach Methodologies and Novel In Vivo Models for the Development of Infectious Disease Countermeasures Moderators: MAJ Blair C. R. Dancy, USA, LTC Charles A. DiTusa, USA, Rajini R. Mudhasani, Ph.D., Eric H. Nguyen, Ph.D.	Sun A
	Technologies for the Treatment of Battlefield Hemorrhage and Management of Vascular Dysfunction Moderators: Thomas H. Edwards, DVM, M.S., Amy E. Wingerd, B.A., RN	Coastal C
	Novel Interventions to Address Posttraumatic Stress Disorder in Service Members and Veterans Moderator: Michael J. Roy, M.D., MPH	Coastal A
	Advancements in Prosthetic and Exoskeletal Technologies that Facilitate Return to Duty Following Neuromusculoskeletal Injuries Moderators: W. Lee Childers, Ph.D., CP, Trevor Kingsbury, M.A.	Sun B
	Treating Refractory Hypoxemia on the Battlefield: What Does the Future Hold? Moderator: Sandy J. Snyder, Ph.D.	Sun C
	Current Challenges in DoD Aerospace Medicine Moderators: John S. Crowley, M.D., MPH, Richard Arnold Ph.D.	Coastal 4
	Novel Treatments, Strategies, and Technologies in Hearing and Balance Health Moderators: Mei Sun, Ph.D., Amy Boudin-George, AuD, Stacey Harcum, MPH, M.S.	Coastal 9
	Ethical and Regulatory Considerations in DoD-Supported Research: Biosecurity, AI/ML Analytics, and DoD Collaboration Moderator: Laura R. Brosch, RN, Ph.D.	Sun 4
0900 – 1600	Exhibit Hall Open	Florida Exhibit Halls D-F
1000 – 1100	Break	
1000 – 1200	Poster Session 3	Osceola Ballroom
1000 – 1600	2024 MHSRS Blood Drive	Exhibit Hall - Back of 1200 Aisle
1130 – 1330	Lunch	Florida Exhibit Halls A-C
1300 – 1500	Breakout Sessions	
	Strategies for Mitigating the Development of Post-traumatic Wound Infections with Multi-drug Resistant Organisms across the Continuum of Care Moderators: Schroeder M. Noble, Ph.D., COL Robert Cybulski, USA	Coastal A

AGENDA

Wednesday, 28 August

TIME	SESSION	LOCATION
	Advances in Life Saving Interventions at Point of Injury and in Prolonged Care Moderators: Kimberly B. Pope, Ph.D., Sylvain Cardin, Ph.D.	Coastal C
	Mental and Behavioral Health Manifestations of Anger Moderators: Maria A. Morgan, Ph.D., MPS, Marija S. Kelber, Ph.D.	Sun A
	Design, Prevent, and Implement: Advancements in Osseointegration Technology and Outcomes Moderators: Kenneth Furdella, Ph.D., Jason Ghannadian, M.S.	Sun B
	Exertional Heat Stroke: What's New in Prevention, Management, and Return to Duty Moderator: Francis G. O'Connor, M.D., MPH	Sun C
	Undersea Operational Research Panel Moderator: Ben D. Lawson, Ph.D.	Coastal 4
	4 Legged Warriors: Military Working Dogs at the Tip of the Spear Moderator: Thomas H. Edwards, DVM, M.S.	Coastal 9
	An Overview of the DHA Tech Transfer Program and Processes Moderator: Robert Bolluyt, B.S.	Sun 4
1445 – 1545	Break	
1530 – 1730	Breakout Sessions	
	Central Role of Dental Care in Military Readiness, Operational Deployment, In-Theater Care, Post-Injury Reconstruction, and Warfighter Rehabilitation Moderators: Rodney D. Phoenix, DDS, M.S., COL Kevin Gillespie, USA	Sun A
	Trauma Resuscitation and Critical Care on the Future Battlefield Moderator: Caryn Stern, DrPH, MPH	Coastal A
	Military Family Health and Readiness: Understanding the Interdependence of the Military Family System Moderators: Hope McMaster, Ph.D., Elizabeth Hisle-Gorman Ph.D.	Coastal 9
	Warfighter Operational Resilience: Next Generation Programs to Sustain Performance under Fire Moderator: LTC Matthew L. LoPresti, USA	Sun B
	Implementation of Evidence-based Pain Management Practices in the MHS Moderators: Christie Vu, Ph.D., CAPT Harold Gelfand, USN	Coastal C
	Ocular Optimization: Before and After Injury Moderators: MAJ Nathan Davidson, USA, Mariia Viswanathan, M.D., Ph.D.	Sun C
	Genetic Readiness of the Force: Genetics and Integrative Omics for Optimizing Warfighter Health and Performance Moderator: Juvanee Estrada-Veras, M.D.	Coastal 4
	Global Health Engagement Research in Combatant Commands Moderators: Danny Shiau, M.D. MPH, COL Matthew R. Scherer, USA	Sun 4

AGENDA

Thursday, 29 August

TIME	SESSION	LOCATION
0630 – 0830	Breakfast	Florida Exhibit Halls A-C
0800 – 1100	Registration Open	City Hall Lobby
0800 – 0830	2024 MHSRS Awards: Young Investigator and Poster Awards	Sun 4
0845 – 1045	Breakout Sessions	
	Innovative Technologies and Devices for Treatment of Battlefield Wounds in Prolonged Care to Prevent Infection Moderators: Arthi A. Amin, Ph.D., LTC Sheila Johnson, USA, Brian Coyne, B.S.	Sun A
	Clinical Studies to Advance Combat Casualty Care Moderators: Kimberly B. Pope, Ph.D., George Jiang, M.D.	Sun B
	Managing Fatigue in the DoD: Methodologies for Sleep and Circadian Measurement Moderator: Malena B. Rone, Ph.D.	Sun C
	Applications of Artificial Intelligence in Psychological Disorders Moderator: Ruoting Yang, Ph.D.	Sun 4
	Advances in Blast Polytrauma: Implications to Warfighter Function and Combat Casualty Care Moderators: Michael J. Urban, Ph.D., Pamela VandeVord, Ph.D.	Coastal A
	Military Injury Biomechanics for the Prevention of Behind Helmet and Behind Armor Blunt Trauma Moderators: Frederick T. Brozoski, M.S., Thuvan Piehler, Ph.D.	Coastal C
1030 – 1130	Break	
1115 – 1315	Breakout Sessions	
	Update in Emerging Infectious Diseases of Military Importance: Predicting and Preventing Future Outbreaks in Military Settings Moderators: CAPT Andrew G. Letizia, USN, Simon Pollett, MBBS	Coastal A
	Novel Strategies for Treatment of Shock or Blood Failure: Blood and Blood Products Moderator: Michael Adam Meledeo, Ph.D.	Coastal C
	Solutions Addressing Behavioral Health Clinician Shortage – Leveraging Telebehavioral Health Moderators: Sharmila A. Chari, Ph.D., Tim Hoyt, Ph.D., MBA	Sun A
	Musculoskeletal Injury Prevention: Highlighting Vulnerable Warfighters Moderator: Joseph G. Wasser, Ph.D.	Sun B
	Challenges and Opportunities of High Volume, Prolonged Medical Mobility and CASEVAC During Large Scale Combat Operations Moderators: Lt Col Nelson Pacheco, USAF, Rachel Kinsler, M.S.	Sun C
1200 – 1400	Lunch	Osceola Foyer
1400	End of Symposium	

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MHSRS
2024

Breakout Sessions

Monday, 26 August

BREAKOUT SESSIONS

Monday, 26 August | 1300 – 1400

Experimentation – Beyond the Bench

Moderators: Joan Cmarik, Ph.D., COL Denise Milhorn, USA

LOCATION: Coastal A

- 1300 – 1315 **Experimentation Overview** (MHSRS-24-13509)
Presenter: Eva Rosvold, M.S.
- 1315 – 1330 **Field Experimentation of a Remote Patient Management System (RPMS), a Telemedicine Platform for Monitoring and Control of Patient Care in CASEVAC and Pre-Hospital Environments** (MHSRS-24-12456)
Presenter: Zachary Buono, MSE
- 1330 – 1345 **Results of BATDOK End-user Surveys Collected During Unit Rotations at NTC** (MHSRS-24-13406)
Presenter: Laura Scott, Ph.D.
- 1345 – 1400 **Panel Discussion**
Presenters: CDR Lee Dortzbach, USN, Douglas Jones, Ph.D., COL Laura McGhee, USA, MAJ David Preczewski, USA, Eva Rosvold, M.S.

Cellular Therapeutics for Treatment of Shock and Trauma

Moderator: Barbara Christy, Ph.D.

LOCATION: Coastal C

- 1300 – 1315 **Development of a Scalable Manufacturing Process for Stem-Derived Red Blood Cells** (MHSRS-24-11490)
Presenter: Shobhit Saxena, Ph.D.
- 1315 – 1330 **Phenotypic and Molecular Characterization of Cardiomyocytes During Hypoxic Conditioning** (MHSRS-24-11345)
Presenter: Hensin Tsao, M.D., Ph.D.
- 1330 – 1345 **Commercial Growth Media and Transport Media Effects on Mesenchymal Stromal Cell Storage** (MHSRS-24-12967)
Presenter: Maryanne Herzig, Ph.D.
- 1345 – 1400 **Overcoming Economic and Logistical Hurdles to Creating Manufactured Red Blood Cells for Defense and Civilian Applications** (MHSRS-24-12103)
Presenter: Robert Thomas, Ph.D.

Directed Energy Health Effects Research for the Warfighter

Moderators: Martin LaFrance, OD, Ph.D., CDR Rachel L. Werner, USN

LOCATION: Sun A

- 1300 – 1315 **Suprathreshold RF Injury Effects: Simulating Exposures Beyond the Standard** (MHSRS-24-13230)
Presenter: Jason Payne, M.S.
- 1315 – 1330 **Damage Assessment and Histological Analysis of Suprathreshold Near-Infrared Laser Exposures to Skin in the Yucatan Mini Pig** (MHSRS-24-11168)
Presenter: Morgan Schmidt, Ph.D.
- 1330 – 1345 **Hazard Analysis for Dual Band Radar Operations** (MHSRS-24-12025)
Presenter: LCDR Jason Cole, USN
- 1345 – 1400 **A Digital Ophthalmoscope for the Automatic Detection of Laser Lesions** (MHSRS-24-10834)
Presenter: Edward Pier, Ph.D.

BREAKOUT SESSIONS

Monday, 26 August | 1300 – 1400

Research and Training in Military Medicine in the Age of AI – Strategies and Perspectives from HA, DHA, and USUHS

Moderator: Jesus J. Caban, Ph.D.

LOCATION: Sun B

Military Medicine in the Age of AI - HA Perspective (MHSRS-24-NAS601)

Presenter: Ms. Seileen Mullen, Principal Deputy Assistant Secretary of Defense for HA

1300 – 1315

Research and Training in Military Medicine in the Age of AI - HA Perspective (MHSRS-24-NAS602)

Presenter: Terry Rauch, Ph.D.

1315 – 1330

Research and Training in Military Medicine in the Age of AI - USUHS Perspective (MHSRS-24-NAS603)

Presenter: Eric Elster, M.D.

1330 – 1345

Research and Training in Military Medicine in the Age of AI - DHA Perspective (MHSRS-24-NAS604)

Presenter: Bob Walker, M.D.

1345 – 1400

Panel Discussion (MHSRS-24-NAS605)

Presenters: Ms. Seileen Mullen, Terry Rauch, Ph.D., Eric Elster, M.D., Bob Walker, M.D.

Scientific Abstracts of Distinction

Plenary

Moderator: Farrukh Rizvi, Ph.D.

LOCATION: Sun C

1300 – 1315

Prehospital Intranasal Ketamine as an Adjunct to Fentanyl for the Treatment of Acute Traumatic Pain: A Randomized Clinical Trial (MHSRS-24-11178)

Presenter: Jason McMullan, M.D., University of Cincinnati, Cincinnati, OH

1315 – 1330

Gun Carrying Among Youth with a Parent in the U.S. Military: Results of a National Survey (MHSRS-24-11832)

Presenter: Ian H. Stanley, Ph.D., University of Colorado School of Medicine, Aurora, CO

1330 – 1345

Clinical Trial: Evaluating the Safety and Efficacy of Acellular Tissue Engineered Vessels to Repair Arterial Traumatic Injuries in a Military Setting (MHSRS-24-11905)

Presenter: Shamik Parikh, M.D., Humacyte Global Inc., Durham, NC

1345 – 1400

Leveraging Big Data to Identify and Understand the Mechanisms Underlying Unplanned Loss Among Enlisted Submariners (MHSRS-24-12619)

Presenter: LCDR Neal D. McNeal, USN, Naval Submarine Medical Research Laboratory, Naval Submarine Base, New London, CT

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1630

Young Investigator Competition

Plenary

Moderators: Michael J. Morris, M.D., Lt Col Adam M. Willis, USAF

LOCATION: Coastal 4

- 1430 – 1445** **Saving Limbs and Lives: A Novel Percutaneous Vessel Occlusion Device to Combat Junctional Hemorrhage in Trauma** (MHSRS-24-11202)
Presenter: MAJ Bobby Zhang, USA, Madigan Army Medical Center, Tacoma, WA
- 1445 – 1500** **Gene Expression Signature of Leukocytes in a Combination Injury from Ionizing Radiation and Trauma** (MHSRS-24-11230)
Presenter: Olivia Tran, Ph.D., U.S. Army Institute of Surgical Research, San Antonio, TX
- 1500 – 1515** **Neural Network Correlates of Apathy, Executive Dysfunction, and Disinhibition in Active-Duty United States Special Operations Forces** (MHSRS-24-11377)
Presenter: Isabella McKinney, B.S., Massachusetts General Hospital, Boston, MA
- 1515 – 1530** **Mental Health Disparities in Military Affiliated vs. Civilian Adolescents: Analysis of 2015-2019 National Survey of Drug Use and Health (NSDUH) Data** (MHSRS-24-11517)
Presenter: LCDR Kezia Edmonson, USN, Duty Under Instruction - Naval Medical Leader & Professional Development Command, Bethesda, MD
- 1530 – 1545** **Ketamine Sedation Decreases Survival After Extremity Trauma and Hemorrhage in Rats** (MHSRS-24-11519)
Presenter: Miryam Pando, Ph.D., U.S. Army Institute of Surgical Research, San Antonio, TX
- 1545 – 1600** **Pharmacogenetics in the MHS: Comparing PGx Genotyping and Next Generation Sequencing** (MHSRS-24-11658)
Presenter: Lydia Hellwig, Ph.D., Uniformed Services University of the Health Sciences; The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, MD
- 1600 – 1615** **Acute Neurological Effects of Repeat Low-Level Blast Exposure** (MHSRS-24-11764)
Presenter: Amy Stahl, Au.D., Vanderbilt University, Nashville, TN
- 1615 – 1630** **Integrating Point of Care Ultrasound (POCUS) for Peripheral Intravenous Catheter Placement within a Military Pediatric Residency Program** (MHSRS-24-12628)
Presenter: CPT Joseph Marotto, USA, Madigan Army Medical Center, Joint Base Lewis McChord, WA

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Lessons Learned from Current Conflicts in Ukraine and Israel to Improve Combat Casualty Care Strategies

Moderators: Kimberly B. Pope, Ph.D., CAPT Travis M. Polk, USN, Brig. Gen. Elon Glassberg, IDF

LOCATION: Coastal C

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| 1430 – 1445 | If You Want Peace Prepare for War: Pragmatic Assessment of War-Related Data Collection Challenges in Ukraine
(MHSRS-24-13243)
Presenter: Andriy Batchinsky, M.D. |
| 1445 – 1500 | Assessment of Ukrainian Trauma and Combat Casualty Care: Medical Capabilities in an Active Combat Zone
(MHSRS-24-12343)
Presenter: Tiffany Hamm, Ph.D. |
| 1500 – 1515 | Immediate Impact on Ukrainian Trauma System and United States Combat Casualty Care Through a Series of Targeted Symposia (MHSRS-24-11998)
Presenter: John Holcomb, M.D. |
| 1515 – 1530 | Frontline Casualty Care in Ukraine: Blood Products, Training and Use of Non-Medical Personnel (MHSRS-24-11897)
Presenter: Tracey Parnell, M.D. |
| 1530 – 1545 | Use of Partial Resuscitative Endovascular Balloon Occlusion of the Aorta by Ukrainian Medical Personnel to Sustain and Evacuate Warfighters Beyond 30 Minutes (MHSRS-24-13274)
Presenter: Jonathan Morrison, Ph.D. |
| 1545 – 1600 | Characteristics of Israel Defense Forces' Injuries during the 2023-2024 Israel-Hamas War (MHSRS-24-13198)
Presenter: LTC Ofer Almog, IDF |
| 1600 – 1615 | The Management of Ongoing Multiple Mass Casualty Events Under Threat – Lessons Learned from the October 7th Terror Attack on Israel (MHSRS-24-13140)
Presenter: Ortal Tamam, M.D., MSc |
| 1615 – 1630 | Assessing the Efficacy of Personal Protective Gear Against Penetrating Torso Injuries in IDF Soldiers During the 2023-2024 Israel-Hamas War (MHSRS-24-12903)
Presenter: CPT Inbal Gozani, IDF |
| 1630 – 1645 | Harnessing Business Intelligence Capabilities to Facilitate Ongoing Data-Driven Learning During War
(MHSRS-24-13270)
Presenter: MAJ Cole Bendor, IDF |
| 1645 – 1700 | The Introduction and Impact of a Digital Documentation and Casualty Management System in the IDF
(MHSRS-24-13122)
Presenter: CPT Danielle Akler, IDF |
| 1700 – 1715 | Introducing Low Titer Group O Whole Blood to the Battlefield: Blood Product Administration in Operation Protective Edge and The 2023-2024 Israel-Hamas War (MHSRS-24-12776)
Presenter: LTC Ofer Almog, IDF |
| 1715 – 1730 | Discussion with Presenters and Guest Moderators |

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Women's Health and Readiness: Health Focused Updates

Moderators: Maj Angela Phillips, USAF, Lynette Hamlin Ph.D., RN

LOCATION: Sun A

- 1430 – 1445** **Association Between Body Composition Standards and Disordered Eating Among Active-duty Service Women, FY 2018-2019** (MHSRS-24-12584)
Presenter: Tracey Koehlmoos, Ph.D., MHA
- 1445 – 1500** **Does SARS-CoV-2 Infection or Vaccination Impact Menstrual Health? Results from a Longitudinal Cohort Study Among Military Health System Beneficiaries** (MHSRS-24-10823)
Presenter: Stephanie Richard, Ph.D., MHS
- 1500 – 1515** **Psychological Risk and Resiliency in Female Military Medical Personnel Across the Deployment Cycle** (MHSRS-24-11294)
Presenter: Chelsea J. Sterne, Ph.D.
- 1515 – 1530** **The Effect of Alpha-Linolenic Acid on Post-Traumatic Stress Disorder-like Symptoms in Female Mice Following mild Traumatic Brain Injury** (MHSRS-24-12774)
Presenter: Maj Kathryn Capple, USAF
- 1530 – 1545** **A Focus on Fertility Preservation and Family Planning in Military Healthcare: Examining Knowledge, Perceptions, and Expectations about Oocyte Cryopreservation Among Military Healthcare Students** (MHSRS-24-11361)
Presenter: ENS Claire Sturek, USN
- 1545 – 1600** **Break**
- 1600 – 1615** **Pregnancy Delivery Methods and Postpartum Health Care Use of Active Duty Servicewomen Delivering in Military Treatment Facilities** (MHSRS-24-11739)
Presenter: CDR Ryan Smith, USN
- 1615 – 1630** **Female Endocrinology in Arduous Training (FEAT) Study: Sex Differences in Dynamic Stress and Reproductive Function During Basic Military Training** (MHSRS-24-11995)
Presenter: Wg Cdr Robert M. Gifford, RAF
- 1630 – 1645** **Rates of Testing and Treatment Follow-up for Chlamydia trachomatis Among Active-Duty Service Women in the San Antonio Market of the Military Health System** (MHSRS-24-12087)
Presenter: CPT James Marsh, USA
- 1645 – 1700** **Multi-omic Analysis of Uterine Leiomyomas in Black and White Women: Insights into Health Disparity** (MHSRS-24-12117)
Presenter: G. Larry Maxwell, M.D.
- 1700 – 1715** **Perceptions and Engagement with the Military Health System: Exploring Gender Dynamics and the Reproductive Health Burden on Women** (MHSRS-24-12145)
Presenter: Sara Vargas, Ph.D.
- 1715 – 1730** **Gender and Unit Cohesion Impact Neurobehavioral Health in Veterans with Military Environmental Exposure Concerns** (MHSRS-24-13166)
Presenter: Abou Ibrahim-Biangoro, Ph.D.(c), MPH

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Advances in Diagnosis of TBI: Biomarkers and Beyond

Moderators: Stacey Harcum, MPH, M.S., Stephanie S. Sloley, Ph.D., Manish Bhomia, Ph.D.

LOCATION: Coastal 9

- 1430 – 1445 **Blood Biomarker Differences Between Military versus Civilian and Blast-related versus Blunt Mechanism Traumatic Brain Injury in the Chronic Phase (MHSRS-24-13451)**
Presenter: Ava M. Puccio, Ph.D.
- 1445 – 1500 **Plasma Concentrations of Trauma-related and Neurodegenerative Biomarkers Among Service Members and Veterans with Chronic Combat-deployed mild Traumatic Brain Injury (MHSRS-24-12957)**
Presenter: Jessica M. Gill, RN, Ph.D.
- 1500 – 1515 **Acute HPA and IL-6 Family Biomarker Level Associations with Global Outcome After Moderate-severe (ms)TBI: A NEXUS (NeuroImmunoEndocrine Interface: Exploring a Unifying Axis for Studying Precision Care in Psychological Health and TBI) Study (MHSRS-24-13548)**
Presenter: Amy K. Wagner, M.D.
- 1515 – 1530 **Serum Biomarkers to Predict Therapeutic Intensity and Loss of Cerebral Autoregulation in Severe TBI (MHSRS-24-11724)**
Presenter: Janet Ashley, M.D.
- 1530 – 1545 **Traumatic Brain Injury Biomarkers Glial Fibrillary Acidic Protein and Ubiquitin C-terminal Hydrolase L1 Increase with Glasgow Coma Scale Severity in Hyperacute Period of Trauma Assessment (MHSRS-24-11841)**
Presenter: Saul A. Datwyler, Ph.D.
- 1545 – 1600 **Break**
- 1600 – 1615 **Traditional Clinical Criteria Do Not Accurately Predict Biomarker-Positive Traumatic Brain Injury: Results From a Large-Scale Prospective Cohort Study (MHSRS-24-11837)**
Presenter: Samuel A. McLean, M.D., MPH
- 1615 – 1630 **Quantitative Pupillometry Predicts Return to Play and Tracks Clinical Evolution of mild Traumatic Brain Injury: An MTBI2 Study (MHSRS-24-10824)**
Presenter: LTC Bradley Dengler, USA
- 1630 – 1645 **The Relationship Between Headaches, Dizziness, and Sensory Phenotype After Traumatic Brain Injury in Veterans and First Responders (MHSRS-24-11886)**
Presenters: Wesley Cole, Ph.D., Heidi Greata, DPT
- 1645 – 1700 **Saccadic Markers of White Matter Integrity After mild and Moderate-to-Severe TBI in Active Duty Military Personnel (MHSRS-24-10853)**
Presenter: Mark L. Ettenhofer, Ph.D.
- 1700 – 1715 **Perivascular Space Burden and Cerebrospinal Fluid Biomarkers in U.S. Veterans with Blast-related mild Traumatic Brain Injury (MHSRS-24-12615)**
Presenter: Juan Piantino, M.D.
- 1715 – 1730 **Culture Shift Within the Department of Defense Regarding Brain Injury Detection and Treatment (MHSRS-24-11501)**
Presenter: Deveney Ching, Ph.D.

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Military Exposures and Subsequent Long-term Outcomes

Moderator: Col Ian J. Stewart, USAF

LOCATION: Sun C

- 1430 – 1445** **Impact of Burn Pit Exposure on the Severity of Obstructive Sleep Apnea in U.S. Veterans: A Retrospective Analysis** (MHSRS-24-12525)
Presenter: Javad Razjouyan, Ph.D.
- 1445 – 1500** **Association of Neurocognition and Obstructive Sleep Apnea in Participants with Chronic Blast-Related Traumatic Brain Injury** (MHSRS-24-13097)
Presenter: Shawn Eagle, Ph.D.
- 1500 – 1515** **Subjective Cognitive Decline and Correlated Biomarkers in Gulf War Veterans** (MHSRS-24-13502)
Presenter: Rosemary Toomey, Ph.D.
- 1515 – 1530** **Break**
- 1530 – 1545** **Exposure Assessment of Iraq and Afghanistan Deployers Using a Job Exposure Matrix** (MHSRS-24-12989)
Presenter: Andrew Dey, MPH
- 1545 – 1600** **The Impact of Military Deployment on the Development of Lymphoma** (MHSRS-24-13399)
Presenter: Maj Matthew Rendo, USAF
- 1600 – 1615** **The Relationship of Deployment Exposures to Bronchiectasis in a Military Population** (MHSRS-24-12223)
Presenter: Maj Lorena North, USAF
- 1615 – 1630** **Traumatic Brain Injury Increases the Risk of Subsequent Atrial Fibrillation and Atrial Flutter** (MHSRS-24-11444)
Presenter: Mark Haigney, M.D.
- 1630 – 1645** **Brain Cancer Mortality (1979 -2019) in the Vietnam Era Veteran Cohort** (MHSRS-24-13077)
Presenter: Aaron Schneiderman, Ph.D.
- 1645 – 1700** **Incidence Rate Trends of Cardiac Outcomes in Active Duty Service Members relative to the COVID-19 Pandemic** (MHSRS-24-12760)
Presenter: Anthony Marrama, MPH
- 1700 – 1715** **Selective Motoric Dysfunction in Service Members with Combat-related mild TBI Compared to Non-injured Combat Deployed Controls – A Longitudinal Assessment of Outcome Over the First Decade Post-injury** (MHSRS-24-12485)
Presenter: Christine Mac Donald, Ph.D.
- 1715 – 1730** **Blast Exposure and Chronic Medical Conditions Among Veterans: A Millennium Cohort Study Investigation of High- and Low-level Blast** (MHSRS-24-11144)
Presenter: Sarah Martindale, Ph.D.

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Casualty Care During Multi-Domain Operations, Large Scale Combat Operations, and Prolonged Care

Moderators: Jose Salinas, Ph.D., Nathan Fisher, M.S., Kathy Grochowski, B.A.

LOCATION: Coastal A

- 1430 – 1445** **Randomized Controlled Trial of Telementoring During 14-hour Prolonged Casualty Care Simulation Improves Caregiver Performance and Casualty Survival (MHSRS-24-12026)**
Presenter: COL Jeremy Pamplin, USA
- 1445 – 1500** **Pilot Comparison of Vital Sign Frequency for Manual versus Automated Data Capture to Enable Machine Learning in En Route Care Environments (MHSRS-24-12204)**
Presenter: Maj William T. Davis, USAF
- 1500 – 1515** **Advanced Trauma Skills Training for Ukrainian Surgeons – Preliminary Results (MHSRS-24-12662)**
Presenter: CAPT Travis Polk, USN
- 1515 – 1530** **Adapting Artificial Intelligence for Automated Triage from a UAV (MHSRS-24-13420)**
Presenter: Kelly Roman, B.S.
- 1530 – 1545** **APRAISE-HRI: An FDA-cleared AI Algorithm for Triage of Hemorrhage in Trauma Casualties (MHSRS-24-12056)**
Presenter: Jaques Reifman, Ph.D.
- 1545 – 1600** **Advanced Decision Support for Monitoring Casualties with Hemorrhage: Why Is There Continued Reliance on the Use of Standard Vital Signs? (MHSRS-24-12068)**
Presenter: Victor Convertino, Ph.D.
- 1600 – 1615** **Break**
- 1615 – 1630** **Investigation and Analysis of Available Chatbot Technologies to Integrate in a Multi-Domain Operational (MDO), Delayed/Disconnected, Intermittently Connected, Low-Bandwidth (DIL) Conditions (MHSRS-24-11687)**
Presenter: Richard Barnhill, B.A.
- 1630 – 1645** **Artificially Intelligent (AI) Perception System for Tactical Combat Casualty Care Scene Interpretation and Automated Documentation on an ATAK Enabled Smartphone (MHSRS-24-11718)**
Presenter: Rebecca Kwasinski, M.S.
- 1645 – 1700** **Towards a Multi-fidelity Digital Human Model for Use in Simulation Environments for Tactile Human/Robot Interactions (MHSRS-24-11698)**
Presenter: Rajarshi Roy, Ph.D.
- 1700 – 1715** **In Silico Modeling of the Electromechanical Properties of the Heart in Hemorrhagic Shock (MHSRS-24-12323)**
Presenter: MAJ John Green, USA
- 1715 – 1730** **Multimodal Monitoring and Artificial Intelligence to Enhance TBI Management in Role 1 of Care (MHSRS-24-13088)**
Presenter: Ethan J. Moyer, B.S.

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Innovative Tools and Technologies for Predicting and Assessing Musculoskeletal Injuries of the Warfighter

Moderators: Pinata H. Sessoms, Ph.D., CDR Joshua Swift, USN

LOCATION: Sun B

- 1430 – 1445 **A Warfighter Digital Twin Can Identify Personalized Risk Factors of Musculoskeletal Injury** (MHSRS-24-12695)
Presenter: Nathan Pickle, Ph.D.
- 1445 – 1500 **Personalized Strength Scaling Improves Musculoskeletal Simulation Accuracy** (MHSRS-24-12477)
Presenter: Anna Corman, M.S.
- 1500 – 1515 **Reactive Viscoelastic Material Model of the Annulus Fibrosus - Applications for Fatigue Modeling** (MHSRS-24-13177)
Presenter: Lance Frazer, Ph.D.
- 1515 – 1530 **Pilot-specific Neck Morphologies to Determine Muscle Forces and Cervical Column Kinetics for predicting Musculoskeletal Injuries: An Upright Magnetic Resonance Imaging Study** (MHSRS-24-11363)
Presenter: Narayan Yoganandan, Ph.D.
- 1530 – 1545 **Quantitative Ultrasound for Evaluation of Peripheral Nerve Injury** (MHSRS-24-11824)
Presenter: Sameer Shah, Ph.D.
- 1545 – 1600 **Non-Invasive Measurement of Muscle Compartment Pressure in Battlefield Conditions Using Artificial Intelligence Powered Ultrasound** (MHSRS-24-13000)
Presenter: Meir Marmor, M.D.
- 1600 – 1615 **Improved Trunk Extension Strength Assessment with a Portable and Low-cost Dynamometer** (MHSRS-24-13514)
Presenter: Cole Dempsey, M.S.
- 1615 – 1630 **Break**
- 1630 – 1645 **MSK NEST - A Data Driven Tool for Future Intelligent and Collaborative MSK Surveillance** (MHSRS-24-12706)
Presenter: Jason Lee, Ph.D.
- 1645 – 1700 **The Synergy of Health Care Encounters and Operational Data in the Extraction of Exposome Signatures Associated with Lower Back Pain in Military Helicopter Pilots** (MHSRS-24-11661)
Presenter: Carlos Maldonado, Ph.D.
- 1700 – 1715 **Enabling Big Data Insights from a Musculoskeletal Injury Domain-Specific Database** (MHSRS-24-12172)
Presenter: Mehrdad Rafiei, Ph.D.
- 1715 – 1730 **International Consensus for Minimum Common Data Elements for Tracking and Reporting Musculoskeletal Injuries in Military Settings: A Delphi Consensus Study** (MHSRS-24-10905)
Presenter: Daniel I. Rhon, PT, DSc, Ph.D.

BREAKOUT SESSIONS

Monday, 26 August | 1430 – 1730

Big Data and Machine Learning for Full Spectrum Military Health Readiness, Performance and Care

Moderators: Dominic E. Nathan, Ph.D., Tracey K. Koehlmoos, Ph.D., Kent Etherton, Ph.D.

LOCATION: Sun 4

- 1430 – 1445** **Developing Machine Learning Models to Accurately Predict Post-Rib Fracture Pulmonary and Renal Complications** (MHSRS-24-11117)
Presenter: 2LT Ha Eun Kim, USA
- 1445 – 1500** **Classification of Gender and Systemic Disease from External Eye Photographs Using Deep Learning** (MHSRS-24-11637)
Presenter: CPT Paul Chong, USA
- 1500 – 1515** **Geospatial and Multilevel Analysis of Big Data for Decision-Making to Reduce Postpartum Hemorrhage in the U.S. Military Health System** (MHSRS-24-12703)
Presenter: Elizabeth H. Lee, DrPH
- 1515 – 1530** **A Machine Learning Model to Streamline Medical Readiness via the eProfile System** (MHSRS-24-11676)
Presenter: David Hazel, M.S.
- 1530 – 1545** **Prediction of Clinically Significant Improvements During the NiCoE Intensive Outpatient Program Using Machine Learning** (MHSRS-24-11021)
Presenter: Rujirutana Srikanchana, Ph.D.
- 1545 – 1600** **Break**
- 1600 – 1615** **Asymptomatic Hypertension in Military Emergency Departments** (MHSRS-24-11567)
Presenter: 2LT Joseph Rhee, USA
- 1615 – 1630** **Future Osteoarthritis Development Can Be Predicted by Peripheral Blood Epigenetic Machine-Learning Models Up to 96 Months in Advance** (MHSRS-24-11482)
Presenter: Matlock Jeffries, M.D.
- 1630 – 1645** **Creating Deep Embeddings for Characterizing Military-Relevant Gastrointestinal Diseases with Computer Vision Models** (MHSRS-24-13280)
Presenter: Camilo Valdes, Ph.D.
- 1645 – 1700** **Adverse Physical and Mental Health Outcomes in Deployers with Primary Psychiatric Evacuation from CENTCOM 2001 to 2015: A Cohort Analysis** (MHSRS-24-12195)
Presenter: Lt Col Cubby Gardner, USAF
- 1700 – 1715** **Early Identification of Critical Care Patients at High Risk of Developing ARDS and Sepsis Using Machine Learning** (MHSRS-24-11088)
Presenter: Felipe A. Lisboa, M.D.
- 1715 – 1730** **Fishbowl Q&A**

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Breakout Sessions

Tuesday, 27 August



MHS Military Health System
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BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

An Ounce of Prevention: Next Generation Vaccines and Passive Immunoprophylaxis to Enhance Warfighter Readiness

Moderators: COL Julie Ake, USA, MAJ Gina Griffith, USA

LOCATION: Coastal A

- 0800 – 0815 **Real-world Evaluation of Vaccine Strain Immune Escape through SARS-CoV-2 Genetic Sieve Analysis: Insights and Future Vaccine Applications** (MHSRS-24-11986)
Presenter: Simon Pollett, MBBS
- 0815 – 0830 **Army Liposome Formulation with QS21 (ALFQ): A Safe and Potent Adjuvant in Phase I Clinical Trials** (MHSRS-24-12077)
Presenter: Essie Komla, Ph.D.
- 0830 – 0845 **RV 575 Study: Dose Optimization Study of ALFQ Adjuvant in a Candidate HIV Vaccine Containing A244 and B.63521 HIV Envelope Proteins Conducted at the Walter Reed Army Institute of Research (WRAIR) - Results of a Blinded Interim Analysis** (MHSRS-24-11944)
Presenter: David Leggat, Ph.D.
- 0845 – 0900 **Epitope Disk Nanoparticle: Development of a Next-Generation Vaccine Platform** (MHSRS-24-13341)
Presenter: Shelby Foor, Ph.D.
- 0900 – 0915 **Injectable Scaffolds for Vaccination Against Implant-Associated Infection** (MHSRS-24-11394)
Presenter: Michael Super, Ph.D.
- 0915 – 0930 **Vaccine Associated Cardiac Adverse Events: Myocarditis and Subclinical Myocardial Injury Following Smallpox Vaccines Are Associated with Cardiovascular Disease Risk Factors and Post-Vaccine Cardiac Injury Biomarker Increases** (MHSRS-24-12122)
Presenter: Renata Engler, M.D.
- 0930 – 0945 **Efficacy of the Bispecific Antibody 10E8.4/iMab Against High-dose Intravenous SHIV Challenge in Rhesus Macaques** (MHSRS-24-12301)
Presenter: Caroline Subra, Ph.D.
- 0945 – 1000 **Clinical Development of Oral Biologics for Pre-exposure Prophylaxis Against All Major Pathogenic Enterotoxigenic Escherichia coli (ETEC) Strains** (MHSRS-24-12845)
Presenter: Lisa Cavacini, Ph.D.

Severe Burn Injury: Strategies to Accelerate Casualty Functional Recovery

Moderators: Robin K. Walker, Ph.D., Anne McKeague, Ph.D., Bonnie J. Woffenden, Ph.D.

LOCATION: Coastal 9

- 0800 – 0815 **Alternative Resuscitation Strategies Using Fresh Frozen Plasma to Reduce Fluid Requirements After Severe Burn in a Swine Model: A Pilot Study** (MHSRS-24-11285)
Presenter: Tina Rodgers, Ph.D.
- 0815 – 0830 **Urine Output Is Insensitive to Fluid Volume in the Initial 8 Hours After Burn in a Swine Model: Implications for Fluid Creep and the Use of Urine Output as an Endpoint to Resuscitation** (MHSRS-24-11240)
Presenter: Caroline Gusson Shimoura de Almeida Lima, Ph.D.
- 0830 – 0845 **Acute Development of Squamous Cell Carcinoma in a Burn Donor Site: A Case Report and Review of Literature** (MHSRS-24-11386)
Presenter: Madelyn Kamly, MSN
- 0845 – 0900 **Investigational Biological Ointment for Dermal Burns That Reduces the Risk of SIRS, Accelerates Healing, Prevents Scars by Directly Modulating Inflammation While Treating Infection Topically, on the Battlefield** (MHSRS-24-12338)
Presenter: Philippe Sollie, MSc

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

- 0900 – 0915** **Innovative Full-Thickness Burn Care Solutions: Pre-Clinical Assessment of a Novel Silicone-Based Polymer (SBP) Wound Matrix for Combat Casualty Burn Care (MHSRS-24-10822)**
Presenter: Adam Jorgnesen, M.D., Ph.D.
- 0915 – 0930** **Commissuroplasty with Triangular Wedged Scar Excision and Mucosal Y-V Advancement Flap as Treatment for Burn-related Microstomia: A Case Series (MHSRS-24-13212)**
Presenter: Maria A. Lux, M.D.
- 0930 – 0945** **Low-level Endotoxin Preconditioning After Burn Injury Significantly Improves Survival Rate in Mouse Sepsis Model: Implications for Burn Casualties During Prolonged Field Care (MHSRS-24-11119)**
Presenter: MAJ Bradley Kearney, USA
- 0945 – 1000** **Bridging Gaps in Combat Medic Training: A Simulation-Based Approach for Burn Injury Management (MHSRS-24-11876)**
Presenter: Hannah Theriot, M.D.

TBI Management: Epidemiology and Down Range Management

Moderator: Caryn Stern, DrPH, MPH

LOCATION: Coastal C

- 0800 – 0815** **History of Musculoskeletal (MSK) and Traumatic Brain Injury (TBI): Depression Symptoms in Law Enforcement Personnel (MHSRS-24-11662)**
Presenter: James Onate, Ph.D.
- 0815 – 0830** **Service Member and Veteran Participants of the Department of Veterans Affairs Traumatic Brain Injury (TBI) Intensive Evaluation and Treatment Programs (IETPs): Who Are They? (MHSRS-24-12535)**
Presenter: Jessica Ryan, Ph.D.
- 0830 – 0845** **Advancing Prehospital Assessment of Traumatic Brain Injury (TBI) Patients with the Use of Machine Learning-based Modeling of Continuous Physiologic Data (MHSRS-24-11962)**
Presenter: LT Kenneth Dalton, USN
- 0845 – 0900** **Personalized, Augmented Cognitive Training for Veterans and Service Members with a History of mild Traumatic Brain Injury: Randomized Controlled Trial Results (MHSRS-24-11695)**
Presenter: Mark Ettenhofer, Ph.D.
- 0900 – 0915** **2-Deoxy-2-[18F]Fluoro-D-Glucuric Acid (18F-FGA) Detects mild Traumatic Brain Injury: Possible Positron Emission Tomography Screening Tool for mild Head Injury (MHSRS-24-13419)**
Presenter: Kelly Standifer, Ph.D.
- 0915 – 0930** **Hypobaric During Aeromedical Evacuation Increases Systemic Inflammation Following Porcine Traumatic Brain Injury (MHSRS-24-12191)**
Presenter: Michael D. Goodman M.D.
- 0930 – 0945** **Whole Blood Use in Patients with Traumatic Brain Injury Is Not Associated with Decreased Mortality (MHSRS-24-12650)**
Presenter: CPT Nina Eng, USA
- 0945 – 1000** **Intranasal N-Acetylcysteine (NAC) or Increasing Brain Levels of Glutathione (GSH) and Rapid Amelioration of Acute Post-Concussive Symptoms (MHSRS-24-13504)**
Presenter: Jeffrey Lewine, Ph.D.

BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

Moving the Needle on Preventing Harmful Behaviors in the Military Community – Implementing Cross Agency Research Priorities – Current and Future State

Moderators: Tim Hoyt, Ph.D., MBA, Fuad Issa, M.D., Melissa Mehalick, Ph.D., Sharmila A. Chari, Ph.D.

LOCATION: Sun A

- 0800 – 0815** **The People First Task Force Inventory: Understanding One Service's Activities to Prevent and Respond to Harmful and Destructive Behaviors and Lessons Learned for Application across the Department of Defense** (MHSRS-24-12901)
Presenter: Theresa Jackson Santo, Ph.D., MPH
- 0815 – 0830** **Rapid Response Surveillance: A Naval Health Research Center Capability for At-Risk Navy Commands** (MHSRS-24-12321)
Presenter: Robyn M. Englert, MPH
- 0830 – 0845** **Cross-Cutting Prevention: Development of an Adaptable Model for Use Across Diverse Military Settings** (MHSRS-24-12473)
Presenters: Nicola Winkel, MPA, Kayla Stevenson, B.S.
- 0845 – 0900** **New Strategies to Address Substance Misuse in the Military** (MHSRS-24-13322)
Presenter: CAPT Erin Wilfong, USN
- 0900 – 0915** **Moving the Needle on Preventing Suicide in the Military Community - Implementing Cross Agency Research to Practice** (MHSRS-24-13190)
Presenter: Ramya Sundararaman, M.D., MPH
- 0915 – 0930** **Adopting Community-Based Participatory Research Approach to Address Suicide Risk Among Alaska Native Youth to U.S. Army Formations** (MHSRS-24-12549)
Presenter: James Morton Jr., Ph.D.
- 0930 – 0945** **Project Safe Guard: Challenges and Opportunities of a Universal Rollout of Peer-Delivered Lethal Means Safety Counseling at a U.S. Military Installation** (MHSRS-24-10797)
Presenter: Ian Stanley, Ph.D.
- 0945 – 1000** **Suicide Prevention Learning Collaborative in VA Community Care: Improving Equitable and Culturally Sensitive Care to Military/Veteran Populations** (MHSRS-24-11450)
Presenter: Patricia Russell, Ph.D.

Solutions to Accelerate Recovery from Neuromusculoskeletal Injury

Moderators: Elizabeth Russell Esposito, Ph.D., Brad D. Isaacson, Ph.D.

LOCATION: Sun B

- 0800 – 0815** **Exploring Changes in Neuromusculoskeletal Injury Incidence and Rehabilitation Utilization Among Active Duty Service Members During the COVID-19 Pandemic** (MHSRS-24-12341)
Presenter: Kalya Christine Jannace, Ph.D.
- 0815 – 0830** **Patient Reported and Biomechanical Outcomes for Servicemembers with ACLr Undergoing Rehabilitation at a MTF** (MHSRS-24-12397)
Presenter: Trevor Kingsbury, M.S.
- 0830 – 0845** **Factors Associated with Return-to-Duty Following Modified Bröstrom Repair for Chronic Ankle Instability** (MHSRS-24-11613)
Presenter: Megan Roach, Ph.D., ATC

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

- 0845 – 0900** **Assessing the Feasibility and Compliance of Using a Virtual Reality System to Enhance Upper Extremity Rehabilitation and Recovery in DoD Beneficiaries (MHSRS-24-13028)**
Presenter: David Carlisle, B.A.
- 0900 – 0915** **The Impact of Blood Flow Restriction Training on Tibial Bone Stress Injury Rehabilitation: An Exploratory Case Series (MHSRS-24-12738)**
Presenter: MAJ Andrew Golden, USA
- 0915 – 0930** **Blood Flow Restriction Therapy Following Closed Diaphyseal Femur Fractures: A Prospective Randomized Trial (MHSRS-24-13329)**
Presenter: Daniel Stinner, M.D., Ph.D.
- 0930 – 0945** **Non-surgical Rehabilitative Treatments for Musculoskeletal Injuries Reduced Pain Immediately Following Treatment Sessions (MHSRS-24-11776)**
Presenter: Laura Talbot, Ph.D., EdD, RN
- 0945 – 1000** **Orthobiologics in Physical Medicine and Rehabilitation: Monitoring Practice Patterns and Outcomes Using the Military Orthopaedics Tracking Injuries and Outcomes Network (MOTION) (MHSRS-24-11130)**
Presenter: Xiaoning Yuan, M.D., Ph.D.

Force Health Protection: Operational Exposure Research and Predictive Risk Methods

Moderator: David R. Mattie, Ph.D., DABT

LOCATION: Sun C

- 0800 – 0815** **Emerging Evidence for Adverse Health Effects from Vaping Electronic Cigarettes and Delivery Systems in the Military – Relevance to Force Health, Readiness, and Resilience (MHSRS-24-11205)**
Presenter: Mark A. Williams, Ph.D.
- 0815 – 0830** **Collection and Analysis of Underivatized Aldehydes Using Mesoporous Silica and Selected Ion Flow Tube Mass Spectrometry and Thermal Desorption Mass Spectrometry (MHSRS-24-10826)**
Presenter: Mitch Rubenstein, Ph.D.
- 0830 – 0845** **Multi-Task Machine Learning Models for Predicting Health Risks from Chemical Exposures (MHSRS-24-13417)**
Presenter: Mary Versa Clemens-Sewall, B.S.
- 0845 – 0900** **Rapid Assessment of Risk to Potential Neurotoxins Using Non-Animal Test Methods (MHSRS-24-11286)**
Presenter: Teresa R. Sterner, MS
- 0900 – 0915** **Alveolus-on-a-Chip as a Model Platform for Assessing Toxicity after Exposure to Flight-related Compounds via Custom Soot/VOC Generation (MHSRS-24-12399)**
Presenter: Patrick M. McLendon, Ph.D.
- 0915 – 0930** **The Relationship Between DoD Firefighter Blood PFAS Levels, Age, and Sex (MHSRS-24-11889)**
Presenter: Beth T. Poitras, MPH
- 0930 – 0945** **Post-Occupational Impulse Noise Exposure Mediates the Development of Noise Induced Hearing Loss (MHSRS-24-10995)**
Presenter: Elliott W. Dirr, Ph.D.
- 0945 – 1000** **Biomarker Discovery in Controlled Normobaric Hypoxia Exposures (MHSRS-24-11492)**
Presenter: Sean W. Harshman, Ph.D.

BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

Human Performance Optimization in Polar Environments

Moderators: Christopher Santee, MBA, PPM, Ronald Wayne Matheny, Ph.D., Camilla Mauzy, Ph.D., Doug Jones, Ph.D.

LOCATION: **Coastal 4**

Welcome

Presenter: Patrick Mason, Ph.D., SES

- 0800 – 0815** **Urinary Metabolites Measured at Sea Level Predict Altitude-induced Acute Mountain Sickness Outcome** (MHSRS-24-12306)
Presenter: Camilla Mauzy, Ph.D.
- 0815 – 0830** **Beyond the Scope of Altitude Predictive Risk: From Terrestrial to Extraterrestrial Life** (MHSRS-24-13142)
Presenter: Dylan T. Dahlquist, MSc
- 0830 – 0845** **Feeding the Gut-Muscle-Brain Axis to Support Warfighter Performance During Cold Weather Operations** (MHSRS-24-11594)
Presenter: Lynn Cialdella-Kam, Ph.D.
- 0845 – 0900** **Non-Invasive, Handheld Devices Integrated with Five Sensors for Rapid Assessment of Cold-Related Injury** (MHSRS-24-10912)
Presenter: Daniel Sim, Ph.D.
- 0900 – 0915** **Evaluation of the Performance of Chemical Exposure Management in Simulated Arctic Conditions** (MHSRS-24-12322)
Presenter: James Eazor, MPH
- 0915 – 0930** **Naval Aircrew Personal Protective Equipment Limitations in Arctic Operations** (MHSRS-24-13065)
Presenter: Bethany Shivers, Ph.D.
- 0930 – 0945** **Interdisciplinary South Pole Innovation & Research Expedition Study 2022 (INSPIRE22): Hormonal Adaptation and Body Composition in Military Men and Women Crossing Antarctica Unsupported** (MHSRS-24-12001)
Presenter: Wg Cdr Robert M. Gifford, RAF
- 0945 – 1000** **Discussion**

Military Female Health Research Aimed at Overcoming the Challenges and Barriers Impacting Optimal Warfighter Performance & Operational Readiness

Moderators: Genny M. Cook, MPH, Ava Marie S. Conlin, DO, MPH

LOCATION: **Sun 4**

- 0800 – 0815** **Breaking Barriers: Women in Army Special Operations Forces (ARSOF) Study** (MHSRS-24-11547)
Presenters: LTC Rachel Cepis, USA, Monica Moore, Ph.D.
- 0815 – 0830** **Musculoskeletal Injuries in Female U.S. Active Duty Service Members: Prevalence/Incidence, Healthcare Utilization, and Cost Analysis Spanning Fiscal Years 2016-2021** (MHSRS-24-11272)
Presenter: Xiaoning Jenny Yuan, M.D., Ph.D.
- 0830 – 0845** **Women Medical Personnel as Pioneers in the Male Dominated Warzone** (MHSRS-24-12819)
Presenter: Ortal Tamam, M.D., MSc
- 0845 – 0900** **Maternal and Fetal Health Risks Among Female Military Aviation Officers** (MHSRS-24-10988)
Presenter: MAJ Christopher Stark, USA

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 0800 – 1000

- 0900 – 0915** **I'd Rather Just Hold It: Examining Attitudes Towards Specialized Bladder Relief Devices for Female Warfighters**
(MHSRS-24-11231)
Presenter: LT Alexandra Kaplan, USN
- 0915 – 0930** **Dynamic Strength Index Differs Between Male and Female Entry-level U.S. Marines at the School of Infantry-West**
(MHSRS-24-11858)
Presenter: Joshua Winters, Ph.D.
- 0930 – 0945** **Dynamic Strength Index Differs Between Male and Female Entry-level U.S. Marines at the School of Infantry-West**
(MHSRS-24-11955)
Presenter: Melissa Sutter, BSN
- 0945 – 1000** **Discussion**

Tuesday, 27 August | 1300 – 1500

Improving Traumatic Wound Healing and Recovery

Moderator: Prem Yadav, Ph.D.

LOCATION: **Coastal 9**

- 1300 – 1315** **Handheld In Situ Printing of Macroporous Scaffolds for Wound Healing** (MHSRS-24-13227)
Presenter: Mohamadmahdi Samandari, Ph.D.
- 1315 – 1330** **mBMF164 Reduces Fibrosis and Improves Neuromuscular Function in the Treatment of Volumetric Muscle Loss**
(MHSRS-24-12187)
Presenter: Jessica Motherwell, Ph.D.
- 1330 – 1345** **Delayed Minced Muscle Autografting Does Not Improve Bone Healing or Muscle Function in Yucatan Minipigs Subjected to a Composite Tissue Injury Including a Segmental Bone Defect and Volumetric Muscle Loss**
(MHSRS-24-13124)
Presenter: Roman Natoli, M.D. Ph.D.
- 1345 – 1400** **High Surgical Complication Rate for Ballistic Proximal Femur Fractures Regardless of Fracture Location**
(MHSRS-24-11325)
Presenter: Rachel Seymour, Ph.D.
- 1400 – 1415** **Impact of Obesity on Inflammatory Markers in Patients with Aseptic Nonunions** (MHSRS-24-11435)
Presenter: 2LT Bradley J. Lauck, USANG
- 1415 – 1430** **Understanding the Role of Thrombospondin 1 and 2 in Aberrant Wound Healing and Preventing Heterotopic Ossification** (MHSRS-24-10913)
Presenter: Madysen Hunter, B.A.
- 1430 – 1445** **Cell Therapy Applications in Dermatology – A Potential Therapy for Amputees** (MHSRS-24-10850)
Presenter: Luis Garza, M.D., Ph.D.
- 1445 – 1500** **A Transformational Dermal Template That Allows Reconstruction of Full-thickness Skin Loss in a Single Surgical Step** (MHSRS-24-11726)
Presenter: Jason A. Spector, M.D.

BREAKOUT SESSIONS

Tuesday, 27 August | 1300 – 1500

Organ Support in Trauma

Moderators: Maj Liz Powell, USAF, Lt Col Richard Betzold, USAF, Col Ian J. Stewart, USAF

LOCATION: Sun A

- 1300 – 1315 **Nitric Oxide Releasing Circuitry and Nitric Oxide-Enhanced Sweep Gas for Heparin-Free Artificial Organ Support: 72-Hours In Vivo Validation** (MHSRS-24-10959)
Presenter: Teryn Roberts, Ph.D.
- 1315 – 1330 **Initiation Timing of Extracorporeal Membrane Oxygenation Therapy in Trauma Patients** (MHSRS-24-11700)
Presenter: Capt Connor Wakefield, USAF
- 1330 – 1345 **Domain-Specific PCAs of Biomarkers, Clinical, and Genetic Variables Improve Prediction of Complications in Polytrauma Patients** (MHSRS-24-11109)
Presenter: Henry Robertson, Ph.D.
- 1345 – 1400 **Small RNA Sequencing Identifies Early Differential Expression of Whole Blood MicroRNAs in Shocked Trauma Patients** (MHSRS-24-11161)
Presenter: MAJ Simon Tallwin, BMBS, MSc
- 1400 – 1415 **Teaching Old Drug New Tricks: Recombinant Human C1 Inhibitor Repurposing for Traumatic Hemorrhage-induced Endotheliopathy and Multiple-organ Dysfunction Syndrome in Prehospital Settings** (MHSRS-24-12798)
Presenter: Yansheng Feng, M.D., Ph.D.
- 1415 – 1430 **Predicting Multiple Organ Failure in a Combat-Relevant Polytrauma Model** (MHSRS-24-11412)
Presenter: Zhangsheng Yang, DVM, Ph.D.
- 1430 – 1445 **Resuscitation of Exsanguination Cardiac Arrest in a Porcine Model** (MHSRS-24-12854)
Presenter: Bryan S. Jordan, DNP, RN
- 1445 – 1500 **Evaluation of a Powerless Portable Dialysate Generator in a Porcine Model of Acute Kidney Injury** (MHSRS-24-12847)
Presenter: Mirza Zain Baig, M.D.

From Theory to Practice: Transitioning S&T Findings into Actionable Knowledge

Moderators: Kasey E. Moritz, Ph.D., James B. Phillips, Ph.D.

LOCATION: Coastal 4

- 1300 – 1315 **An Evaluation of a Medical Education Roadmap for DoD Healthcare Professionals: An Innovative Evidence Based Approach** (MHSRS-24-13457)
Presenter: Jeff Hillier, Ph.D.
- 1315 – 1330 **Developing Financially Sustainable Biomedical Products with Military Relevance** (MHSRS-24-11667)
Presenter: Brian Finrow, JD
- 1330 – 1345 **Leveraging Best Practices in Science Communications to Support Military Health System Research Agendas** (MHSRS-24-12044)
Presenter: Richard Breen Jr., APR
- 1345 – 1400 **Building Capacity for Translation of Research into Policy and Practice: Clinical Practice Guideline Deconstruction Tool Case Study** (MHSRS-24-12888)
Presenter: Richard Caldwell, MSN
- 1400 – 1415 **From Science to Policy: Translating Research to Develop Best Practices** (MHSRS-24-NA-01)
Presenter: LaGwyn Durden, ATC, LAT

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 1300 – 1500

- 1415 – 1430** **Summary Findings from the State of the Technology for Neurotrauma, Assessment, Diagnosis, and Monitoring**
(MHSRS-24-11000)
Presenter: Janelle Hurwitz, M.S., MBA
- 1430 – 1445** **Technology Transfer (T2) Provides Law Enforcement with Lifesaving Access to DHA Medical Innovation**
(MHSRS-24-11026)
Presenter: Beth Drees, Ph.D., MBA
- 1445 – 1500** **A Venture Capital Investor Perspective: From Startup Company Formation to Scaling, Growth, and Dual-Use**
(MHSRS-24-11268)
Presenter: Corey Ritter, MBA

Advances in Regenerative Medicine from Point of Injury to Definitive Care and Beyond

Moderators: Jenifer Ojeda, Ph.D., Stephen M. Goldman, Ph.D.

LOCATION: Sun B

- 1300 – 1315** **Advanced Composite Material for the Regeneration of Complex Craniomaxillofacial (CMF) Bone Defects**
(MHSRS-24-13143)
Presenter: Simion Bran, M.D., Ph.D.
- 1315 – 1330** **4-aminopyridine Augments BMP2 Expression and Mesenchymal Stem Cell Differentiation to Accelerate Bone Healing Following Tibial Fracture** (MHSRS-24-13233)
Presenter: John Elfar, M.D.
- 1330 – 1345** **Advanced Regenerative Composite Material for Tibial Tuberosity Advancement (TTA) Rapid Technique for Canine Cranial Cruciate Ligament Disease** (MHSRS-13025)
Presenter: Ciprian Ober, Ph.D.
- 1345 – 1400** **Assessment of Systematic Micrografting for Mitigating Donor Site Morbidity in Skeletal Muscle Autografting**
(MHSRS-24-12202)
Presenter: Stephen Goldman, Ph.D.
- 1400 – 1415** **Robotic-arm In Vivo Printing of Patient-specific Bioinks for Treatment of Volumetric Muscle Loss** (MHSRS-24-13513)
Presenter: Mohamadmahdi Samandari, Ph.D.
- 1415 – 1430** **Stem Cell Therapy to Promote Tissue Repair, Regeneration and Functional Outcomes in Neuromusculoskeletal Injuries**
(MHSRS-24-10966)
Presenter: Shashikumar K. Salgar, Ph.D.
- 1430 – 1445** **Nerve Tape Assisted PEG Fusion for Immediate Restoration of Axon Continuity** (MHSRS-24-11552)
Presenter: Geetanjali Bendale, Ph.D.
- 1445 – 1500** **Safety and Efficacy of NTX-001 in the Treatment of Acute Single Transected Peripheral Nerve Injuries: A Phase 2 Randomized Controlled Trial** (MHSRS-24-11308)
Presenter: David Micah Brogan, M.D., MSc

BREAKOUT SESSIONS

Tuesday, 27 August | 1300 – 1500

Warfighter Brain Health: Advances in Optimizing and Sustaining Cognitive Performance

Moderators: Malena B. Rone, Ph.D., Tim Dunn, Ph.D., Lars Hungerford, Ph.D.

LOCATION: **Coastal A**

- 1300 – 1315 **DoD Warfighter Brain Health Initiative: Line of Effort 1 - Cognitive Health and Performance** (MHSRS-24-NA-05)
Presenter: Kathy Lee, MS, CRNP, ANP-BC
- 1315 – 1330 **Effects of Hypoxia and Extended Time on Task on Dynamic Stereoscopic Depth Tracking and Related Tasks**
(MHSRS-24-11234)
Presenter: Leonard Temme, Ph.D.
- 1330 – 1345 **Accelerating Sensorimotor Learning in a Flight Training Simulation Using Transcutaneous Vagus Nerve Stimulation (tVNS)** (MHSRS-24-13219)
Presenter: Justin Estep, M.S.
- 1345 – 1400 **Evaluating the Impact of Cueing Modality and Sensitivity on Pupil Diameter and Eye Movement During Simulated Rotary-Wing Flight** (MHSRS-24-12296)
Presenter: Christopher Aura, M.S.
- 1400 – 1415 **We Cannot Optimize What We Cannot Measure: Can Cognitive State be Assessed Using Naturalistic Brain Measurements and Machine Learning?** (MHSRS-24-13335)
Presenter: Sujoy Ghosh Hajra, Ph.D.
- 1415 – 1430 **Unanticipated Effects of Cognitive Training on Quality of Life in Veterans with History of mTBI** (MHSRS-24-13324)
Presenter: Nicholas Davenport, Ph.D.
- 1430 – 1445 **Longitudinal Changes in Eye Movements During Simulated Military/Operational Tasks: Tracking mTBI Recovery in the Fusion VR Study** (MHSRS-11703)
Presenter: Mark Ettenhofer, Ph.D.
- 1445 – 1500 **Baselining Tier 1 Weapon Systems and Breaching Charges to Determine Their Effects on Warfighter Brain Health**
(MHSRS-24-13556)
Presenter: Olivia Webster, B.S.

Assuaging Agony: Novel Pain Therapeutics

Moderators: Carmen Hinojosa-Laborde, Ph.D., MAJ Nathan Davidson, USA

LOCATION: **Sun C**

- 1300 – 1315 **Battlefield Analgesic Acquisition: Past Difficulties and Current Efforts** (MHSRS-24-12158)
Presenter: LTC Stephen Crimmins, USA
- 1315 – 1330 **Pain Management in Critical Combat Casualty Environments Using Degradable Poly(ester urea) Films for Sustained Delivery of Meloxicam and Bupivacaine** (MHSRS-24-13211)
Presenter: Matthew Becker, Ph.D.
- 1330 – 1345 **Sphenopalatine Ganglion Block for the Treatment of Acute Headache** (MHSRS-24-11981)
Presenter: Jason Cook, M.D.
- 1345 – 1400 **Pragmatic Biomarkers for Pain Management: A Preliminary Replication Analysis of Biomarkers in the Foundation Pain Index Among Individuals with Chronic Pain** (MHSRS-24-12261)
Presenter: Nicholas Ieronimakis, Ph.D.
- 1400 – 1415 **An Effective Novel Selective and Injectable Cryoneurolysis Treatment of Knee Pain** (MHSRS-24-11795)
Presenter: Lilit Garibyan, M.D., Ph.D.

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 1300 – 1500

- 1415 – 1430** **Mitochondrial Uncoupler MP-201 Reduces Orofacial Neuropathic Pain** (MHSRS-24-10993)
Presenter: Karin Westlund, Ph.D.
- 1430 – 1445** **Efficacy and Safety of Bedtime TNX-102 SL (Sublingual Cyclobenzaprine HCl) for the Management of Fibromyalgia: Results from the Confirmatory Phase 3 Randomized, Double-Blind, Placebo-Controlled RESILIENT Trial** (MHSRS-24-12790)
Presenter: Seth Lederman, M.D.
- 1445 – 1500** **The Application of Interdisciplinary Pain Management to Complex, Service-Related Chronic Pain: Findings from an NCCIH-Funded Trial** (MHSRS-24-11323)
Presenter: Don McGeary, Ph.D.

Case Records of the Joint Trauma System

Moderators: Col Valerie Sams, USAF, CAPT Matthew Tadlock, USN

LOCATION: Sun 4

- 1300 – 1500** **Panels of Clinical Combat Casualty Care Experts Discuss the Management of Challenging Cases from the Combat Environments** (MHSRS-24-NAS701, MHSRS-24-NAS702)
Presenters: John Holcomb, M.D., LCDR Jan (Mike) Van Gent, USN, BG Elon Glassberg, IDF, LTC Andrew Beckett (CAN), Col Stacy Shackelford, USAF, Brian Eastridge, M.D., Ray Fang, M.D., CAPT Travis Polk, USN

Congressionally Directed Medical Research Programs and Defense Health Program Medical Research Funding Opportunities

Moderator: Rebecca A. Fisher, Ph.D.

LOCATION: Coastal C

- 1300 – 1415** **CDMRP Overview, Review Process, Program Information, and Strategies for Application Success** (MHSRS-24-NAS401)
Presenters: COL Mark Hartell, USA, Gayle Vaday, Ph.D., Sandy Snyder, Ph.D., Tian Wang, Ph.D., Christie Vu, Ph.D., Rebecca Fisher, Ph.D.
- 1415 – 1430** **Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Programs - Overview and Opportunities** (MHSRS-24-NAS402)
Presenter: James R. Myers, MBA
- 1430 – 1445** **USAMRDC and Other Transactions Agreements with the Medical Technology Enterprise Consortium (MTEC)** (MHSRS-24-NAS403)
Presenter: Sara Langdon, MBA
- 1445 – 1500** **Panel Q&A**

BREAKOUT SESSIONS

Tuesday, 27 August | 1530 – 1730

Non-traditional Treatments and Delivery Strategies for Wound Infections and Sepsis

Moderator: COL Robert J. Cybulski, USA

LOCATION: Coastal A

- 1530 – 1545 **The Layered Defense Strategy: Lactea-Lf Is a Safe and Effective First Defense Against Bacterial Biothreat Agents as a Potential Medical Countermeasure** (MHSRS-24-12575)
Presenter: Jonathan Snedeker, Ph.D.
- 1545 – 1600 **SEM-AI based Quantitative Assessment of Wound Biofilm Infection: Response to Electroceutical Dressing Intervention** (MHSRS-24-12786)
Presenter: Sashwati Roy, Ph.D.
- 1600 – 1615 **Blood Purification for the Treatment of Critically Ill Patients with Pathogen Associated Shock: A Multicenter, Randomized Controlled Feasibility Trial (PURIFY-RCT)** (MHSRS-24-11502)
Presenter: Col Ian Stewart, USAF
- 1615 – 1630 **Fully Human Monoclonal Antibodies Confer Robust Protection in a Mouse MRSA Sepsis Model** (MHSRS-24-12389)
Presenter: Zachary Rivas, Ph.D.
- 1630 – 1645 **Targeting Polysaccharides of Klebsiella pneumoniae for Wound Infection Treatment** (MHSRS-24-10949)
Presenter: Renee Fleeman, Ph.D.
- 1645 – 1700 **CMTX-101: A Non-Traditional Anti-Biofilm Therapeutic for Improving Clinical Outcomes for Difficult-to-Treat Bacterial Infections** (MHSRS-24-12220)
Presenter: Charles McOsker, Ph.D.
- 1700 – 1715 **Regulation of Gene Expression in Deep Tissues of Chronic Ulcers via Localized Needle-Free Transdermal Delivery of Micromist Containing Gene and Protein Therapeutics - A Paradigm Shift in Treating Non-Healing Wounds** (MHSRS-24-12567)
Presenter: Lakshmi Pulakat, Ph.D.
- 1715 – 1730 **A Comparison of Two Foaming Bleaches for Controlling Sink Drain Reservoirs of Clinically Relevant Bacteria in Two Hospitals** (MHSRS-24-11400)
Presenter: Rosslyn Maybank, M.S.

Remote Damage Control Resuscitation: Innovations to Prolong the "Golden Hour"

Moderators: Robert T. Gerhardt, M.D., MPH, Col Joseph Maddry, USAF

LOCATION: Coastal C

- 1530 – 1545 **Introduction to the Concept of Remote Damage Control Resuscitation** (MHSRS-24-NA-10)
Presenter: Robert T. Gerhardt, M.D., MPH
- 1545 – 1600 **Efficacy-testing of an Injectable, Expandable, Biodegradable, Synthetic Foam in a Porcine Junctional Hemorrhage Model** (MHSRS-24-11847)
Presenter: Al-Murtadha Al-Gahmi
- 1600 – 1615 **Evaluation of an Adaptive Closed Loop Hemorrhagic Shock Resuscitation Controller in a Large Animal Model** (MHSRS-24-12326)
Presenter: David Berard
- 1615 – 1630 **The Efficacy of CounterFlow in Halting Non-Compressible Truncal Hemorrhage in Swine Model Is Dependent on the Concentration of Thrombin** (MHSRS-24-12931)
Presenter: Youjie Zhang, ME
- 1630 – 1645 **Prehospital Dried Plasma as a Bridge to Whole Blood Resuscitation** (MHSRS-24-11894)
Presenter: Aron Shoara, Ph.D.

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 1530 – 1730

- 1645 – 1700 **A Hypovolemic Infusion of Human Methemoglobin in Golden Syrian Hamsters Provides Insight on Its Effect on the Microcirculation** (MHSRS-24-13339)
Presenter: Carlos Munoz
- 1700 – 1715 **Heparin-free Extracorporeal Interventions for Future LSCO: Antithrombin Dynamics During 72-Hour Venovenous Extracorporeal Life Support** (MHSRS-24-11058)
Presenter: Halle Kill
- 1715 – 1730 **Discussion**

Far Forward Battlefield Diagnostic Imaging

Moderator: Jonathan D. Monti, DSc, PA-C

LOCATION: **Sun A**

- 1530 – 1545 **BEFAST (Bubble-Enhanced FAST) for the Evaluation of Solid Organ Injury in Hemodynamically Stable Blunt Abdominal Trauma** (MHSRS-24-11867)
Presenter: Laura Oh, M.D.
- 1545 – 1600 **First Pragmatic Multi-Institutional Testing of a Mobile Handheld Dynamic Portable X-Ray Device During 72-Hour Ground and Simulated High Altitude Aeromedical Evacuation** (MHSRS-24-11304)
Presenter: Andriy Batchinsky, M.D.
- 1600 – 1615 **Automating Ultrasound eFAST Triage Using Artificial Intelligent Models** (MHSRS-24-12159)
Presenter: Austin Ruiz
- 1615 – 1630 **A Modular, Portable Computed Tomography (CT) System for Triage and Surgical Support in Far-Forward, Austere Environments** (MHSRS-24-12267)
Presenter: Rajiv Gupta, M.D., Ph.D.
- 1630 – 1645 **Impact of Adding Diagnostic Musculoskeletal Ultrasound to Forward Deployed Physical Therapists** (MHSRS-24-12069)
Presenter: LTC Jon Umlauf, USA
- 1645 – 1700 **Defense Health Agency Enterprise POCUS Solution: Preparation for Far Forward Imaging by Integrating at Home** (MHSRS-24-10888)
Presenter: COL Scott Grogan, USA
- 1700 – 1715 **Optical Imaging Approach to Measure Burn Wound Severity and the Percentage of Total Body Surface Area** (MHSRS-24-12095)
Presenter: Gordon Kennedy, Ph.D.
- 1715 – 1730 **Discussion**

Protecting the Warfighter from Nuclear Threats: Acute Radiation Syndrome and Radiation Polytrauma

Moderators: Whitney Greene, Ph.D., David W. Evans, MPM, MSIT

LOCATION: **Coastal 4**

- 1530 – 1545 **A Rat Polytrauma Model of Whole-Body Irradiation and Blast Exposure** (MHSRS-24-12938)
Presenter: SGT Matthew McCloskey, USA
- 1545 – 1600 **Hemorrhage Exacerbates the Hematopoietic Acute Radiation Syndrome Induced by Irradiation Combined with Hemorrhagic Trauma** (MHSRS-24-11328)
Presenter: Juliann Kiang, Ph.D.

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 1530 – 1730

- 1600 – 1615** **The Influence of Extracellular Vesicles of Human Mesenchymal Stem Cells on the Regeneration Process of Radiation-induced Wounds (MHSRS-24-12003)**
Presenter: MAJ Julian Haupt, Bundeswehr, Germany
- 1615 – 1630** **A microRNA based Fingerstick Blood Test for Rapid Evaluation of Radiation Sickness (MHSRS-24-12424)**
Presenter: Naduparambil Jacob, Ph.D.
- 1630 – 1645** **Identification of Potential Prophylactic Medical Countermeasures Against Acute Radiation Syndrome (MHSRS-24-11053)**
Presenter: Rebecca Oberley-Deegan, Ph.D.
- 1645 – 1700** **BBT-059, a Promising Prophylactic Countermeasure for Radiation-induced Multi-organ Injury (MHSRS-24-11129)**
Presenter: Vidya Kumar, Ph.D.
- 1700 – 1715** **Identification of the Novel Medical Countermeasure LL244-3 Using In Vitro Models (MHSRS-24-11568)**
Presenter: Lynnette Cary, Ph.D.
- 1715 – 1730** **Expanding the Treatment Window for the FDA Approved Radiation Countermeasure NPLATE (MHSRS-24-11481)**
Presenter: Sanchita Ghosh, Ph.D.

Brain Impact of Sub-concussive Blast Exposure in Military Service Members: Implications for Prevention and Health

Moderators: Michael J. Roy, M.D., MPH, Raj K. Gupta, Ph.D.

LOCATION: Coastal 9

- 1530 – 1545** **Mitigation of Overpressure Exposures in Sniper Training: Findings from the COmbat and traINing QUeryable Exposure/event Repository (CONQUER) Operational Monitoring Program (MHSRS-24-13546)**
Presenter: Eric Schneider, Ph.D.
- 1545 – 1600** **Brain Impact of Subconcussive Blast Exposure During Heavy Weapons Training: the INVestigating training assoCiated blasT pAthology (INVICTA) Study (MHSRS-24-11099)**
Presenter: Michael J. Roy, M.D., MPH
- 1600 – 1615** **Subconcussive Blasts—Regardless of Magnitude—Lead to a Decline in Neuromotor Performance: Data from the INVICTA Study (MHSRS-24-11598)**
Presenter: Christopher Rhea, Ph.D.
- 1615 – 1630** **Quantifying Blast Safety Limits to Prevent Sub-concussive Traumatic Brain Injury During Heavy Weapons Training (MHSRS-24-11974)**
Presenter: Rika Carlsen, Ph.D.
- 1630 – 1645** **Neurological Correlates of Repeated Low-level Blast Exposure in Experienced Artillery Personnel (MHSRS-24-12811)**
Presenter: James Stone, M.D., Ph.D.
- 1645 – 1700** **It's About Time: Examining Sources of Variation for Amyloid Beta Biomarkers in Military Training Environments Involving Blast Exposure (MHSRS-24-13058)**
Presenter: Walter Carr, Ph.D.
- 1700 – 1715** **Impact of Low-Level Blast (LLB) Exposures on the Gut-Brain Axis During Tactical Training (MHSRS-24-12148)**
Presenter: Fatemeh Haghighi, Ph.D.
- 1715 – 1730** **High Lifetime Blast Exposure Using the Blast Exposure Threshold Survey (BETS) Is Associated with Worse Warfighter Brain Health Following mild Traumatic Brain Injury (MHSRS-24-12299)**
Presenter: Rael Lange, Ph.D.

BREAKOUT SESSIONS

Tuesday, 27 August | 1530 – 1730

Optimizing the Human Weapon System: Utilizing Wearable Sensors to Inform Readiness across the Joint Force

Moderators: Malena B. Rone, Ph.D., Andrew Midzak, Ph.D., James Christensen, Ph.D.

LOCATION: Sun B

- 1530 – 1545 **Optimizing the Human Weapon System (OHWS): Overview** (MHSRS-24-NA-06)
Presenters: Andrew Midzak, Ph.D., James Christensen, Ph.D.
- 1545 – 1600 **OHWS Infrastructure: A Cloud Architecture Built to Support Large-scale Human Performance Research and Transitions** (MHSRS-24-12405)
Presenter: Adam Strang, Ph.D.
- 1600 – 1615 **OHWS Air & Space: A Sustainable System to Facilitate the Rapid Development, Validation and Transition of Human Performance Products and Technology** (MHSRS-24-12211)
Presenter: Nicole Ray, Ph.D.
- 1615 – 1630 **OHWS Land: Integrated Ecosystem Development and Fielding: July 2020 to Present Day** (MHSRS-24-12149)
Presenter: Joseph Patterson, B.S.
- 1630 – 1645 **OHWS SEA: Steps Toward a Wearables-Based Capability for Monitoring Sleep and Readiness in United States Navy Populations** (MHSRS-24-15952)
Presenter: Rachel Markwald, Ph.D.
- 1645 – 1700 **Assessing and Augmenting Performance in Extreme Environments: Feasibility of Physiological Monitoring in Chemical, Biological, Radiological, and Nuclear Simulation Events at Bold Quest 2023** (MHSRS-24-13160)
Presenter: Joshua Hagen, Ph.D.
- 1700 – 1715 **Utilizing Wearable Technology to Assess Operational Performance in UMS Operators** (MHSRS-24-12228)
Presenter: Brandon Schrom, B.S.
- 1715 – 1730 **Question and Answer**

Food and Drug Administration Regulated Activities and Collaborations with DoD

Moderators: LTC Stuart Hobbs, USA, Chandar S. Thakur, Ph.D.

LOCATION: Sun C

- 1530 – 1545 **PL 115-92 and DoD Considerations for Regulatory Affairs** (MHSRS-24-NAS201)
Presenters: Dixon Rwakasyaguri, MPH, MBA, Rachel Hunnicutt, JD
- 1545 – 1600 **Animal Rule: Use within CBRND** (MHSRS-24-NAS202)
Presenter: Jennifer Dabisch, B.S.
- 1600 – 1615 **DoD-Funded FDA-Regulated Investigations: MRDC Office Of Human and Animal Research Oversight Review Activities** (MHSRS-24-NAS208)
Presenter: Kimberly Odam, M.S.
- 1615 – 1630 **Regulatory Pathways for New Innovated Medical Devices** (MHSRS-24-NAS203)
Presenter: Heather Agler, Ph.D.
- 1630 – 1645 **Regulatory Science Tools for Physiologic Closed-Loop Controlled Medical Devices** (MHSRS-24-NAS204)
Presenter: Ramin Bighamian, Ph.D.

(Continued)

BREAKOUT SESSIONS

Tuesday, 27 August | 1530 – 1730

- 1645 – 1700** **ECHO Program: Genetic Characterization and Observation (MHSRS-24-NAS205)**
Presenter: CDR Todd Myers, USN
- 1700 – 1715** **Use of Real-World Evidence in Regulatory Decision Making (MHSRS-24-NAS206)**
Presenter: Peter Weina, Ph.D., M.D.
- 1715 – 1730** **One Health at FDA (MHSRS-24-NAS207)**
Presenter: CAPT Brianna Skinner, USPHS

From Benchtop to Battlefield - Transitioning Research to Fielded Products

Moderator: Kathleen L. Berst, MBA

LOCATION: **Sun 4**

- 1530 – 1545** **Introduction & Acquisition Overview (MHSRS-24-NAS501)**
Presenters: Kathleen Berst, MBA, Philip Smith, Ph.D.
- 1545 – 1600** **Requirements & Acquisition: A Panel Discussion (MHSRS-24-NAS502)**
Presenters: James Mancillas, Ph.D., Col Melinda Eaton, USAF, CAPT Matthew Weiner, USN
Facilitator: Taara Bhat, MPH
- 1600 – 1615** **Project Management & Acquisition Panel Discussion (MHSRS-24-NAS505)**
Presenters: Thomas Dunn, M.S., MBA, Christopher Wilson, M.S., MBA, John Notte, M.S.
Facilitator: Philip Smith, Ph.D.
- 1615 – 1630** **Acquisition Across the DoD (MHSRS-24-NAS506)**
Presenter: Jeff Zerhusen, MBA
- 1630 – 1645** **JHubMed: UK Medical Innovation (MHSRS-24-NAS504)**
Presenter: COL Giles Nordmann, M.D., MBBS
- 1645 – 1730** **Questions and Closing**
Presenter: Kathleen Berst, MBA

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Breakout Sessions

Wednesday, 27 August



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BREAKOUT SESSIONS

Wednesday, 28 August | 0800 – 1000

New Approach Methodologies and Novel In Vivo Models for the Development of Infectious Disease Countermeasures

Moderators: MAJ Blair C. R. Dancy, USA, LTC Charles A. DiTusa, USA, Rajini R. Mudhasani, Ph.D., Eric H. Nguyen, Ph.D.

LOCATION: Sun A

- 0800 – 0815 **Development of a Porcine Model of Systemic Inflammatory Response Syndrome and Sepsis Resulting from Extremity Injury and Associated Complications (MHSRS-24-11001)**
Presenter: Randy Stone, Ph.D.
- 0815 – 0830 **Extracorporeal Inoculation of Human Donor Blood with *Borrelia burgdorferi* Activates Cytokines but Not the Complement System (MHSRS-24-11036)**
Presenter: Andriy Batchinsky, M.D.
- 0830 – 0845 **Application of a Human-Based Organ-on-a-Chip Model of the Blood-Brain Barrier for the Development of Countermeasures Against Neuroinvasive Arboviruses (MHSRS-24-11555)**
Presenter: Niloufar Boghdeh, M.S.
- 0845 – 0900 **Update on Clinical and Algorithm Validation of a Novel Vibroacoustic Detection Device for Early Detection of SARS-CoV-2/COVID-19 (MHSRS-24-12345)**
Presenter: Marisol Resendiz, Ph.D.
- 0900 – 0915 **An Instrumented Neurovascular Unit for Non-Invasive Monitoring of Blood-Brain Barrier and Neural Function (MHSRS-24-13171)**
Presenter: Noah Goshi, Ph.D.
- 0915 – 0930 **The Humanized DRAGA Mouse as a Model for HIV Latency and Cure (MHSRS-24-12464)**
Presenter: Ahmad Faisal Karim, Ph.D.
- 0930 – 0945 **Dengue Virus-Induced Microvascular Leakage: Early Functional Changes from Time of Virus Contact (MHSRS-24-13272)**
Presenter: Dennis Grab, Ph.D.
- 0945 – 1000 **Novel Inhibitors of the Alphavirus nsP2 Protease Demonstrate Protection in an Organ-on-a-Chip Model of the Blood-Brain Barrier and in an In Vivo Model (MHSRS-24-12116)**
Presenter: Michael Barrera, Ph.D.

Technologies for the Treatment of Battlefield Hemorrhage and Management of Vascular Dysfunction

Moderators: Thomas H. Edwards, DVM, M.S., Amy E. Wingerd, B.A., RN

LOCATION: Coastal C

- 0800 – 0815 **Fabrication, Scaling and Stability Testing for a Biosynthetic Whole Blood Analogue (WBA) Suitable for In-field Resuscitation of Hemorrhagic Shock (MHSRS-24-12756)**
Presenter: Alan Doctor, M.D.
- 0815 – 0830 **Autoinjector-Based Delivery of Tranexamic Acid in a Swine Model of Uncontrolled Hemorrhage (MHSRS-24-11796)**
Presenter: LTC (Res.) Arik Eisenkraft, IDF
- 0830 – 0845 **Treatment of a Penetrating Arterial Injury with a Novel Silicon-Based Polymer Universal Combat Matrix in a Coagulopathic Porcine Model (MHSRS-24-12215)**
Presenter: CPT Lauren Heyda, USA

(Continued)

BREAKOUT SESSIONS

Wednesday, 28 August | 0800 – 1000

- 0845 – 0900** **Laboratory Evaluation of Hemostatic Pressure Dressings Under Simulated Extreme Cold Conditions** (MHSRS-24-11207)
Presenter: George Plasko, Ph.D.
- 0900 – 0915** **Early Mechanical Stabilization and Bleeding in Disruptions of the Pelvic Ring: Does Timing of Circumferential Compression Reduce Transfusion Volume and Mortality Risk?** (MHSRS-24-13003)
Presenter: Robert V. O'Toole, M.D.
- 0915 – 0930** **Standardized Test Platforms for Evaluation of Casualty Care Devices Using Human Analog Simulation and Under Extreme Environmental Conditions** (MHSRS-24-11378)
Presenter: Richard Bergs, M.S.
- 0930 – 0945** **Training of Emergency Medicine Residents on the Use of Extracorporeal Cardiopulmonary Resuscitation (E-CPR) in a Swine Sudden Cardiac Arrest Model** (MHSRS-24-12413)
Presenter: Jae Hyek Choi, Ph.D., DVSc
- 0945 – 1000** **Inorganic Nanomaterial-based Expandable Shape-Memory Hemostat for Treatment of Non-Compressible Hemorrhage** (MHSRS-24-12557)
Presenter: Saptarshi Biswas, M.S.

Novel Interventions to Address Posttraumatic Stress Disorder in Service Members and Veterans

Moderator: Michael J. Roy, M.D., MPH

LOCATION: Coastal A

- 0800 – 0815** **Clinical Differences in Chronic Symptoms and Cognitive Performance Secondary to Blast vs. Blunt Traumatic Brain Injury** (MHSRS-24-13087)
Presenter: Shawn Eagle, Ph.D.
- 0815 – 0830** **Clinical Relevance of Subthreshold PTSD versus Full Criteria PTSD Following Traumatic Brain Injury in U.S. Service Members and Veterans** (MHSRS-24-12313)
Presenter: Louis French, PsyD
- 0830 – 0845** **Service Dog Training Program Alters Serum miRNA Expression Profile In Service Members With Post Traumatic Stress Disorder and Traumatic Brain Injury** (MHSRS-24-13042)
Presenter: Piper Deleon, B.S.
- 0845 – 0900** **Massed Cognitive Processing Therapy for Posttraumatic Stress Disorder with Active Duty Personnel: Results of a Randomized Clinical Trial** (MHSRS-24-11608)
Presenter: Jennifer Wachen, Ph.D.
- 0900 – 0915** **RECONsolidation of Traumatic memories to ResOLve Posttraumatic Stress Disorder (RECONTROL): A Randomized Controlled Trial vs Prolonged Exposure (An MTBI2 Study)** (MHSRS-24-11121)
Presenter: Michael J. Roy, M.D., MPH
- 0915 – 0930** **Quantitative EEG Markers of Post-Traumatic Stress Disorder: Baseline Observations and Impact of the Reconsolidation of Traumatic Memories (RTM) Treatment Protocol** (MHSRS-24-12985)
Presenter: Jeffrey Lewine, Ph.D.
- 0930 – 0945** **A Pilot Study of Trauma-Sensitive Yoga and Breathe2Relax among Service Members in an Intensive Outpatient Program** (MHSRS-24-12333)
Presenter: Nancy Skopp, Ph.D.
- 0945 – 1000** **A Frequency-filtered Music Intervention for PTSD Treatment: Results from a Pilot Controlled Study** (MHSRS-24-12871)
Presenter: Jacek Kolacz, Ph.D.

BREAKOUT SESSIONS

Wednesday, 28 August | 0800 – 1000

Advancements in Prosthetic and Exoskeletal Technologies that Facilitate Return to Duty Following Neuromusculoskeletal Injuries

Moderators: W. Lee Childers, Ph.D., CP, Trevor Kingsbury, M.A.

LOCATION: Sun B

- 0800 – 0815 **Enhanced Functionality Using a Powered Upper Extremity Exoskeleton in Patients with Neuromuscular Injuries** (MHSRS-24-11157)
Presenter: Sandesh G. Bhat, Ph.D.
- 0815 – 0830 **Usability of the Intrepid Battlefield Exoskeleton During the Army Expeditionary Warrior Experiment** (MHSRS-24-12062)
Presenter: Sarah Pesquera, M.S.
- 0830 – 0845 **The Effect of Custom Dynamic Orthosis Use on Physical Function in Individuals with Traumatic Lower Limb Injury** (MHSRS-24-12891)
Presenter: Jason Wilken, PT, Ph.D.
- 0845 – 0900 **An Adaptable Transtibial Socket for Managing Socket Fit, Socket Comfort, and Pain During Military Specific Tasks** (MHSRS-24-12993)
Presenter: Molly Baumann, Ph.D.
- 0900 – 0915 **A Critical Comparison of Lower Limb Biomechanics of Users of Powered and Passive Prostheses During Ramp and Stair Ambulation** (MHSRS-24-12359)
Presenter: Aaron Young, Ph.D.
- 0915 – 0930 **Toward Evaluating Mobility Outcomes in the Real World After Limb Loss** (MHSRS-24-12665)
Presenter: Julian Acasio, M.S.
- 0930 – 0945 **Interaction between Contralateral Knee Pain and Low Back Pain After Unilateral Lower Limb Loss** (MHSRS-24-12962)
Presenter: Courtney Butowicz, Ph.D.
- 0945 – 1000 **The Suitcase Packing Activity: A Novel Outcome Measure for Individuals with Upper Extremity Amputations** (MHSRS-24-13094)
Presenter: Paige Paulus, Ph.D.(c)

Treating Refractory Hypoxemia on the Battlefield: What Does the Future Hold?

Moderator: Sandy J. Snyder, Ph.D.

LOCATION: Sun C

- 0800 – 0815 **Inhibition of CD38 to Mitigate Acute Lung Injury and Restore Respiratory Health** (MHSRS-24-11421)
Presenter: Divyaam Satija, B.S.
- 0815 – 0830 **RespirAid - An Intravenous Solution to Enhance Pulmonary Gas Exchange Kinetics and Increase Patient Resilience to Hypercapnia in Cases of Acute Respiratory Distress Syndrome** (MHSRS-24-10987)
Presenter: Lauren Costella
- 0830 – 0845 **Immediate Post-Injury Intravenous Autologous Bone-Marrow-Derived Mesenchymal Stromal Cells Delay Acute Respiratory Distress Syndrome, Reduce Its Severity or Prevent Its Occurrence in Swine** (MHSRS-24-11023)
Presenter: Andriy Batchinsky, M.D.
- 0845 – 0900 **Immediate Post-Injury Extracorporeal CO2 Removal Reduces Ventilator Requirements and Mitigates or Prevents Acute Respiratory Distress Syndrome in Swine** (MHSRS-24-11024)
Presenter: Andriy Batchinsky, M.D.

(Continued)

BREAKOUT SESSIONS

Wednesday, 28 August | 0800 – 1000

- 0900 – 0915** **High Efficiency IntraVascular Membrane Oxygenating Catheter: Proof-of-Concept Testing Under Mixed Venous Conditions** (MHSRS-24-12849)
Presenter: Tobias Straube, M.D.
- 0915 – 0930** **Healing Lungs: DRIVE-ing Innovations in ARDS Supportive Care** (MHSRS-24-11654)
Presenter: Sofia Cheliout Da Silva, Ph.D.
- 0930 – 1000** **Panel Discussion with Q & A**
Presenter: Sandy Snyder, RN, Ph.D.

Current Challenges in DoD Aerospace Medicine

Moderators: John S. Crowley, M.D., MPH, Richard Arnold, Ph.D.

LOCATION: **Coastal 4**

Agenda

Presenter: John S. Crowley, M.D., MPH

- 0800 – 0815** **Combat-related Direct Injury Trends in U.S. Army Aviators During Operations Enduring and Iraqi Freedom: Historical Trends** (MHSRS-24-12119)
Presenter: Frederick Brozoski, M.S.
- 0815 – 0830** **Naval Aviation Aircrew Systems 2024 Aeromedical Priorities** (MHSRS-24-12618)
Presenters: Bethany Shivers, Ph.D., LCDR Adam Preston, USN
- 0830 – 0845** **The Medical College of Wisconsin Military Aircrew Neck and Back Pain Study: Influence of Flight-Related Neck Pain on Functional Capacity of F-35 Fighter Pilots** (MHSRS-24-11095)
Presenter: Rachel Cutlan, B.S.
- 0845 – 0900** **The USAFSAM Aeromedical Consult Service Medical Risk Assessment & Airworthiness Matrix (AMRAAM)** (MHSRS-24-13541)
Presenter: Ryan Mayes, Ph.D.
- 0900 – 0915** **International Screening for Coronary Artery Disease prior to Air & Space Flight** (MHSRS-24-11556)
Presenter: Col Eddie Davenport, USAF
- 0915 – 0930** **DoD HFACS Underrepresents Spatial Disorientation in Army Aviation Mishaps** (MHSRS-24-11589)
Presenter: Michelle Duffy, Ph.D.
- 0930 – 0945** **Aviation-Related Exposure to Rapid Pressure Fluctuations (PFLUX) at Altitude Triggers Traumatic Brain Injury in Rats** (MHSRS-24-12297)
Presenter: Lee Goldstein, M.D., Ph.D.
- 0945 – 1000** **The Lived Experience of Critical Care Air Transport (CCAT) Teams That Transported Afghan Refugee Children: A Qualitative Study** (MHSRS-24-12462)
Presenter: Col Renee Matos, USAF

BREAKOUT SESSIONS

Wednesday, 28 August | 0800 – 1000

Novel Treatments, Strategies and Technologies in Hearing and Balance Health

Moderators: Mei Sun, Ph.D., Amy Boudin-George, AuD, Stacey Harcum, MPH, M.S.

LOCATION: Coastal 9

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| 0800 – 0815 | Impact of Hearing Protection Devices on Speech Perception in Noise (MHSRS-24-13425)
Presenter: Nathaniel Greene, Ph.D. |
| 0815 – 0830 | Metrics for Comparison of Electromechanical and Human Subject Hearing Protection Evaluation Methods (MHSRS-24-13479)
Presenter: Theodore Argo, Ph.D. |
| 0830 – 0845 | Magnitude of Hearing Threshold Changes in Service Members and Veterans Over 5 Years by Baseline Hearing Ability and Self-reported Noise Exposure (MHSRS-24-13542)
Presenter: Kelly Reavis, Ph.D. |
| 0845 – 0900 | Assessment of Auditory Fitness-for-Duty in U.S. Service Members (MHSRS-24-13189)
Presenter: Douglas Brungart, Ph.D. |
| 0900 – 0915 | 3D Computational Modeling for Investigating Auditory Injury in Organ of Corti Under Blast Wave Transmission (MHSRS-24-10972)
Presenter: Yijie Jiang, Ph.D. |
| 0915 – 0930 | Examining the Use and Benefits of Low/Mild Gain Hearing Aids in Service Members with Normal Hearing Thresholds and Self-reported Hearing Difficulties (MHSRS-24-12063)
Presenter: Alyssa Davidson, Ph.D. |
| 0930 – 0945 | Protective Effects of Valproic Acid Against Noise-Induced Hearing Loss in Swine (MHSRS-24-12034)
Presenter: Ying Wang, M.D. |
| 0945 – 1000 | Discussion |

Ethical and Regulatory Considerations in DoD-Supported Research: Biosecurity, AI/ML Analytics, and DoD Collaboration

Moderator: Laura R. Brosch, RN, Ph.D.

LOCATION: Sun 4

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|--------------------|---|
| 0800 – 0830 | Assessing Biosecurity Risks and Mitigation: Considerations for DoD Supported Research Involving Genomic Data (MHSRS-24-NAS105)
Presenters: Kim E. London, JD, MPH, Melissa Ginn, B.A. |
| 0830 – 0900 | Perspectives on the Use of AI/ML Analytics in the Conduct of Human Research (MHSRS-24-NAS101)
Presenter: Natalie Klein, Ph.D. |
| 0900 – 0930 | The Use of sIRB in DoD-conducted/supported Human Research: Option or Mandate? (MHSRS-24-NAS102)
Presenter: Kimberly Odam, M.S. |
| 0930 – 1000 | Strategies for Success in Conducting Multi-site Clinical Research in the MHS: A University Researcher Perspective (MHSRS-24-NAS103)
Presenter: Stacey Young-McCaughan, RN, Ph.D. |

BREAKOUT SESSIONS

Wednesday, 28 August | 1300 – 1500

Strategies for Mitigating the Development of Post-traumatic Wound Infections with Multi-drug Resistant Organisms across the Continuum of Care

Moderators: Schroeder M. Noble, Ph.D., COL Robert Cybulski, USA

LOCATION: Coastal A

- 1300 – 1315 **Detection of Major Wound Infection Pathogens and Antimicrobial Resistance Genotypes from Wound Swabs Using a Multiplexed PCR Test for BIOFIRE® FilmArray 2.0 and Torch Instruments (MHSRS-24-11239)**
Presenter: Jason Nielson, Ph.D.
- 1315 – 1330 **A Novel DNA Array Technology to Detect and Discriminate Polymicrobial Infection and Associated Antibiotic Resistance Genes: Current Technology Application in Urinary Tract Infection. Future Application for Portable Analysis of Wounds and Septicemia (MHSRS-24-11664)**
Presenter: Michael Hogan, Ph.D.
- 1330 – 1345 **Antecedent Gram-negative Bacilli Colonization on Admission Surveillance and Sepsis Following Battlefield Injury (MHSRS-24-12150)**
Presenter: David Tribble, Ph.D.
- 1345 – 1400 **Prolonged Field Care: Testing a Novel Drug Eluting Hydrogel Wound Dressing for the Care of Traumatic Blast Wounds in Far-Forward Environments (MHSRS-24-11802)**
Presenter: Christopher Hamad, M.D.
- 1400 – 1415 **Evaluation of a Novel Antimicrobial Coating on Implanted Kirschner Wires in Rats (MHSRS-24-12219)**
Presenter: Manuela Gaviria, M.D.
- 1415 – 1430 **Novel Ammonium Carboxylate Salts as Broad-spectrum Biodefense Antimicrobials for Wound, Skin, and Surface Decontamination (MHSRS-24-13126)**
Presenter: Thomas Rau, Ph.D.
- 1430 – 1445 **Nitric Oxide Topical Therapy to Treat and Prevent Infections in Battlefield (MHSRS-24-13090)**
Presenter: Gilly Regev, Ph.D.
- 1445 – 1500 **The Antimicrobial Peptide OMN6 as a Novel Therapy Against Multidrug-Resistant *Acinetobacter baumannii* (MHSRS-24-10867)**
Presenter: Niv Bachnoff, Ph.D.

Advances in Life Saving Interventions at Point of Injury and in Prolonged Care

Moderators: Kimberly B. Pope, Ph.D., Sylvain Cardin, Ph.D.

LOCATION: Coastal C

- 1300 – 1315 **Physical and Pharmacostability of Essential Medications in Cold and Ultra-Cold Environments: Interim Report (MHSRS-24-11170)**
Presenter: Jason McMullan, M.D.
- 1315 – 1330 **HMGB1 Activation Is Correlated with Acute Kidney Injury in a Swine Polytrauma Model (MHSRS-24-11398)**
Presenter: Zhangsheng Yang, Ph.D.
- 1330 – 1345 **Efficacy of Cilastatin Sodium for Prolonged Care in a Large Animal Crush Syndrome Model (MHSRS-24-11807)**
Presenter: Michael Hutchens, M.D.

(Continued)

BREAKOUT SESSIONS

Wednesday, 28 August | 1300 – 1500

- 1345 – 1400** **Enabling Technologies for Remote Telesurgery** (MHSRS-24-12036)
Presenter: Nathan Bills, Ph.D.
- 1400 – 1415** **Reduction of Thromboinflammation by Phosphodiesterase 4 Inhibition in an ECMO Circuit Model with Human Blood** (MHSRS-24-12096)
Presenter: Andrew Meyer, M.D.
- 1415 – 1430** **Partial Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) vs Intermittent REBOA in Non-Compressible Torso Hemorrhage with Concomitant Traumatic Brain Injury** (MHSRS-24-12701)
Presenter: Elizabeth Wood, M.D.
- 1430 – 1445** **Adjunctive Metronidazole for Targeting the Core of the Bacterial Biofilm in a Pseudomonas aeruginosa Porcine Dermal Infection Model** (MHSRS-24-13206)
Presenter: Nicholas Ashton, Ph.D.
- 1445 – 1500** **A Global Clinical Research Consortium to Enable Biomarker-guided Solutions for Prognosis and Treatment of Severe Infectious Disease and Sepsis** (MHSRS-24-13251)
Presenter: Josh Chenoweth, Ph.D.

Mental and Behavioral Health Manifestations of Anger

Moderators: Maria A. Morgan, Ph.D., MPS, Marija S. Kelber, Ph.D.

LOCATION: Sun A

- 1300 – 1315** **Problematic Anger and Mental Health in Service Members and Veterans** (MHSRS-24-12113)
Presenter: Marija Kelber, Ph.D.
- 1315 – 1330** **Poor Mental Health, Work-related Stress, and Aggressive Behavior in the Workplace: Findings from a Rapid Response Surveillance Effort** (MHSRS-24-12309)
Presenter: Robyn M. Englert, MPH
- 1330 – 1345** **Aggression, Anger Expression, and Alcohol Use as Predictors for Intimate Partner Violence Perpetration** (MHSRS-24-13434)
Presenter: CPT George Mesias, USA
- 1345 – 1400** **Association of Angry and Aggressive Behaviors with Posttraumatic Stress Disorder and mild Traumatic Brain Injury in the Health Related Behaviors Survey** (MHSRS-24-12038)
Presenter: Daniel Berman, Ph.D.
- 1400 – 1415** **Emotional Dyscontrol in Veterans with Extended History of mild Traumatic Brain Injury and Multisensory Management and Processing Contributions: Work-in-Progress Report** (MHSRS-24-11335)
Presenter: Jeffrey Hebert, Ph.D.
- 1415 – 1430** **Streamlining Measurement of Problematic Anger: The Three-Item Dimensions of Anger Reactions Scale** (MHSRS-24-10955)
Presenter: Cynthia LeardMann, MPH
- 1430 – 1445** **Reducing Problematic Anger, Aggression, and Suicide Ideation with an Online Military Emotional Skills Training Program** (MHSRS-24-12542)
Presenter: COL William Killgore, USA
- 1445 – 1500** **Reducing Anger Is Not Enough: Interim Analysis of a Randomized Clinical Trial That Teaches the Adaptive Value of Emotions** (MHSRS-24-12230)
Presenter: Shannon Miles, Ph.D.

BREAKOUT SESSIONS

Wednesday, 28 August | 1300 – 1500

Design, Prevent, and Implement: Advancements in Osseointegration Technology and Outcomes

Moderators: Kenneth Furdella, Ph.D., Jason Ghannadian, M.S.

LOCATION: Sun B

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|-------------|---|
| 1300 – 1315 | Characterization of a Transtibial Amputation Model of Osseointegrated Implant Infection (MHSRS-24-11701)
Presenter: Bailey Fearing, Ph.D. |
| 1315 – 1330 | The Role of Preoperative Skeletal Alignment on Postoperative Lumbopelvic Biomechanics in Transfemoral Bone-Anchored Limb Users (MHSRS-24-11977)
Presenter: Brecca Gaffney, Ph.D. |
| 1330 – 1345 | Personalized Biomechanical Modeling for the Design and Manufacture of Osseointegrated Percutaneous Limb Implants (MHSRS-24-12597)
Presenter: David Dean, Ph.D. |
| 1345 – 1400 | Osseointegration: Utilization of a 3D FE Model to Quantify the Biomechanical Profile of OI Implants in Transfemoral Amputees Through Analysis of Stress and Strain Distribution (MHSRS-24-12151)
Presenter: Tiereny McGuire, Ph.D.(c) |
| 1400 – 1415 | Investigating the Impact of Porous Coating Extent and Bone Density on Mechanical Stresses for Patients with Bone-Anchored Limbs (MHSRS-24-12896)
Presenter: Dana Carpenter, Ph.D. |
| 1415 – 1430 | Transfemoral Osseointegrated Prosthesis Limb-Load Symmetry Training: Study Protocol and 1-Year Progress (MHSRS-24-11126)
Presenter: Cory Christiansen, Ph.D. |
| 1430 – 1445 | Sociodemographic Factors and Their Effects on Transfemoral Osseointegration Patient Outcomes (MHSRS-24-13296)
Presenter: Kara Churovich, MPH |
| 1445 – 1500 | Discussion |

Exertional Heat Stroke: What's New in Prevention, Management and Return to Duty

Moderator: Francis G. O'Connor, M.D., MPH

LOCATION: Sun C

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|-------------|---|
| 1300 – 1315 | Risk Factors for Exertional Heat Illness among U.S. Army Enlistees: Climate Indexes, Intrinsic Factors, and Their Interactions (MHSRS-24-11780)
Presenter: Josh B. Kazman, M.S. |
| 1315 – 1330 | Quantifying the Impact of Multi-Day Heat Exposure on Thermal-Work Strain During Rigorous Training (MHSRS-24-12770)
Presenter: Emma Atkinson, B.S. |
| 1330 – 1345 | Frequency of End-Organ Damage in Exertional Heat Stroke and Exertional Heat Injury at Ft. Moore (MHSRS-24-13151)
Presenter: Kari C. Goodwin, M.S. |

(Continued)

BREAKOUT SESSIONS

Wednesday, 28 August | 1300 – 1500

- 1345 – 1400** **A Rapid Urinary Liver Fatty Acid-binding Protein (L-FABP) Detection Kit Enables Early Detection of Organ Damage After Heat Stress Under Field Conditions (MHSRS-24-11461)**
Presenter: Hiroyasu Goto, M.D.
- 1400 – 1415** **Enhancing Safety and Performance in High-Stakes Environments: Non-Invasive PPG-Based Detection of Heat Stress and Dehydration (MHSRS-24-12569)**
Presenter: John Jedziniak
- 1415 – 1430** **Using Higher than Expected Heart Rates to Improve Predictions of Exertional Heat Injuries During Military Training Exercises (MHSRS-24-12468)**
Presenter: James R. Williamson, Ph.D.
- 1430 – 1445** **Chain of Survival for a Severe Exertional Heat Stroke Casualty (MHSRS-24-13207)**
Presenter: David W. DeGroot, Ph.D.
- 1445 – 1500** **Preventing, Diagnosing and Managing Exertional Heat Illness in Warfighters: A 2024 Evidence-Based Clinical Practice Guideline (MHSRS-24-12033)**
Presenter: Francis G. O'Connor, M.D., MPH

Undersea Operational Research Panel

Moderator: Ben D. Lawson, Ph.D.

LOCATION: Coastal 4

- 1300 – 1315** **Evaluating Kv2.2 Channels in Rats as Therapeutic Targets Against Hyperbaric Oxygen Induced Toxicity (MHSRS-24-12380)**
Presenter: Miriam Weiss, Ph.D.
- 1315 – 1330** **Dose Response Impact of Carbon Dioxide on Human Glymphatic Function (MHSRS-24-13075)**
Presenter: Rachael D. Seidler, Ph.D.
- 1330 – 1345** **Wearable Device for Detection of Central Nervous System Oxygen Toxicity in Divers (MHSRS-24-12754)**
Presenter: Lucy Fitzgerald, Ph.D.
- 1345 – 1400** **Polar Guard: Incompressible Insulation for Cold Water Diving at Depth (MHSRS-24-12481)**
Presenter: Michael Vignos, Ph.D.
- 1400 – 1415** **Evidence-Based Management of Life-Threatening Box Jellyfish Stings (MHSRS-24-13174)**
Presenter: 2LT Suzanna Del Rio, USA
- 1415 – 1430** **Development of a Hyperbaric Neurocognitive Assessment System (HNAS) (MHSRS-24-12235)**
Presenters: Andrea Vincent, Ph.D., Justin Handy, Ph.D.
- 1430 – 1445** **E-Guard: Expediting Submarine Escape Time Calculations (MHSRS-24-10977)**
Presenter: Krystina Diaz, B.S., B.A.
- 1445 – 1500** **Associations Between Submarine Officer Personality and Operational Outcomes (MHSRS-24-11853)**
Presenter: David Clark, Ph.D.

BREAKOUT SESSIONS

Wednesday, 28 August | 1300 – 1500

4 Legged Warriors: Military Working Dogs at the Tip of the Spear

Moderator: Thomas H. Edwards, DVM, M.S.

LOCATION: Coastal 9

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| 1300 – 1315 | Using Military Working Dog Records to Assist with Exposure-informed Care (MHSRS-24-11653)
Presenter: Justin Bergeron, BVMS, MPH |
| 1315 – 1330 | Development of System for Tracking and Analyzing Military Working Dog Injuries in New Trauma Registry (MHSRS-24-13063)
Presenter: Kathryn Loftis, Ph.D. |
| 1330 – 1345 | Osteosarcoma in Military Working Dogs: Investigation of Occupational and Genetic Risk Factors (MHSRS-24-11374)
Presenter: MAJ Alicia Moreau, USA |
| 1345 – 1400 | Quantifying Occupational Noise Exposure in Working Dogs: Survey Results (MHSRS-24-11579)
Presenter: MAJ Jennifer Noetzel, USA |
| 1400 – 1415 | Distribution, Clinical Presentation, Diagnosis, and Pathologic Findings of Trypanosoma cruzi in Military Working Dogs: Sentinels for Zoonoses in Service Members (MHSRS-24-11642)
Presenter: MAJ Kelsey Fiddes, USA |
| 1415 – 1430 | Paws for Concern: Investigating Leishmaniasis, Bartonella, and Medical Conditions In Military Working Dogs Deployed to Iraq (MHSRS-24-12587)
Presenter: Stephen Davies, BVSc, Ph.D. |
| 1430 – 1445 | Advancements in TXA Administration for Canine Trauma Care (MHSRS-24-13239)
Presenter: COL Sean Hollonbeck, USA |
| 1445 – 1500 | Causes of Mortality in Military Working Dogs from Traumatic Injuries (MHSRS-24-11229)
Presenter: Thomas H. Edwards, DVM, M.S. |

An Overview of the DHA Tech Transfer Program and Processes

Moderator: Robert Bolluyt, B.S.

LOCATION: Sun 4

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|--------------------|---|
| 1300 – 1315 | Introduction of Tech Transfer (T2) and DHA T2 Overview (MHSRS-24-NAS301)
Presenter: Robert Bolluyt, B.S. |
| 1315 – 1330 | What Qualifies as an Invention (Invention Disclosure)? (MHSRS-24-NAS302)
Presenter: Marlana, Chapin, JD |
| 1330 – 1345 | Intellectual Property and the Need for Patenting (MHSRS-24-NAS303)
Presenter: Marlana, Chapin, JD |
| 1345 – 1400 | What Is a CRADA and When/How to Create/Use Questions (MHSRS-24-NAS304)
Presenter: Robert Charles, LLM, MPH |
| 1400 – 1415 | The Licensing Process of IP and Patented Inventions (MHSRS-24-NAS305)
Presenter: Barry Datlof, MBA |
| 1415 – 1430 | The "What and Why of Royalties" Questions (MHSRS-24-NAS306)
Presenter: Paul Michaels, JD |
| 1430 – 1445 | The "Why" of Tech Transfer: Developing Medical Capabilities (Products) for the Military Questions (MHSRS-24-NAS307)
Presenter: Scott F. Walter, Ph.D. |
| 1445 – 1500 | Questions and Discussion |

BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

Central Role of Dental Care in Military Readiness, Operational Deployment, In-Theater Care, Post-Injury Reconstruction, and Warfighter Rehabilitation

Moderators: Rodney D. Phoenix, DDS, M.S., COL Kevin Gillespie, USA

LOCATION: Sun A

- 1530 – 1545** **Dental Care as a Central Consideration in the Projection and Sustainment of Combat Power: The State of Military Dental Science (MHSRS-24-NA-07)**
Presenter: Rodney Phoenix, DDS, M.S.
- 1545 – 1600** **Claromer Peptoid Activity Against Four Oral Pathogens: A Potential Convenient Prophylactic and Therapeutic Dental Care Dosage Form (MHSRS-24-11063)**
Presenter: Gill Diamond, Ph.D.
- 1600 – 1615** **Physical and Biocompatibility Testing of a Novel Self-healing Dental Composite (MHSRS-24-11437)**
Presenter: Sabrina Snyder, Ph.D.
- 1615 – 1630** **Incorporating Additive Manufacturing in Field Dentistry to Meet the Demand of the Future Operational Deployment (MHSRS-24-11188)**
Presenter: CPT Ryan Kang, USA
- 1630 – 1645** **Advantages of Patient-specific and Semi-specific Guides and Osteosynthesis Plates in Fibula Free Flap Reconstruction of Facial War Injuries: A Comparative Analysis Identifying Potential Advantages (MHSRS-24-11826)**
Presenter: Lt Col Andreas Pabst, German Armed Forces
- 1645 – 1700** **The Effect of Disinfectant Gels on the Dental Implant Microleakage Microbial Profile (MHSRS-24-10874)**
Presenter: MAJ Ellen Sharma, USA
- 1700 – 1715** **Multicenter-based Development of Structural Treatment Algorithms and Clinical Recommendations utilizing Botulinum Toxin for Severe Bruxism and Temporomandibular Disorders in Warfighters (MHSRS-24-11828)**
Presenter: Lt Col Andreas Pabst, German Armed Forces
- 1715 – 1730** **Development of a Generative Adversarial Network for Generation of Clinically Realistic Dental Radiographs (MHSRS-24-11366)**
Presenter: LTC Brian Kirkwood, USA

Trauma Resuscitation and Critical Care on the Future Battlefield

Moderator: Caryn Stern, DrPH, MPH

LOCATION: Coastal A

- 1530 – 1545** **'Thank God for Jonathan Letterman': A History of Battlefield Critical Care (MHSRS-24-11693)**
Presenter: Alan Hawk, B.A.
- 1545 – 1600** **Train As You Fight: In-Field Validation of a Cadaver-Based Airway Course in a German Helicopter Emergency Medical Service. A Prospective, Observational Study (MHSRS-24-11429)**
Presenter: Benny Kölbel, M.D., MBA
- 1600 – 1615** **A Novel p38alpha MAPK Signal Modulator with a Unique Mechanism of Action and Anti-inflammatory, Endothelial-Barrier-Stabilizing and Lung-Protective Effects as Potential Therapy in Acute Respiratory Distress Syndrome (MHSRS-24-12241)**
Presenter: Jeffrey Hasday, M.D.

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BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

- 1615 – 1630** **Reassessing Prehospital Chest Decompression in Military Trauma: Outcomes Following Intervention** (MHSRS-24-12749)
Presenter: MAJ Cole D. Bendor, IDF
- 1630 – 1645** **Plasma Inclusive Resuscitation in Burn Patients Does Not Change Fibrinolytic Phenotypes** (MHSRS-24-11859)
Presenter: Shane K. Mathew, M.D.
- 1645 – 1700** **Development of a Curriculum and Virtual Coach for Learning Foundational Ultrasound Skills in a Mixed-Reality Simulator** (MHSRS-24-12390)
Presenter: Christopher Samouce, Ph.D.
- 1700 – 1715** **Expectant Casualty Care Training for Future Conflicts: A Qualitative Study** (MHSRS-24-11770)
Presenter: Sean Keenan, M.D.
- 1715 – 1730** **Next Generation Prediction of Transfusion Requirements in Combat Trauma: Leveraging Data and Expert Knowledge** (MHSRS-24-11829)
Presenter: Sankalp Tandle, MB, B.S.

Military Family Health and Readiness: Understanding the Interdependence of the Military Family System

Moderators: Hope McMaster, Ph.D., Elizabeth Hisle-Gorman, Ph.D.

LOCATION: Coastal 9

- 1530 – 1545** **The Importance of Healthcare Delivery: Birth Outcomes and Cumulative Incidence of Medical Complexity Among Young Children of U.S. Service Members** (MHSRS-24-11019)
Presenter: Ava Marie S. Conlin, DO, MPH
- 1545 – 1600** **Longitudinal Pediatric Symptom Trajectories and Parental Risk Factors for Psychological Distress in Children of Warfighters with Traumatic Brain Injury** (MHSRS-24-12379)
Presenter: Tracey A. Brickell, D.Psych.
- 1600 – 1615** **The Impact of Service Member Injury Type of Spouse and Child Mental Healthcare Need** (MHSRS-24-12784)
Presenter: Elizabeth Hisle-Gorman, Ph.D.
- 1615 – 1630** **Spouses of Service Members with PTSD: A Longitudinal Examination of Psychological Health Among Spouses in the Millennium Cohort Family Study** (MHSRS-24-11949)
Presenter: Hope McMaster, Ph.D.
- 1630 – 1645** **Health Disparities in Military Spouses by Sex and Sexuality: Findings from the Millennium Cohort Family Study** (MHSRS-24-11721)
Presenter: Travis Ray, Ph.D.
- 1645 – 1700** **A Qualitative Analysis of Family Building Desires and Barriers Among LGBTQ+ Military Service Members** (MHSRS-24-10849)
Presenter: Cynthia Shen, DO
- 1700 – 1715** **Causal Factors of Military and Veteran Family Food Insecurity** (MHSRS-24-12369)
Presenter: Shanna Smith, Ph.D.
- 1715 – 1730** **A Novel Intervention to Increase Service Member Enrollment in the Supplemental Nutritional Program for Women, Infants, and Children (WIC)** (MHSRS-24-12396)
Presenter: Dakota Davis, B.S.

BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

Warfighter Operational Resilience: Next Generation Programs to Sustain Performance under Fire

Moderator: LTC Matthew L. LoPresti, USA

LOCATION: Sun B

Introduction

Presenter: LTC Matthew L. LoPresti, USA

- 1530 – 1545** **Efforts to Establish an Intervention Model for Front-Line Behavioral Health in Large Scale Combat Operations (MHSRS-24-10851)**
Presenter: Tim Hoyt, Ph.D.
- 1545 – 1600** **Death by a Thousand Cuts: PERSTEMPO and Operational Stress, Recovery, and Readiness in the U.S. Naval Surface Force (MHSRS-24-11597)**
Presenter: Peter G. Roma, Ph.D.
- 1600 – 1615** **Emotional State, Personality, and Psychophysiological Targets of Warfighter Operational Resilience (MHSRS-24-12548)**
Presenter: COL William Killgore, USA
- 1615 – 1630** **Cognitive Training to Increase Warfighter Resilience (MHSRS-24-13095)**
Presenter: Leanne Young, Ph.D.
- 1630 – 1645** **The Impact of Mental Strength Resilience Training (MSRT) on Performance in the Far-Forward Operational Environment (MHSRS-24-11618)**
Presenter: Amy Hildreth, M.D.
- 1645 – 1700** **Operational Resilience Training: a U.S.-Norwegian Course Preparing Ukrainian Soldiers to Address Combat Stress (MHSRS-24-12367)**
Presenter: CPT George Mesias, USA
- 1700 – 1715** **Trialing the Efficacy of the iCOVER Intervention in a Civilian Trauma Center Population (MHSRS-24-11838)**
Presenter: Emily Lowery-Gionta, Ph.D.
- 1715 – 1730** **Readiness and Resilience Training for Leaders: How Highly Stressed Service Members May Benefit Most (MHSRS-24-12524)**
Presenter: Leslie Hammer, Ph.D.

Implementation of Evidence-based Pain Management Practices in the MHS

Moderators: Christie Vu, Ph.D., CAPT Harold Gelfand, USN

LOCATION: Coastal C

- 1530 – 1545** **Desuvia (Sufentilil) Early Evaluation of Pain “DEEP” Randomized Controlled Trial (MHSRS-24-11309)**
Presenter: Francis Guyette, M.D., MS, MPH
- 1545 – 1600** **Short-term Outcomes of Psychologically Informed Physical Therapy in Patients with Musculoskeletal Injuries Treated at a Navy Shore-based Medical Clinic (MHSRS-24-11327)**
Presenter: Hope Mowery, Ph.D.
- 1600 – 1615** **Clinical Deployment of a Myoelectric Pattern Recognition-Driven Virtual Reality Rehabilitation System for Phantom Limb Pain Management: Preliminary Results (MHSRS-24-13071)**
Presenter: Levi Hargrove, Ph.D.

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BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

- 1615 – 1630** **Retrospective Review of 60-day PNS Targeting Lumbar Medial Branches in Individuals with Back Pain from Spondylosis Without Radiculopathy (MHSRS-24-11262)**
Presenter: Steven Cohen, M.D.
- 1630 – 1645** **The Value of Replication in Studies of Intervention for Headache Attributable to Traumatic Brain Injury: Progression from RCT to a Multisite Replication Trial (MHSRS-24-11650)**
Presenter: Don McGeary, Ph.D.
- 1645 – 1700** **Provider Perceived Barriers to Accessing Comprehensive Pain Programs for Chronic Pain After TBI Inform Implementation Strategies: A NIDILRR and VA TBI Model System Collaborative Study (MHSRS-24-12287)**
Presenter: Jeanne Hoffman, Ph.D.
- 1700 – 1715** **Complementary, Integrative and Standard Rehabilitative Pain Therapies in a Military Population with Chronic Predominately Musculoskeletal Pain: A Pragmatic Clinical Trial Using a SMART Design (MHSRS-24-11582)**
Presenter: Diane Flynn, M.D., MPH
- 1715 – 1730** **Challenges of a Chronic Pain Pragmatic Trial in the Military Health System (MHSRS-24-12678)**
Presenter: CAPT (Ret) Jeffrey Goodie, USPHS

Ocular Optimization: Before and After Injury

Moderators: MAJ Nathan Davidson, USA, Mariia Viswanathan, M.D., Ph.D.

LOCATION: Sun C

- 1530 – 1545** **Epidemiology of Traumatic Ocular Injury Among US Service Members in Theater, 2001-2020 (MHSRS-24-12404)**
Presenter: Frances Silva, O.D., Ph.D.
- 1545 – 1600** **Metagenomics Based Threat Agnostic Diagnosis of Ocular Infection in Less Than 4 Hours (MHSRS-24-13307)**
Presenter: Espoir Kyubwa, M.D., Ph.D.
- 1600 – 1615** **Rapid Uptake of a Proprietary Cell-Penetrating Human HSP72 into Retinal Tissue After a Blast Injury Suppresses Neurodegeneration (MHSRS-24-12657)**
Presenter: Missag Parseghian, Ph.D.
- 1615 – 1630** **Eye Recovery Automation for Post Injury Dysfunctions (iRAPID) Study Methods of Treatment and Baseline and Outcome Assessment for mTBI Convergence Insufficiency (MHSRS-24-11660)**
Presenter: Chang Yaramothu, Ph.D.
- 1630 – 1645** **Proliferative Vitreoretinopathy Management in Combat Ocular Trauma - Is Surgery the Only Solution? (MHSRS-24-10892)**
Presenter: Lt Cdr Guy Hunter, Royal Navy, United Kingdom
- 1645 – 1700** **Anti-Apoptosis and Necrosis Effect of Necrostatin-1 in Retina Subjected to Laser Injury (MHSRS-24-12995)**
Presenter: Yuhuan Luo, M.D.
- 1700 – 1715** **Development of a Novel 3-D Printed Simulator for Practical Training of the Retrobulbar Block (MHSRS-24-10894)**
Presenter: CPT Timothy Lee, USA
- 1715 – 1730** **Evaluation of Optic Nerve Sheath Diameter in Post-Traumatic Optic Neuropathy Using AI Assisted Ultrasound (MHSRS-24-12808)**
Presenter: Akshaya Bhagavathula, PharmD, Ph.D.

BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

Genetic Readiness of the Force: Genetics and Integrative Omics for Optimizing Warfighter Health and Performance

Moderator: Juvianee Estrada-Veras, M.D.

LOCATION: Coastal 4

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|--------------------|--|
| 1530 – 1545 | Discrimination of Physical Fatigue State via Salivary Biomarkers (MHSRS-24-12916)
Presenter: Bryndan W. Lindsey, Ph.D. |
| 1545 – 1600 | Development of an Objective Genomic Biomarker for PTSD (MHSRS-24-13134)
Presenter: Anne L. Naclerio, M.D., MPH |
| 1600 – 1615 | Postmortem Genetic Testing: The Critical Importance of a Multidisciplinary Team (MHSRS-24-11663)
Presenter: Austin Pagani, MGC |
| 1615 – 1630 | Proteogenomic Characterization of Primary Invasive Breast Tumors from Young Women compared to Matched Tumors from Older Women (MHSRS-24-12729)
Presenter: Hai Hu, Ph.D. |
| 1630 – 1645 | Impact of the Tumor Microenvironment in Splenic Metastasis in High-Grade Serous Ovarian Cancer Revealed by Quantitative Proteomics (MHSRS-24-12140)
Presenter: Nicholas Bateman, Ph.D. |
| 1645 – 1700 | Multi-omics analyses Reveal Differential Expression of mRNA and miRNA related to Acute Mountain Sickness (MHSRS-24-12873)
Presenter: Mazen Istanbouli, M.S. |
| 1700 – 1715 | Sudden Cardiac Arrest Recurrence in Survivors from Ongoing GEMini Study (MHSRS-24-12552)
Presenter: Lydia Hellwig, Ph.D., M.S. |
| 1715 – 1730 | Impact Of Microgravity on Osteoblast Cells Treated by Osteoinductive Agents: A Multi-Omics Analysis (MHSRS-24-10878)
Presenter: Nabarun Chakraborty, M.S., MBA |

BREAKOUT SESSIONS

Wednesday, 28 August | 1530 – 1730

Global Health Engagement Research in Combatant Commands

Moderators: Danny Shiau, M.D., MPH, COL Matthew R. Scherer, USA

LOCATION: Sun 4

- 1530 – 1545** **Sustaining Readiness Through an Enduring Global Health Engagement: Lessons Learned Over the Past Two Years in Honduras (MHSRS-24-NA-09)**
Presenters: COL Eric Chin, USA, Jessica L.A. Jackson, M.A., MPH
- 1545 – 1600** **The Austere Environments Consortium for Enhanced Sepsis Outcomes (ACESO) Advances Global Health Engagement through Programmatic Focus on Host-country Field sites, Clinical Trial Development, Novel Product Testing and Outbreak Response Training (MHSRS-24-13304)**
Presenter: Patrick Blair, Ph.D.
- 1600 – 1615** **One Health Xenosurveillance to Inform Risk and Assess Drivers of Zoonotic and Vector-Borne Disease Spillover in Northern Ghana (MHSRS-24-13069)**
Presenter: Bernice Baako, MPhil
- 1615 – 1630** **Department of Defense Research Institutes as Forward Medical Diplomacy Platforms: AFRIMS Global Health Engagement Activities (MHSRS-24-10991)**
Presenter: LTC Erin Ball, USA
- 1630 – 1645** **Intelligent Software Solutions for Global Health Engagements (MHSRS-24-11621)**
Presenter: Joseph Cohn, Ph.D.
- 1645 – 1700** **A Novel Approach to Implementing Virtual Communities of Practice (VCoP) with International Partners for Building Capacity in Military Health Systems Globally (MHSRS-24-10973)**
Presenter: Jorge Miguel Sobral Martins, B.A.
- 1700 – 1715** **Supporting Partner-Nation Blood Access through Military-Civilian Trauma System Integration (MHSRS-24-11349)**
Presenter: Emad S. Madha, M.D.
- 1715 – 1730** **What is Missing from Global Health Engagement? Engagement After the Engagement! (MHSRS-24-12336)**
Presenter: Ramey Wilson, M.D.

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Breakout Sessions

Thursday, 29 August



MHS

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BREAKOUT SESSIONS

Thursday, 29 August | 0845 – 1045

Innovative Technologies and Devices for Treatment of Battlefield Wounds in Prolonged Care to Prevent Infection

Moderators: Arthi A. Amin, Ph.D., LTC Sheila Johnson, USA, Brian Coyne, B.S.

LOCATION: Sun A

- 0845 – 0900** **Introduction** (MHSRS-24-NA-08)
Presenters: Arthi A. Amin, Ph.D., LTC Sheila Johnson, USA
- 0900 – 0915** **Histological Analysis of Cortical Bone Following Standard and Novel Treatments Against Biofilms** (MHSRS-24-13392)
Presenter: Dustin Williams, Ph.D.
- 0915 – 0930** **Development of Klebsiella Synthetic Phages to Overcome the Resistance to Promote Wound Healing Process** (MHSRS-24-12237)
Presenter: Alexander M. Ditzel, Ph.D.
- 0930 – 0945** **Phage-Mimicking Nanoparticles, Conjugated to Antimicrobial Peptides or Antimicrobial Polymers, Exhibit Broad-Spectrum Antibacterial Activity Against ESKAPE Pathogens in Liquid Phase or Immobilized Phase** (MHSRS-24-13533)
Presenter: Prakash D. Nallathamby, Ph.D.
- 0945 – 1000** **Transdermal Delivery of High Molecular Weight Antibiotics to Deep Tissue Infections via Droplet Micromist Technology Device (DMTD)** (MHSRS-24-12964)
Presenter: Hongmin Sun, Ph.D.
- 1000 – 1015** **Multi-Modal Polymer Technology for Multi-Modal Point of Injury Infection Prevention and Wound Management** (MHSRS-24-13346)
Presenter: Lucas Duncan, M.S.
- 1015 – 1030** **Antibacterial Efficacy of a Chitosan-Based Hydrogel Loaded with Epsilon-Poly-L-Lysine and Poly(l:C)-Extracellular Vesicles for the Control of Polymicrobial Extremity Wound Infections in a Porcine Polytrauma Model** (MHSRS-24-11743)
Presenter: Lisa Pierce, DSc
- 1030 – 1045** **A Novel, Reverse-phase-shifting, Thermoreversible Foaming Hydrogel Containing Antibiotics for the Treatment of Traumatic Tissue Injuries in a Swine Model – A Pilot Study** (MHSRS-24-11592)
Presenter: Ross I. Donaldson, M.D., MPH

Clinical Studies to Advance Combat Casualty Care

Moderators: Kimberly B. Pope, Ph.D., George Jiang, M.D.

LOCATION: Sun B

- 0845 – 0900** **Does Hypertonic Saline After Damage Control Laparotomy Improve Primary Fascial Closure? A Multi-Center Randomized Control Trial** (MHSRS-24-11762)
Presenter: 2ndLt Mayar Osman, USAF
- 0900 – 0915** **A Multicenter, Prospective Study of Calcium Derangements on Arrival After Major Traumatic Injury** (MHSRS-24-11419)
Presenter: Susannah E. Nicholson, M.D., M.S.
- 0915 – 0930** **Noninvasive Ventilation for Preoxygenation During Emergency Intubation** (MHSRS-24-11473)
Presenter: Adit Ginde, M.D., MPH

(Continued)

BREAKOUT SESSIONS

Thursday, 29 August | 0845 – 1045

- 0930 – 0945** **ProPatch: A Next-Generation Patient Monitor and Results from Trauma Intensive Care Unit Patients**
(MHSRS-24-10852)
Presenter: Alexi Charalambides, Ph.D.
- 0945 – 1000** **Safety and Efficacy Findings from a pProspective, Case-controlled Evaluation of oLlceridine for Moderate or sEVEre Pain in Patients with Acute Burn Injuries (RELIEVE)** (MHSRS-24-13557)
Presenter: David Hill, Pharm D
- 1000 – 1015** **Acute Epithelial and Adaptive Immunologic Responses Risk-Stratify Organ Failure in Multiply Injured Patients**
(MHSRS-24-13037)
Presenter: Todd McKinley, M.D.
- 1015 – 1030** **Non-Operative Treatment of Humeral Shaft Fractures with Immediate Functional Bracing versus Coaptation Splinting and Delayed Functional Bracing: A Retrospective Study** (MHSRS-24-12393)
Presenter: Maaz Muhammad, M.D.
- 1030 – 1045** **Interim Prospective Study Analysis of Mobile Health Applications to Discern the Presence of mild Traumatic Brain Injury in a Civilian Trauma Population** (MHSRS-24-11852)
Presenter: Neeraj Badjatia, M.D.

Managing Fatigue in the DoD: Methodologies for Sleep and Circadian Measurement

Moderator: Malena B. Rone, Ph.D.

LOCATION: Sun C

- 0845 – 0900** **Studying the Circadian Clock and Sleep Homeostasis Using Proteomic Data** (MHSRS-24-12465)
Presenter: Adrien Specht, M.S.
- 0900 – 0915** **Using the Brain's Default Mode Network to Predict Cognitive Fatigue During Prolonged Wakefulness**
(MHSRS-24-12547)
Presenter: COL William Killgore, USAR
- 0915 – 0930** **Transcranial Electrical Synchronization of Slow Oscillations to Enhance Deep Sleep at Home for Healthy Adults**
(MHSRS-24-10989)
Presenter: Kyle Morgan, Ph.D.
- 0930 – 0945** **Focused Ultrasound Neuromodulation of the Thalamus to Increase Alertness and Improve Reaction Time**
(MHSRS-24-13456)
Presenter: Cameron Good, Ph.D.
- 0945 – 1000** **Towards Glymphatics Measurement in the Frontal Cortex Using Near-Infrared Spectroscopy (NIRS) and a Link to Sleep Apnea** (MHSRS-24-11766)
Presenter: CDR J. Kent Werner, USN
- 1000 – 1015** **EEG Markers from Routine Sleep Discriminate Individuals Who Are Vulnerable or Resilient to Sleep Loss**
(MHSRS-24-12072)
Presenter: Jaques Reifman, Ph.D.
- 1015 – 1030** **Correlations between Physiological Sleep Metrics Collected Using Wearable Devices and Self-reported Fatigue: A Demonstration of the Potential of High-dimensional Physiological Landscape Mapping using Source-agnostic Big Data** (MHSRS-24-11111)
Presenters: Ashley Mason, Ph.D., Ben Smarr, Ph.D.
- 1030 – 1045** **The Importance of Good Sleep and Supportive Leadership During Arctic Operations** (MHSRS-24-12217)
Presenter: MAJ Rachell Jones, USA

BREAKOUT SESSIONS

Thursday, 29 August | 0845 – 1045

Applications of Artificial Intelligence in Psychological Disorders

Moderator: Ruoting Yang, Ph.D.

LOCATION: Sun 4

- 0845 – 0900** **Biomarker Panel to Objectively Distinguish Different Stage of Alzheimer’s Disease Using a Machine Learning Algorithm: Biomarker Discovery Process at Binomial Decision Point (2BDP) (MHSRS-24-10879)**
Presenter: Nabarun Chakraborty, MBA
- 0900 – 0915** **Multimodal Molecular Features Correlating with Key Clinical Characteristics of PTSD in Army Veterans and Active-Duty Military Personnel (MHSRS-24-12676)**
Presenter: Seid Muhie, Ph.D.
- 0915 – 0930** **Deep Learning Identifies DNA Methylation Signatures of PTSD in Military Personnel (MHSRS-24-12834)**
Presenter: Ruoting Yang, Ph.D.
- 0930 – 0945** **Individual Physiological Response Profiles Distinguish between PTSD and Non-PTSD in Military Participants (MHSRS-24-13098)**
Presenters: Nicolas Ricka, Ph.D., Denis Fompeyrine, Ph.D.
- 0945 – 1000** **Measuring the Effectiveness of AI Wearables and a Synchronized Mental Wellness Mobile App on Symptoms of Mental Health in Military Service Members (MHSRS-24-12478)**
Presenter: Brandi Walker, Ph.D.
- 1000 – 1015** **Core Epigenetic Module Biomarkers Among Various PTSD Subtypes (MHSRS-24-12840)**
Presenter: Dewayne Dixon, Ph.D.(c)
- 1015 – 1030** **Comparison of ChatGPT vs. Human-coded Machine Learning Prediction of Autism Spectrum Disorder (MHSRS-24-12645)**
Presenter: Lt Col Cubby Gardner, USAF
- 1030 – 1045** **Forecasting Stress with Biomarkers and Wearable Sensors (MHSRS-24-11958)**
Presenter: Himanshu Thapliyal, Ph.D.

Advances in Blast Polytrauma: Implications to Warfighter Function and Combat Casualty Care

Moderators: Michael J. Urban, Ph.D., Pamela VandeVord, Ph.D.

LOCATION: Coastal A

- 0845 – 0900** **The Effect of Blast Overpressure Exposure on the Development of Gene Markers of End Organ Injury and Muscle Tissue Osteo-chondrogenesis in a Combat Applicable Model of Complex Lower Limb Trauma (MHSRS-24-11410)**
Presenter: CDR Philip Spreadborough, Royal Navy, United Kingdom
- 0900 – 0915** **Cutaneous Burn Injury Represents a Major Risk Factor for the Development of Traumatic Ectopic Bone Formation Following Blast-Related Extremity Injury (MHSRS-24-11284)**
Presenter: CDR Philip Spreadborough, Royal Navy, United Kingdom
- 0915 – 0930** **Novel Method for Evaluation of the Effects of Rotary Wing Transport on a Large Animal Polytrauma Model (MHSRS-24-11360)**
Presenter: Rachel Kinsler, M.S.

(Continued)

BREAKOUT SESSIONS

Thursday, 29 August | 0845 – 1045

- 0930 – 0945** **Directional Blast-Induced Polytrauma and Military-Relevant Stress Effects on Acute Craniofacial Pain, Lower Extremity Pain, and Behavior in Rodents (MHSRS-24-12796)**
Presenter: Michael Urban, Ph.D.
- 0945 – 1000** **Biomechanical Mechanisms and Pathophysiology-based Human Lumbar Spine Human Injury Probability Curves from Blast Loading Using Clinical Classification of Injuries (MHSRS-24-11456)**
Presenter: Narayan Yoganandan, Ph.D.
- 1000 – 1015** **Investigation of Blood-Brain Barrier Permeability Changes following Blast Overpressure Exposures Using Protein-templated Fluorescent Metal Nanoclusters (MHSRS-24-12305)**
Presenter: Venkata (Rama) Kakulavarapu, Ph.D.
- 1015 – 1030** **Potential Biomechanical Scaling Metrics for Primary Blast across Multiple Species (MHSRS-24-12746)**
Presenter: YungChia Chen, Ph.D.
- 1030 – 1045** **Indirect Traumatic Optic Neuropathy Induced by Primary Blast: A Fluid-Structure Interaction Study (MHSRS-24-11877)**
Presenter: Jose Colmenarez, M.S.

Military Injury Biomechanics for the Prevention of Behind Helmet and Behind Armor Blunt Trauma

Moderators: Frederick T. Brozoski, M.S., Thuvan Piehler, Ph.D.

LOCATION: Coastal C

- 0845 – 0900** **Two Lethal Cases of Behind Armor and Behind Helmet Blunt Trauma (MHSRS-24-13397)**
Presenter: CPT Ben Levi, IDF
- 0900 – 0915** **Characterization of Deep Tissue Contusions from Behind Armor Blunt Trauma (MHSRS-24-11904)**
Presenter: Alexander Stotka, B.S., Ph.D.(c)
- 0915 – 0930** **Lung Injury Risk Curves from Behind Armor Blunt Trauma Using a Live Swine Model (MHSRS-24-11491)**
Presenter: Narayan Yoganandan, Ph.D.
- 0930 – 0945** **Structural Scaling between Human and Swine Cadaver for Behind Armor Blunt Trauma Injury Criteria (MHSRS-24-12620)**
Presenter: Cameron Bass, Ph.D.
- 0945 – 1000** **Review of Impact Systems for Development of Generalized Injury Risk Curves Related to Behind Armor Blunt Trauma (MHSRS-24-11553)**
Presenter: Narayan Yoganandan, Ph.D.
- 1000 – 1015** **The Effects of Armor Fit and Body Habitus on Behind Armor Blunt Trauma Risk (MHSRS-24-13468)**
Presenter: Alexander Iwaskiw, M.S.
- 1015 – 1030** **Characterization and Projected Operational Injury Outcomes of Behind Armor Blunt Trauma in the Lower Abdominal Region (MHSRS-24-13332)**
Presenter: Nadeau Hahne, M.S.
- 1030 – 1045** **Finite Element Ovine Thorax Model (FE-OTM) Validation for High-Rate Non-Penetrating Blunt Impact (NPBI) Environment (MHSRS-24-12134)**
Presenter: Julliette Caffrey, M.S., Ph.D.(c)

BREAKOUT SESSIONS

Thursday, 29 August | 1115 – 1315

Update in Emerging Infectious Diseases of Military Importance: Predicting and Preventing Future Outbreaks in Military Settings

Moderators: CAPT Andrew G. Letizia, USN, Simon Pollett, MBBS

LOCATION: **Coastal A**

- 1115 – 1130 **Using Regional AMR Surveillance to Monitor and Predict Rates of Multidrug and Extensively Drug-Resistant ESKAPEE Pathogens in Southeast Asia** (MHSRS-24-13536)
Presenter: MAJ Sidhartha Chaudhury, USA
- 1130 – 1145 **Exploring the Blood Microbiome of Acute Febrile Illness Patients Using Next-Generation Sequencing** (MHSRS-24-12667)
Presenter: Shirley Nimo-Paintsil, Ph.D.
- 1145 – 1200 **Wastewater Surveillance Insights from the Field: Translating Globally Deployed, Commercial-Ready Technologies for Force Health Protection and Readiness** (MHSRS-24-11364)
Presenter: Cecilia Prator, Ph.D.
- 1200 – 1215 **A Rapid Host Response Blood Test for Bacterial/Viral Infection Discrimination Using a Portable Molecular Diagnostic Platform** (MHSRS-24-13523)
Presenter: Christopher Wodos, Ph.D., MPH
- 1215 – 1230 **A Wearable Photonic Device for Distinguishing Bacterial and Viral Infections** (MHSRS-24-12171)
Presenter: Zuan-Tao Lin, Ph.D.
- 1230 – 1245 **Qualitative Profiling of Specific Orthohantavirus Epitopes Using Domain Programmable Arrays (DPA)** (MHSRS-24-12458)
Presenter: Raina Kumar, M.S.
- 1245 – 1300 **Discovery of Dual Functional Immunomodulatory and Intrinsic Antiviral Drugs Against Coronavirus Diseases** (MHSRS-24-13213)
Presenter: Giulia Monticone, Ph.D.
- 1300 – 1315 **Integrated, Rapid Antibody Discovery and Cell Line Development to Truncate Timelines for Manufacturing Readiness** (MHSRS-24-12382)
Presenter: Talita Mitchell, Ph.D.

Novel Strategies for Treatment of Shock or Blood Failure: Blood and Blood Products

Moderator: Michael Adam Meledeo, Ph.D.

LOCATION: **Coastal C**

- 1115 – 1130 **Prehospital Pooled Frozen Solvent Detergent Plasma in a Nonhuman Primate Polytrauma Hemorrhage Model** (MHSRS-24-11569)
Presenter: Alejandra Lorenzen, B.S.
- 1130 – 1145 **Early Cold Stored Platelet Transfusion in Severely Injured Patients: Results of a Randomized Clinical Trial** (MHSRS-24-10900)
Presenter: Jason Sperry, M.D.
- 1145 – 1200 **VS-101, a Next-Generation PEGylated HBOC, Improves Survival from Severe Transient Hemorrhagic Shock in Rats** (MHSRS-24-12365)
Presenter: Bjorn Song, Ph.D.

(Continued)

BREAKOUT SESSIONS

Thursday, 29 August | 1115 – 1315

- 1200 – 1215** **The USCENTCOM Walking Blood Bank Performance Benchmark and Anticipated Benefit of Universal Low Titer Type O Screening (MHSRS-24-10945)**
Presenter: Lt Col Andrew Hall, USAF
- 1215 – 1230** **VBI-1 Intraarterial Infusion of Phospholipid Nanoparticles: Addressing Neurological Challenges in Severe Hemorrhagic Shock (MHSRS-24-13029)**
Presenter: Philemon Shallie, Ph.D.
- 1230 – 1245** **A Novel APEX™ Additive Solution for Extended Storage Whole Blood Maintained Hemostatic Function Throughout 56 Days of Cold Storage (MHSRS-24-11678)**
Presenter: Kristin Reddoch-Cardenas, Ph.D.
- 1245 – 1300** **The Novel Anticoagulant Diethylenetriamine Pentaacetic Acid (DTPA) Improves Platelet Count and Hemostatic Function Compared to Citrate in Refrigerated, Stored Whole Blood (MHSRS-24-11075)**
Presenter: Maj Maximilian Feth, German Armed Forces
- 1300 – 1315** **Investigation of the Historical Use of Postmortem Blood Transfusion in Military Medicine and Review of Current Ethical and Regulatory Considerations (MHSRS-24-13535)**
Presenter: Richard Gonzales, M.S.

Solutions Addressing Behavioral Health Clinician Shortage - Leveraging Telebehavioral Health

Moderators: Sharmila A. Chari, Ph.D., Tim Hoyt, Ph.D., MBA

LOCATION: Sun A

- 1115 – 1130** **How Often Do Non-Behavioral Health Soldiers Offer Behavioral Health Support? (MHSRS-24-13132)**
Presenter: Katie Nugent, Ph.D.
- 1130 – 1145** **Social-Emotional, A.I.-Powered Avatars in Extended Reality Simulations: Solutions Addressing Behavioral Health Clinician Shortages for the Warfighter (MHSRS-24-11146)**
Presenter: Clint Carlson
- 1145 – 1200** **Adaptation of Rational Thinking, Emotion Regulation, and Problem Solving (REPS) as a Mental Fitness Mobile Application (MHSRS-24-12881)**
Presenter: Jessica LaCroix, Ph.D.
- 1200 – 1215** **A Low-profile Wearable Device and Configurable Software Platform Providing On-demand Telebehavioral Health and Supporting Optimized Care of Patients for Substance Abuse Disorder with Comorbid Psychiatric Illness in Military and Civilian Populations (MHSRS-24-12021)**
Presenter: Scott Pappada, Ph.D.
- 1215 – 1230** **Bridging Behavioral Sleep Medicine Capability Gaps in the DHA/DoD: Effectiveness of a Digital Clinical Decision Support Platform (MHSRS-24-11468)**
Presenter: Anne Germain, Ph.D.
- 1230 – 1245** **The Effectiveness and Applicability of a Heart Rate Variability Assessment and Training Telemedicine System in Remote Settings (MHSRS-24-13292)**
Presenter: Lauren Scroggs, Ph.D.
- 1245 – 1300** **Development of a Novel Diagnostic Test for Post-Traumatic Stress Disorder: A Pilot Study (MHSRS-24-12514)**
Presenter: Audrey Reider, M.S.
- 1300 – 1315** **Vision and Path Toward Enhancing Medical Readiness Through Artificial Intelligence (MHSRS-24-11882)**
Presenter: Ellie Gordon, B.A.

BREAKOUT SESSIONS

Thursday, 29 August | 1115 – 1315

Musculoskeletal Injury Prevention: Highlighting Vulnerable Warfighters

Moderator: Joseph G. Wasser, Ph.D.

LOCATION: Sun B

- 1115 – 1130** **Increases in Musculoskeletal Diagnosis Rates Corresponding with the Transition to the Army Combat Fitness Test (MHSRS-23-11781)**
Presenter: Josh Kazman, M.S.
- 1130 – 1145** **Timing of Radiologically Confirmed Bone Stress Injuries by Severity During U.S. Army Basic Combat Training: The ARMI Study (MHSRS-24-12051)**
Presenter: Patrick Cummings, M.S.
- 1145 – 1200** **Route of Hormonal Contraception Administration Modifies Stress Fracture Risk in Early-Career Female U.S. Army Soldiers (MHSRS-24-12507)**
Presenter: Emily Ricker, Ph.D.
- 1200 – 1215** **Emotion-Focused Coping, but Not Performance Psychology, Is Related to Self-Reported Musculoskeletal Pain During Training in Marine Corps Officers (MHSRS-24-12795)**
Presenters: Maria Canino, Ph.D., Nikki Barczak-Scarboro, Ph.D.
- 1215 – 1230** **The Influence of Therapeutic Exercise on Subsequent Occurrence of Lower Extremity Musculoskeletal Dysfunction Within One Year of a Low Back Pain Diagnosis in the Military Health System (MHSRS-24-12718)**
Presenter: Daniel I. Rhon, PT, DSc, Ph.D.
- 1230 – 1245** **Biomechanical Study of Different Surgical Approaches to Prevent Secondary Injury for Warfighters: A Finite Element Analysis (MHSRS-24-12008)**
Presenter: Hoon Choi, Ph.D.
- 1245 – 1300** **Variations in Treatments and Outcomes for Musculoskeletal Disease Patients in the Navy Medicine Temporary Limited Duty (LIMDU) Program (MHSRS-24-11854)**
Presenter: Alicia Watson, MPH
- 1300 – 1315** **Using the Practical, Robust, Implementation and Sustainability Model (PRISM) Implementation Framework to Guide Musculoskeletal Injury Prevention Strategy Development in United States Marine Corps Infantry Training (MHSRS-24-12451)**
Presenter: Joshua Waters-Jackson, ATC, TSAC-F

BREAKOUT SESSIONS

Thursday, 29 August | 1115 – 1315

Challenges and Opportunities of High Volume, Prolonged Medical Mobility and CASEVAC During Large Scale Combat Operations

Moderators: Lt Col Nelson Pacheco, USAF, Rachel Kinsler, M.S.

LOCATION: Sun C

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|--------------------|---|
| 1115 – 1130 | Preliminary Field Evaluation of Assistive Devices on Carry Distance and Time During Two-Person Litter Transport Scenarios (MHSRS-24-12809)
Presenter: Alexis S. Stewart, M.S. |
| 1130 – 1145 | A Human Performance Model of Aeromedical Evacuation Missions (MHSRS-24-11142)
Presenters: Suma Subbarao, M.S., Gina Calloway, Ph.D. |
| 1145 – 1200 | Recreating the Vigorous Warrior and Clean Care Exercises In-Silico: A Proof-of-Concept Study for the Digital Transformation of Military Medical Support (MHSRS-24-11614)
Presenter: Mehdi Benhassine, Ph.D. |
| 1200 – 1215 | Assessment of Remote Patient Management System Clinical Monitoring in a Ground Simulation of an Airborne Casualty Evacuation Transport Environment (MHSRS-24-11155)
Presenter: Amy Lloyd, M.S. |
| 1215 – 1230 | Diaphragmatic Neurostimulation Is Feasible and Safe in Deeply Sedated ARDS Patients - A Novel Solution for En Route or CASEVAC Transportation (MHSRS-24-10951)
Presenter: Thiago Bassi, M.D., Ph.D. |
| 1230 – 1245 | AeroVitalGuard/4TDS En-Route Care Management System (MHSRS-24-12882)
Presenter: Christopher Nemeth, Ph.D. |
| 1245 – 1300 | En Route Casualty Care (ERCCC) in Ukraine / Critical Care Transport Post Damage Control Surgery (DCS) in Large Scale Combat Operations (LSCO) (MHSRS-24-11305)
Presenter: John Quinn, M.D., MPH, Ph.D. |
| 1300 – 1315 | Pilot Evaluation of Central Monitoring Impact on Time to Event Recognition During Large Volume Air Transport Simulations (MHSRS-24-12245)
Presenter: Maj Nicholas Villalobos, USAF |

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Poster Session 1

Tuesday, 27 August
1000 - 1200



MHS Military Health System
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Poster Session 1

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Treating Refractory Hypoxemia on the Battlefield: What Does the Future Hold?	71	200-300
Casualty Care During Multi-Domain Operations, Large Scale Combat Operations, and Prolonged Care	71	300-500
Advances in Life Saving Interventions at Point of Injury and in Prolonged Care	73	500-700
Trauma Resuscitation and Critical Care on the Future Battlefield	76	700-800
Novel Strategies for Treatment of Shock or Blood Failure: Blood and Blood Products	78	900-1000
Cellular Therapeutics for Treatment of Shock and Trauma	79	1000
Technologies for the Treatment of Battlefield Hemorrhage and Management of Vascular Dysfunction	80	1000-1100
Severe Burn Injury: Strategies to Accelerate Casualty Functional Recovery	81	1100-1200
Clinical Studies to Advance Combat Casualty Care	82	1200
Assuaging Agony: Novel Pain Therapeutics	82	1200-1300
Implementation of Evidence-based Pain Management Practices in the MHS	83	1300-1400
Far Forward Battlefield Diagnostic Imaging	84	1400
Organ Support in Trauma	85	1400-1500
Challenges and Opportunities of High Volume, Prolonged Medical Mobility and CASEVAC During Large Scale Combat Operations	86	1500
Central Role of Dental Care in Military Readiness, Operational Deployment, In-Theater Care, Post-Injury Reconstruction, and Warfighter Rehabilitation	86	1500
4 Legged Warriors: Military Working Dogs at the Tip of the Spear	87	1600
Protecting the Warfighter from Nuclear Threats: Acute Radiation Syndrome and Radiation Polytrauma	87	1600-1700
Directed Energy Health Effects Research for the Warfighter	88	1700
Current Challenges in DoD Aerospace Medicine	89	1700-1800
Undersea Operational Research Panel	90	1800
Novel Treatments, Strategies and Technologies in Hearing and Balance Health	90	1800-1900
Ocular Optimization: Before and After Injury	91	1900
Experimentation – Beyond the Bench	92	1900
From Theory to Practice: Transitioning S&T Findings into Actionable Knowledge	92	2000

LESSONS LEARNED FROM CURRENT CONFLICTS IN UKRAINE AND ISRAEL TO IMPROVE COMBAT CASUALTY CARE STRATEGIES

#200 | Assessing the Training and Equipment Needs of the Ukraine Multi-Domain Medical Battlefield: Perspective of Ukrainian Healthcare Workers (MHSRS-24-11210)

Presentation Author: Ms. Lynn Lawry

#201 | Molecular Epidemiology of Bacteria Infecting War Wounds at Tertiary Care Hospitals in Ukraine (MHSRS-24-11381)

Presentation Author: Dr. Patrick Mc Gann

#202 | Global Health Engagement (GHE) Through NATO: The Case for the Ukraine Conflict (MHSRS-24-11771)

Presentation Author: Dr. Anna Onderkova

#203 | Neck Wounds on the Frontline in Ukraine: Case Series and Review (MHSRS-24-11916)

Presentation Author: Dr. Tracey Parnell

#204 | Lessons Learned in Ukraine: Deployment of an Ultraportable Operating Room for Point-of-Care Surgery in Symmetric Warfare (MHSRS-24-12244)

Presentation Author: Dr. Emanuele Lagazzi

#205 | Considerations for Prevention of and Emergency Response to Tularemia Outbreaks in Ukraine: Vaccine Involvement (MHSRS-24-12789)

Presentation Author: Dr. Carl Gelhaus

#206 | Mortality Review and Determination of Causes of Death Among IDF Personnel: Insights from the 2023-2024 Israel-Hamas War (MHSRS-24-12805)

Presentation Author: Lt Col Michael Malkin

#207 | The October 7th Mass Fatality Incident: An Unprecedented Forensic Undertaking (MHSRS-24-12810)

Presentation Author: MAJ Cole Bendor

#208 | Orthopedic Fracture Characterization: A Comparison of Two Military Conflicts (MHSRS-24-12846)

Presentation Author: Capt Tal Shachar

#209 | Modern Urban Guerrilla Warfare: Battlefield Characteristics from the 2023-2024 Israel-Hamas War (MHSRS-24-12877)

Presentation Author: MAJ Tomer Talmy

#210 | Traumatic Amputations in Conflict: An Analysis of Prevalence, Injury Mechanisms, and Survival Outcomes During the 2023-2024 Israel-Hamas War (MHSRS-24-12893)

Presentation Author: Lt Col Yigal Chechik

#211 | Modeling Casualty Categories in Large-Scale Combat Operations on Ukrainian War Data (MHSRS-24-13487)

Presentation Author: 2LT Ryan Leone

REMOTE DAMAGE CONTROL RESUSCITATION (RDCR): INNOVATIONS TO PROLONG THE "GOLDEN HOUR"

#212 | Thrombin Generation vs. Conventional Clotting Time for Coagulation Screening During Artificial Organ Support (MHSRS-24-11025)

Presentation Author: Mr. Eric Bigon

#213 | Treatment of Noncompressible Torso Hemorrhage with a Novel Intraabdominal Field Deployed Thermoreversible Foam (MHSRS-24-11034)

Presentation Author: Dr. Ross Donaldson

#214 | Investigation into the Potential Roles of Coagulopathy and Endotheliopathy on Survival in a Swine Model of Uncontrolled Hemorrhage (MHSRS-24-11145)

Presentation Author: Dr. Alan Weaver Jr.

#215 | In Silico Medicine: Digital Twin Modeling for Prediction of Combat Medical Outcomes (MHSRS-24-11235)

Presentation Author: CDR Darshan Thota

#216 | Developing a Novel Approach for Lymphatic System Monitoring in a Rat Model of Polytraumatic Injury (MHSRS-24-11485)

Presentation Author: Ms. Kim Hildreth

#217 | Assessment of Plasma Free Hemoglobin in Swine During 72-Hour Veno-Venous Extracorporeal CO₂ Removal: HemoCue vs. HemCheck (MHSRS-24-12489)

Presentation Author: Dr. Teryn Roberts

#218 | Delivery and Logistics of Military Medical Care in the II Karabakh War: Civil-Military Cooperation (MHSRS-24-12640)

Presentation Author: COL Kanan Yusif-zada

#219 | Feasibility of PT, aPTT, and Fibrinogen on a Multifunctional Digital Microfluidic Cartridge (MHSRS-24-13252)

Presentation Author: Dr. Rainer Ng

#220 | Polymerized Hemoglobin Based Solutions Hold Microvascular Function When Stored in Warm Environments (MHSRS-24-13281)

Presentation Author: Dr. Carlos Munoz

#221 | Microcirculatory Evaluation of Crystalloids, Fresh Frozen Plasma, Hemoglobin Based Oxygen Carriers, and Pack Red Blood Cells in Trauma Hemorrhagic Shock (MHSRS-24-13326)

Presentation Author: Dr. Carlos Munoz

TREATING REFRACTORY HYPOXEMIA ON THE BATTLEFIELD: WHAT DOES THE FUTURE HOLD?

#222 | Plug-and-Play: Feasibility of Connecting the Seraph-100 Filter Directly In-Line with an ECMO Circuit to Achieve Flows for an Effective Treatment (MHSRS-24-10947)
Presentation Author: MAJ Jason Thomas

#223 | Phase 2 Clinical Trial Experience Evaluating Multi-Phase Candidates for the Treatment of Adults with Bacteremia Due to Staphylococcus aureus (diSArm) and Chronic Respiratory Infection Due to Pseudomonas aeruginosa (SWARM-P.a. & Tailwind) (MHSRS-24-11182)
Presentation Author: Dr. Deborah Bix

#224 | Impact of Base Excess on Computational Modeling of Chronic Obstructive Pulmonary Disease (MHSRS-24-12974)
Presentation Author: Mr. Fency Varghese

#225 | Nebulized Epinephrine for Improvement of ECMO Efficacy Following Smoke Inhalation Injury in Sheep (MHSRS-24-13084)
Presentation Author: Mr. Ryuichiro Kakizaki

#300 | Evaluating the Cytokine Response Associated with Pulmonary Dysfunction in Severe Traumatic Injury and COVID-19 (MHSRS-24-11148)
Presentation Author: Dr. Michael Rouse

CASUALTY CARE DURING MULTI-DOMAIN OPERATIONS, LARGE SCALE COMBAT OPERATIONS, AND PROLONGED CARE

#301 | Electrochemiluminescence LDT Assay Validation Using Human Wound Effluent for the Development of Clinical Decision Support Tools (MHSRS-24-11080)
Presentation Author: Dr. Michael Rouse

#302 | Physiological Monitoring Based Virtual Clinical Decision Support Tools for Austere Medicine: Pains, Gaps, and "Blue Sky" Solutions from the Medics' Perspective (MHSRS-24-10832)
Presentation Author: Ms. Michaelina Dupnik

#303 | An Augmented Reality Decision Support Technology for the Performance of Emergency Surgical Procedures (MHSRS-24-11141)
Presentation Author: Ms. Nicole Caldwell

#304 | Digital Health Technologies and Regulatory Involvement Throughout the Warfighter Medical Product Acquisition Lifecycle (MHSRS-24-11250)
Presentation Author: Mr. Daniel Patterson

#305 | On-the-Edge Diagnosis and Continuous Monitoring of Skin Conditions of Warfighters in a No-Communications Environments (MHSRS-24-11270)
Presentation Author: Dr. Sridhar Ramakrishnan

#306 | Autonomous Precision Resuscitation During Ground and Air Transport of a Porcine Non-Compressible Torso Hemorrhagic Shock Model (MHSRS-24-11300)
Presentation Author: Dr. Michael Pinsky

#307 | A State-of-the-Art Analysis of Platforms and Technical Challenges in Autonomous Casualty Evacuation (MHSRS-24-11347)
Presentation Author: Mr. Gregory Nichols

#308 | Designing Novel Physiologic Monitor Displays for Combat Medics to Reduce Visual Workload and Sustain Cognitive Resilience (MHSRS-24-11458)
Presentation Author: Ms. Mabel Cummins

#309 | Irregular Warfare Must Combine Good Medicine, with Both Good Tactics and Good Strategies: Position Paper by the French Special Operations Forces Medical Command (MHSRS-24-11510)
Presentation Author: COL Pierre Pasquier

#310 | Interpretable AI in Radiology: A Critical Examination of Saliency Map Trustworthiness (MHSRS-24-11596)
Presentation Author: 1LT Nolan Skelly

#311 | Operational Virtual Health: Delivering Support to the Point of Need – Technical Consultation Improvement Process 2017 to 2023 (MHSRS-24-11649)
Presentation Author: Mr. Michael Kile

#312 | Prolonged Field Care: Comparison of the Military Treatment Facility and a Civilian Level 1 Trauma Center Utilizing QuEST to Investigate Nursing Clinical Exposure for Medical Readiness (MHSRS-24-11765)
Presentation Author: MAJ Anna Prendergast

#313 | Pharmacokinetics of Tranexamic Acid (TXA) Delivered by Expeditious Routes in a Swine Model of Polytrauma and Hemorrhagic Shock (MHSRS-24-12061)
Presentation Author: CDR Sean Stuart

#314 | Individualized AI Algorithm for Mass Casualty Resource Allocation and Optimal Treatment of Hemorrhage (MHSRS-24-12125)
Presentation Author: Dr. Anders Wallqvist

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#918 | Efficacy of Inline Transfusion Warmers in Cold Ambient Temperatures (MHSRS-24-11705)

Presentation Author: Mr. Grantham Peltier

#919 | Quality and Hemostatic Function Assessment of Platelets Componentized Using Non-DEHP Reveos Automated Blood Processing System and Platelet Pooling Set at Room Temperature for 7 Days (MHSRS-24-11707)

Presentation Author: Ms. Samantha Perez

#920 | Developing a Novel Oxygen Carrier for Resuscitation and Oxygen Delivery by Heme Protein Engineering (MHSRS-24-11909)

Presentation Author: Dr. Jason Rose

#921 | Transfusion of Whole Blood Is Not Associated with Increased Rate of Hemolytic Transfusion Reaction (MHSRS-24-12152)

Presentation Author: Mr. David Limon

#922 | Efficacy and Safety of Phospholipid Nanoparticles (VBI-S) in the Treatment of Relative Hypovolemia, Hypotension and Hypoxemia in Septic Shock Patients: A Phase 2a Clinical Pilot Trial (MHSRS-24-12249)

Presentation Author: Dr. Prashanth Anamthathmakula

#923 | Updated Device Design for Increased Performance of a Ruggedized Device for the Removal of Anti-A and Anti-B Blood Group Antibodies from Plasma (MHSRS-24-12363)

Presentation Author: Dr. Maryann Gruda

#924 | Evaluation of Field Fluid Support and Follow-On 72-Hour Survival After 60% Blood Loss in Rats (MHSRS-24-12387)

Presentation Author: Dr. Bjorn Song

#925 | Trauma Resuscitation with Whole Blood from Pregnant Donors Compared to Whole Blood from Non-Pregnant Donors in a Swine Model (MHSRS-24-12658)

Presentation Author: CPT Grace Pak

#1000 | Cryopreservation Methods of Manufactured Human Red Blood Cells Using DMSO Free Solution (MHSRS-24-12743)

Presentation Author: Mr. Owen Lewis

#1001 | Platelet Products Stored in Plasma or Additive Solution Maintain Function for 21 Days of Cold Storage (MHSRS-24-12904)

Presentation Author: Ms. Katelin Rahn

#1002 | Hemostatic Capacity of Lyophilized Cryoprecipitate in a Microfluidic Model of Hyperfibrinolysis (MHSRS-24-13163)

Presentation Author: Ms. Katelin Rahn

#1003 | The Apohemoglobin-Haptoglobin Complex Prevents Nephropathy Associated with Exposure to Acellular Hemoglobin (MHSRS-24-13001)

Presentation Author: Ms. Daniela Lucas

#1004 | Metformin's Impact on Mitochondrial Function and Blood Pressure Recovery After Severe Hemorrhagic Shock (MHSRS-24-13157)

Presentation Author: Dr. Cynthia Rodrigues Muller

#1005 | Multi-Omics Molecular Alterations Associated with Progressive Simulated Hemorrhage (Occurrence/Response) and Tolerance in Healthy Adult Humans (MHSRS-24-13178)

Presentation Author: Ms. Ida Nela Crespo Rosales

#1006 | Implementing Whole Blood on the Battlefield: Insights from the Israel Defense Forces Medical Corps in the 2023-2024 Israel-Hamas War (MHSRS-24-13192)

Presentation Author: Lt Col Ofer Almog

#1007 | Unveiling Platelet Storage Dynamics: Insights from the Ongoing CHILLED Platelet Study in vitro (CHIPSiv) Study (MHSRS-24-13358)

Presentation Author: Dr. Irona Khandaker

#1008 | Valkyrie Solutions for Walking Blood Bank Challenges (MHSRS-24-13473)

Presentation Author: CDR Russell Wier

#1009 | Stored Whole Blood Loses Its Ability to Contract Clots within Its Shelf Life (MHSRS-24-13002)

Presentation Author: Dr. Monica Seadler

CELLULAR THERAPEUTICS FOR TREATMENT OF SHOCK AND TRAUMA

#1010 | Cell Therapy to Create New Palmo-Plantar Skin at the Residual Limb After Amputation (MHSRS-24-10884)

Presentation Author: Dr. Luis Garza

#1011 | Engineering Neutrophil-Membrane Coated Nanoparticles as an Effective Drug Delivery System During Ischemia Reperfusion Injury on the Battlefield (MHSRS-24-11040)

Presentation Author: Dr. Jessica Saul-McBeth

#1012 | Transplant Endothelial Immunocloaking Facilitates Local Immunomodulation in a Rat Hindlimb Model of Vascularized Composite Allotransplantation (MHSRS-24-11110)

Presentation Author: Dr. Wensheng Zhang

#1013 | On-Demand Blood: Utilizing a Novel Expandable Volume Bioreactor to Increase Efficiency for Cellular Therapy Production with an Initial Focus on Red Blood Cells for Commercial and Military Applications Including Austere Forward Capabilities (MHSRS-24-11513)

Presentation Author: Dr. Janice Moser

#1014 | Cellular Biosensor for Intravital Detection of Oxygen Satiation and Deprivation (MHSRS-24-11671)

Presentation Author: Ms. Ching-Ni Njauw

#1015 | Engineering Glial Scar for Brain Tissue Regeneration After Traumatic Injury (MHSRS-24-11752)

Presentation Author: Dr. Xiaowei Li

#1016 | A Novel Shape Memory Polymer Scaffold in Combination with Delayed Bone Marrow-Derived Mesenchymal Stem Cells Promote Angiogenesis in a Rat Calvarial Critical Defect Model (MHSRS-24-11925)

Presentation Author: Dr. Annette Rodriguez

#1017 | Engineering Platelets Using a Clinically Relevant Platform Technology (MHSRS-24-12906)

Presentation Author: Dr. Katherine Badior

#1018 | Economic Realities of Manufacturing Red Blood Cells for Military and Civilian Use: Is Cost Parity with Donor Blood Achievable? (MHSRS-24-13125)

Presentation Author: Mr. Kyle Meetze

TECHNOLOGIES FOR THE TREATMENT OF BATTLEFIELD HEMORRHAGE AND MANAGEMENT OF VASCULAR DYSFUNCTION

#1019 | Fibrinogen Knockdown After Polytrauma Prevents Thrombosis While Maintaining Hemostatic Potential (MHSRS-24-13052)

Presentation Author: Dr. Monica Seadler

#1020 | CAY001, A Synthetic Short-Chain polyphosphate (polyP) Complexed with Silica Nanoparticle (SNP), Corrects Coagulopathy Under Hemodilute, Hypothermic, or Acidotic Conditions as Assessed by In Vitro Coagulation Assays (MHSRS-24-11280)

Presentation Author: Dr. Damien Kudela

#1021 | Scalable Production and Comprehensive Biophysical Characterization of High Molecular Weight Relaxed and Tense Quaternary State Polymerized Human Hemoglobin (MHSRS-24-11523)

Presentation Author: Dr. Mohammad Khan

#1022 | Development of an In Vitro, Human Model of Endotheliopathy of Trauma for Rapid, High-Throughput Testing of Treatment Strategies (MHSRS-24-11850)

Presentation Author: Ms. Phylisia Dimas

#1023 | SanguiStop: Intravenous Nanomedicine for Injury-Targeted Direct Delivery of Thrombin for Hemorrhage Control (MHSRS-24-11851)

Presentation Author: Dr. Bipin Chakravarthy Paruchuri

#1024 | Initial Proof of Concept Evaluation of a Whole Blood Surrogate for Far Forward Hemorrhage Control and Resuscitation (MHSRS-24-12169)

Presentation Author: Dr. Michael Bruckman

#1025 | Encapsulation of Fibrinogen with Calcium Carbonate for Hemorrhage Control (MHSRS-24-12409)

Presentation Author: Dr. Henry Peng

#1100 | Developing an Automated Mechanical Tourniquet for Combat Casualty Care (MHSRS-24-12421)

Presentation Author: Mr. Michael Lopez

#1101 | Arterial Hemorrhage Model Creation from a Porcine In Vivo Comparator: Table Top Simulator (MHSRS-24-12423)

Presentation Author: Mr. Tushar Kailu

#1102 | iCoagLAB: A Novel Point-of-Care Blood Coagulation Optical Sensor for the Precise Diagnosis of Coagulopathies Caused by Battle Injuries (MHSRS-24-12452)

Presentation Author: Mr. Shane Ward

#1103 | Evaluation of the Storage Stability of ErythroMer as a Lyophilized Powder and as a Reconstituted Liquid (MHSRS-24-12466)

Presentation Author: Dr. William McGhee

#1104 | Bio-Engineered Bait-Trap Pair to Selectively Remove ErythroMer from Blood Specimens (MHSRS-24-12486)

Presentation Author: Dr. William McGhee

#1105 | ErythroMer: A Field-Deployable, Artificial Red Blood Cell for Remote Damage Control Resuscitation (RDCR): Performance in Models of Prolonged Field Care (PFC) (MHSRS-24-12689)

Presentation Author: Dr. Allan Doctor

#1106 | Oxygen Delivery Performance Analysis of a Biosynthetic Whole Blood Analogue in an In Vitro Human Massive Transfusion Model (MHSRS-24-12914)

Presentation Author: Dr. Allan Doctor

#1107 | Hemostatic Performance Analysis of Biosynthetic Whole Blood Analogue in an In Vitro Human Massive Transfusion Model (MHSRS-24-12713)

Presentation Author: Dr. Sonali Rohiwal

#1108 | Evaluation of Lyophilized SynthoPlate In Vivo in Models of Traumatic Hemorrhage (MHSRS-24-12742)

Presentation Author: Mr. Norman Luc

#1109 | Platelet Activation in an Ex Vivo Human Massive Transfusion Model – Implications of Whole Blood Storage Duration (MHSRS-24-12874)

Presentation Author: Dr. Susan Shea

#1110 | Hemodynamic and Rheological Performance Analysis of Biosynthetic Whole Blood Analogue in an In Vitro Human Massive Transfusion Model (MHSRS-24-12883)

Presentation Author: Mr. Pedro Cabrales

#1111 | Development of a Contact-Free Assay to Evaluate Stored Blood Quality in Far Forward Environments Using Ultrasound Viscoelasticity Techniques (MHSRS-24-13062)

Presentation Author: Dr. Melissa Caughey

SEVERE BURN INJURY: STRATEGIES TO ACCELERATE CASUALTY FUNCTIONAL RECOVERY

#1112 | Development of an Educational VR Simulation for Burn Care (MHSRS-24-11081)

Presentation Author: Mr. Jacob Rivera

#1113 | Management of Facial Burn Scar Using Repurposed FDA-Approved Drugs (MHSRS-24-11576)

Presentation Author: Dr. Mohamed El Masry

#1114 | Early Plasma Transfusions as Part of Plasma Inclusive Resuscitation in Burn Shock Patients Do Not Result in Differential Coagulation Factor Activity (MHSRS-24-11843)

Presentation Author: CAPT Shane Mathew

#1115 | Silk Protein-Based Field Applicable Spray for Acute Burn Wound Management (MHSRS-24-12073)

Presentation Author: Dr. Kristo Nuutila

#1116 | Development of A Novel Heterogenous Porcine Burn Wound Model (MHSRS-24-12111)

Presentation Author: CPT Jamie Neelon

#1117 | Objective Endpoint Determination for Burn Wound Debridement (MHSRS-24-12520)

Presentation Author: Dr. Wangcun Jia

#1118 | Advancing Burn Depth Assessment Through Ultrasound Imaging with Vision Transformers (MHSRS-24-12580)

Presentation Author: Dr. Juan P. Wachs

#1119 | Evaluation of Subcutaneous Combination Ibuprofen and Resolvin D2 to Mitigate Burn Progression (MHSRS-24-12828)

Presentation Author: Dr. Marc Thompson

#1120 | Evaluation of Enzymatic Debridement Agent SN514 Efficiency of Infected Burn Care Under Combat Scenarios (MHSRS-24-12841)

Presentation Author: Dr. Marc Thompson

#1121 | Aligning Defense Acquisition and FDA Processes to Field New Burn Products (MHSRS-24-12890)

Presentation Author: Ms. Kristin Jones Maia

#1122 | Burn Wound Microbiome Evaluation Following Non-Euphoric Phytocannabinoid Elixir 14 (NEPE-14) Treatment in a Swine Model (MHSRS-24-13048)

Presentation Author: Mr. Joshua Stephenson

#1123 | Platelet-Derived Extracellular Vesicles for Rapid Treatment and Regeneration of Severe Burns and Wounds (MHSRS-24-13139)

Presentation Author: Dr. Brooke Paradise

#1124 | Antibacterial and Immunomodulatory Colloidal Scaffolds for the Treatment of Burns: Recombinant Human Proteoglycan (PRG4) and Minocycline in Gelatin Methacryloyl (GelMA) Foam (MHSRS-24-13228)

Presentation Author: Ms. Fatemeh Alipanahrostami

#1125 | Validation of a Hand-Held Spatial Frequency Domain Imaging (SFDI) Device for Wide-Field Mapping of Burn Severity and TBSA (MHSRS-24-13242)

Presentation Author: Dr. David Cuccia

#1200 | A Novel RNA Therapy for Accelerating Healing of Burn Wounds (MHSRS-24-13529)

Presentation Author: Dr. Brian Johnston

#1201 | Using Early Pro and Anti-Inflammatory Cytokines Ratio to Predict Mortality in Burn Patients (MHSRS-24-12593)

Presentation Author: Dr. Tuan Le

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 Presentation Author: Dr. Tuan Le

#1203 | Study Design, Rational and Implementation for the Linking Investigators in Trauma and Emergency Services (LITES) Calcium and Vasopressin Following Injury Early Resuscitation (CAVALIER) Trial (MHSRS-24-10897)
 Presentation Author: Dr. Jason Sperry

#1204 | Does Technique Matter? A Comparison of Fresh Whole Blood Donation Venous Access Techniques for Time and Success (MHSRS-24-11177)
 Presentation Author: MAJ Brandon Carius

#1205 | Skin Sympathetic Nerve Activity as a Potential Predictor for Autonomic Dysreflexia in Humans with Spinal Cord Injuries (MHSRS-24-11259)
 Presentation Author: Mr. Mitchell Sanchez

#1206 | Decrease in Total Leukocyte Count Is Associated with Acute Kidney Injury After Severe Burn (MHSRS-24-11425)
 Presentation Author: Dr. James Aden

#1207 | Non-Technical Competence for Military Nurses in Their Operational and Non-Deployed Roles: A Grounded Theory Investigation (MHSRS-24-11465)
 Presentation Author: MAJ Adam Hughes

#1208 | Comparing Audiovisual and In-Person Clinical Note Quality (MHSRS-24-11500)
 Presentation Author: Dr. Harry Burke

#1209 | Prospective Blood Transcriptomics Study in a mild Traumatic Brain Injury Cohort Identifies a Number of Genes Which May Be Predictive of Post-Traumatic Headache (MHSRS-24-11515)
 Presentation Author: Dr. Fletcher White

#1210 | Effect of Deployed Cardiothoracic Surgeons on Clinical Outcomes in United States Service Members with Thoracic Trauma in Operation Iraqi Freedom (MHSRS-24-11605)
 Presentation Author: MAJ Timothy Guenther

#1211 | A Randomized, Double-Blind, Placebo-Controlled Phase 1 Single and Multiple-Dose Pharmacokinetic First-in-Human Study of AV-001 in Healthy Subjects for the Treatment of Acute Respiratory Distress Syndrome (MHSRS-24-11804)
 Presentation Author: Dr. Harold Kim

#1212 | Coagulation Disorders Due to Hypothyroidism: Risk of Bleeding Complications During Casualty Military Operations for Soldiers Wounded in Action (MHSRS-24-11833)
 Presentation Author: Lt Col Manuela Andrea Hoffmann

#1213 | ENA-001, a BK Channel Blocker, Enhances Respiration Without Inducing Analeptic Side Effects (MHSRS-24-11880)
 Presentation Author: Dr. Errol Gould

#1214 | Usability of the Intrepid Battlefield Exoskeleton (IBEX) to Complete Military-Specific Tasks (MHSRS-24-12198)
 Presentation Author: Ms. Ciera Price

#1215 | Enhancing Combat Readiness: Field Improvised Exoskeletons for Prolonged Casualty Care (MHSRS-24-12304)
 Presentation Author: Mr. Antuione Perry

#1216 | A Randomized Clinical Trial: Does Scheduled Low-Dose, Short-Term NSAID (Ketorolac) Modulate Cytokine Levels Following Orthopaedic Polytrauma? (MHSRS-24-12690)
 Presentation Author: Dr. Maaz Muhammad

#1217 | Metabolomic Exploration of Lower Limb Interstitial Fluid as a Novel Biofluid in the Evaluation of Lower Limb Viability (MHSRS-24-13061)
 Presentation Author: MAJ Madelaine Gimzewska

#1218 | How Accurate Is the Pulse Ox? A Prospective, Observational Study of Pulse Oximeter Sensor and Calibration Curve Combinations in Emergency Department Patients with a Range of Skin Pigmentation (MHSRS-24-13073)
 Presentation Author: CAPT Maya Alexandri

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 Presentation Author: Dr. Huijuan Hu

#1220 | Objective, Personalized Pain (Nociception) Monitoring Technology – The Missing Link (MHSRS-24-11200)
 Presentation Author: Ms. Rachel Weissbrod

#1221 | Reversal of Mechanical Hypersensitivity by 2R, 6R-Hydroxynorketamine After Activation of Group 2 Metabotropic Glutamate Receptors (MHSRS-24-11563)
 Presentation Author: Dr. Irwin Lucki

#1222 | MiR-155 Therapy for the Treatment of Peripheral Neuropathy in a Rat Spared Nerve Injury Model (MHSRS-24-11657)
 Presentation Author: Dr. Christopher Fellin

#1223 | Smart Precision Nasal Hydromorphone Controlled Delivery for Combat Analgesia (MHSRS-24-11735)

Presentation Author: Mr. Glen Cunningham

#1224 | Evaluation of the Extremity Trauma Model for Spontaneous, Affective, and Reflexive Pain Components (MHSRS-24-12037)

Presentation Author: Dr. Natasha Sosanya

#1225 | Development of Multi-Modal Stress Sensing and Pain-Relieving Battlefield Acupuncture Needles (MHSRS-24-12042)

Presentation Author: Mr. Evan Johnson

#1300 | Nasal Drug Delivery: Parametric Evaluation of Design Parameters That Effect Drug Deposition (MHSRS-24-12082)

Presentation Author: Mr. Jonathan Beckwith

#1301 | Audio-Visual Therapy for Chronic Neuropathic Pain: A Sham-Controlled Randomized Clinical Trial (MHSRS-24-12200)

Presentation Author: Dr. Jeffrey Bower

#1302 | Role of Glycinergic System in Post-Operative Pain Mechanisms (MHSRS-24-12226)

Presentation Author: Dr. Bopaiah Cheppudira

#1303 | : NP1/GPR37 Signaling Axis Protects Painful Traumatic Brain Injury and Its Comorbidities by Regulating Neuroinflammation and Diverse Glial Responses (MHSRS-24-12242)

Presentation Author: Dr. Ru-Rong Ji

#1304 | Clinical Effectiveness and Utilization of Non-Surgical Spinal Decompression for Reduction of Pain in Intervertebral Disc Disorders (MHSRS-24-12517)

Presentation Author: Dr. Nathan Schilaty

#1305 | Evaluation of Roflumilast for Antinociceptive Effect in a Rat Model of Thermal Injury (MHSRS-24-12581)

Presentation Author: CPT Connor Broyles

#1306 | Transdermal Drug Delivery Platform Based on 3D Printed Groove Microneedle Array for Post-Traumatic Stress Disorder and Chronic Pain Management (MHSRS-24-12737)

Presentation Author: Dr. Danilo dos Santos

#1307 | Addressing the Escalation of Chronic Migraine and the Need for Deployable Treatments: Developing a Randomized, Double-Blinded Study to Test the Efficacy of OnabotulinumtoxinA vs. IncobotulinumtoxinA in Adults with Chronic Migraine (MHSRS-24-12853)

Presentation Author: Dr. Mario Oyola

#1308 | Addressing the Opioid Crisis: Advancing IM Narcan in Military Operations (MHSRS-24-13255)

Presentation Author: COL Sean Hollonbeck

#1309 | Intravenous Synthetic Cannabidiol for Non-Opioid Acute Pain Relief (MHSRS-24-13264)

Presentation Author: Mr. Brett Lanier

IMPLEMENTATION OF EVIDENCE-BASED PAIN MANAGEMENT PRACTICES IN THE MHS**#1310 | Massage Therapist Provider Engagement in the Military Health System** (MHSRS-24-10968)

Presentation Author: Dr. Tracy Rupp

#1311 | An Update to The Defense and Veterans Center for Integrative Pain Management's Pain Registry Biobank: Remains a Valuable Asset for Future Research Studies (MHSRS-24-11151)

Presentation Author: Ms. Mary McDuffie

#1312 | Percutaneous PNS Reduces Postoperative Knee Pain and Improves Function After Surgically Induced Orthopedic Trauma: Results from a DoD-Funded Multicenter, Randomized, Double-Blind, Placebo-Controlled Trial (MHSRS-24-11181)

Presentation Author: COL Steven Cohen

#1313 | Does Psychologically Informed Physical Therapy Improve Self-Efficacy and Positive Treatment Outcome Expectations in Patients with Musculoskeletal Injuries Treated at a Navy Shore-based Medical Clinic? (MHSRS-24-11388)

Presentation Author: Dr. Hope Mowery

#1314 | How Does Psychologically Informed Physical Therapy Affect Treatment Satisfaction in Active-Duty Service Members with Musculoskeletal Injuries Reporting to a Navy Physical Therapy Clinic? (MHSRS-24-11390)

Presentation Author: Dr. Hope Mowery

#1315 | Role of Pain Catastrophizing in the Effects of Cognitive Behavioral Therapy for Chronic Pain: An Exploratory Secondary Data Analysis Using Finite Mixture Models (MHSRS-24-11529)

Presentation Author: Dr. Diane Flynn

#1316 | Estimating Minimal Important Change of the National Institutes of Health Research Task Force Impact Score Using Computer Adaptive Measures: A Secondary Analysis of Two Randomized Clinical Trials in a Military Population with Chronic Pain (MHSRS-24-11590)

Presentation Author: Dr. Diane Flynn

#1317 | Sex Differences in Pain Sensitivity and Tolerance After Basic Combat Training (MHSRS-24-11539)

Presentation Author: LTC Jason Judkins

#1318 | Do Pain Specialist Staffing Shortages Have Downstream Effects on Soldier Readiness? (MHSRS-24-11593)

Presentation Author: CPT Shikhar Shah

#1319 | Harnessing Treatment Effect Heterogeneity to Improve Outcomes of Treatment for Headache Attributable to Traumatic Brain Injury: A Focused Program of Research (MHSRS-24-11728)

Presentation Author: Dr. Don McGeary

#1320 | Access to Evidence-Based Behavioral Health Interventions for Chronic Pain Post TBI Through Identification of Barriers That Inform a Multi-Modal Implementation Strategy: A NIDILRR and VA TBI Model System Collaborative Study (MHSRS-24-11779)

Presentation Author: Dr. Risa Nakase-Richardson

#1321 | Validating Two Short-Form Pain Catastrophizing Scales in U.S. Military Personnel Seeking Chronic Pain Treatment (MHSRS-24-11818)

Presentation Author: Dr. Juliana Ee

#1322 | A Functional Restoration Program for Active-Duty Service Members with Chronic Pain: Do PTSD Symptoms Moderate Response on Physical Function Assessments? (MHSRS-24-12164)

Presentation Author: Dr. Emmanuel Espejo

#1323 | Thinking Outside the Pill Box: Pain, Anxiety, and Stress Reduction in Trauma Patients Through Holistic Medicine (MHSRS-24-12329)

Presentation Author: Lt Laurinda Jackson

#1324 | Provider Perceived Barriers to Acupuncture Treatment Access After TBI and Opportunities for Mapping Implementation Strategies: A NIDILRR and VA TBI Model System Collaborative Study (MHSRS-24-12601)

Presentation Author: Dr. Jolie Haun

#1325 | A Comparative Analysis of Clinician-Observed vs. Patient-Reported Measures of Physical Function in Active-Duty Patients Undergoing Interdisciplinary Care for Chronic Pain (MHSRS-24-12744)

Presentation Author: Dr. Tyler Snow

#1400 | Implementation of Evidence-Based Multimodal Pain Management Protocols in the Military Health System Operative Setting (MHSRS-24-13323)

Presentation Author: Ms. Alexandria White

#1401 | Field Assessment of a Self-Contained, Wearable Infusion Device for Non-Opioid Pain Management for Prolonged Field Care While Deployed at Northern Strike 2023 (MHSRS-24-13354)

Presentation Author: Mr. Brent Walsh

#1402 | Objective Acute Pain Measurement in Real-Time Using Forehead Wearable and AI (MHSRS-24-13433)

Presentation Author: Mr. Jonathan Gasson

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Presentation Author: Mr. Robert Armiger

#1404 | The MAUI K3900 and the CET FAST Examination for the Diagnosis and Triage of Trauma in Resource-Limited Environments (MHSRS-24-11051)

Presentation Author: CAPT Matthew Bradley

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Presentation Author: Mr. Gordon Kennedy

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Presentation Author: Dr. Mike Orthner

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Presentation Author: Dr. Srikar Adhikari

#1408 | Handheld POCUS to Support Anesthesia Care in the Austere Environment (MHSRS-24-11798)

Presentation Author: LTC Janet Sims

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Presentation Author: Dr. Venkat Keshav Chivukula

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Presentation Author: MAJ Georgina Flynn-Smith

#1411 | Providing Definitive Care at the Point of Injury with Real-Time 3D Imaging to Unite En Route and Definitive Care Trauma Teams (MHSRS-24-12213)

Presentation Author: Dr. Philip Pratt

#1412 | Comparative Analysis of Image Classification, Object Detection, and Segmentation Algorithms for Foreign Body Detection and Triage in Ultrasound Images (MHSRS-24-12274)

Presentation Author: Mr. Lawrence Holland

#1413 | Autonomous Ultrasound Imaging Using a Robotic Platform with Integrated Computer Vision and Deep Learning Models (MHSRS-24-12493)

Presentation Author: Ms. Krysta-Lynn Amezcua

#1414 | Advancing Combat Burn Assessment: Development and Evaluation of a Fully Handheld Imaging Device for Rapid and Reliable Determination of Burn Depth and % Total Body Surface Area (MHSRS-24-12529)

Presentation Author: Dr. Jason Dwight

#1415 | Multimodal Nasoendoscopy for Olfactory Dysfunction Diagnosis (MHSRS-24-12616)

Presentation Author: Dr. Jesung Park

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Presentation Author: CPT Mark Gartner

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Presentation Author: Dr. Chris Campbell

#1418 | Development of a Portable Ultrasound Device for Automated Pneumothorax Detection (MHSRS-24-13295)

Presentation Author: Dr. Bhaskara Rao Chintada

#1419 | Adapting Ultra-NeRF for 3D Reconstruction of Live Tissue (MHSRS-24-13438)

Presentation Author: Dr. Howie Choset

#1420 | Image Based Extraction of Heart Rate, Blood Pressure, and Perfusion Using Artificial Intelligence (MHSRS-24-13489)

Presentation Author: Ms. Kelly Roman

ORGAN SUPPORT IN TRAUMA

#1421 | Efficacy and Hemocompatibility Comparison of CardioHELP HLS 7.0 and XLUNG Lung Support Devices During 72 Hours Venovenous ECLS in Swine (MHSRS-24-10963)

Presentation Author: Dr. Teryn Roberts

#1422 | Heparin-Free Nitric Oxide-Based Anticoagulation Leads to 50% Reduction in Oxygenator Thrombus Area After Prolonged Combat Relevant 72-Hour-long Extracorporeal Life Support (MHSRS-24-10971)

Presentation Author: Ms. Angela Mitchell

#1423 | The First Clinical Scale Microfluidic Oxygenator Shows Efficacy in a 48-Hour Combat-Relevant Trauma Model in Swine (MHSRS-24-11022)

Presentation Author: Dr. Andriy Batchinsky

#1424 | Pre-Clinical Drug Safety Testing of Free Radical Scavenger PrC-210 in Swine (MHSRS-24-11059)

Presentation Author: Dr. Aaron Dingle

#1425 | Assessment of Injury Severity in a 72-Hour Continuous Intensive Care Unit Study in Swine with Severe Smoke Inhalation Injury and Burns (MHSRS-24-11107)

Presentation Author: Mr. Gregory Williams

#1500 | Polymerized Human Hemoglobin-Based Oxygen Carrier Preserves Lung Allograft Function During Normothermic Ex Vivo Lung Perfusion (MHSRS-24-11224)

Presentation Author: Ms. Alisyn Greenfield

#1501 | Stem Cell-Derived Recombinant Proteins Accelerate Kidney Repair (MHSRS-24-11542)

Presentation Author: Dr. John Jackson

#1502 | Acetazolamide Alleviates Tourniquet-Induced Acute Kidney Injury Through Inhibition of Cathepsin D (MHSRS-24-11574)

Presentation Author: Ms. Bongwe Ngwenyama

#1503 | Extracorporeal Membrane Oxygenation in Severe Trauma – A Retrospective Analysis from the TraumaRegister DGU (MHSRS-24-11875)

Presentation Author: MAJ Maximilian Feth

#1504 | Multiplex Sensing of Predictive Biomarkers for Non-Invasive Graft Surveillance of Vascularized Composite Allografts (MHSRS-24-12821)

Presentation Author: Dr. Sameer Sonkusale

#1505 | A Comprehensive Polytrauma Model Characterizes Battlefield Injury and Systemic Inflammation (MHSRS-24-12898)

Presentation Author: CPT Cole Ogyrdziak

#1506 | Evaluation of Selective Factor Xa Inhibition for Artificial Surface-Induced Coagulation in an Ovine Venovenous ECMO Model (MHSRS-24-13026)

Presentation Author: Dr. Yeahwa Hong

#1507 | Assessment of Renal Function Preservation in Early Prevention of Multisystem Organ Failure in a Porcine Polytrauma Model (MHSRS-24-13205)

Presentation Author: Dr. Catherine Uyehara

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Presentation Author: 2LT Sarah Rodriguez

#1509 | Identifying En Route Care Mission Priorities in Future Combat (MHSRS-24-11365)
Presentation Author: Dr. Hoangha Pirnstill

#1510 | En Route Care Field Simulation Platform with Research Overlay to Enable Technology Assessments in Operationally Relevant Environments and Support Sustainment Training (MHSRS-24-11541)
Presentation Author: Ms. Kimberly Medellin

#1511 | Amphibious Medical Triage, Treatment and Transportation: Addressing Casualty Evacuation Challenges in the Maritime Environment (MHSRS-24-11557)
Presentation Author: CDR Grace Landers

#1512 | Quantifying the Potential Benefit of Electronic Medication Alerts in En Route Critical Care (MHSRS-24-11564)
Presentation Author: CAPT Aaron Alindogan

#1513 | Establishing Clinical Timelines for CBRN and Complex Injuries out of the Vigorous Warrior/Clean Care 24 Exercise (MHSRS-24-11615)
Presentation Author: Dr. Mehdi Benhassine

#1514 | Enhancing Medical Planning for Large Scale Combat Operations: A Test Case for NATO's Forward Land Forces in Romania (MHSRS-24-11620)
Presentation Author: Dr. Mehdi Benhassine

#1515 | A Study of Task Saturation and Intravenous Pump Readiness at the CCAT-Advanced Course (MHSRS-24-11839)
Presentation Author: MAJ Nicole Leib

#1516 | Systematic Review of Research on Aeromedical Evacuation Crew Configuration, Skill Mix, and Mission Characteristics (MHSRS-24-12102)
Presentation Author: MAJ Angela Phillips

#1517 | End User Evaluation of Structured Handoff Didactic Training and Data Summary Tool for En Route Care (MHSRS-24-12104)
Presentation Author: Capt Kate Beyrau

#1518 | iMEDCAP – intelligent Military Medical Capabilities for Monitoring, Medical Care, and Evacuation of Contagious, Injured and Contaminated Personnel (MHSRS-24-12655)
Presentation Author: CDR Christoph Jaenig

CENTRAL ROLE OF DENTAL CARE IN MILITARY READINESS, OPERATIONAL DEPLOYMENT, IN-THEATER CARE, POST-INJURY RECONSTRUCTION, AND WARFIGHTER REHABILITATION

#1519 | Antimicrobial Properties of Bioceramic Endodontic Sealers Against Enterococcus faecalis (MHSRS-24-10958)
Presentation Author: Dr. Daniel Thompson

#1520 | Efficacy of an Antiviral Peptidomimetic Oligomer in an Animal Model of HSV-1 Infection (MHSRS-24-11076)
Presentation Author: Dr. Gill Diamond

#1521 | Testing and Evaluation of a Portable Ozone Sterilizer: Bacterial Reduction Efficacy (MHSRS-24-11540)
Presentation Author: Ms. Tarea Burton

#1522 | Periodontal Disease Treatment with Atmospheric Non-Thermal Plasma for Better Clinical Outcomes (MHSRS-24-11924)
Presentation Author: Dr. Mark Chen

#1523 | Comparison of Dental Emergencies Among U.S. Military and Civilian Personnel During Combat Operations 2007 to 2009 (MHSRS-24-12256)
Presentation Author: Dr. John Simecek

#1524 | Effects of Heat and Humidity on the Physical and Biological Properties of Endodontic Sealers in Simulated Military Storage and Transit Conditions (MHSRS-24-12303)
Presentation Author: Dr. Meaghan Rose

#1525 | Dental Emergencies Experienced by Ukrainian Military Personnel Treated at U.S. Army Clinics in Germany (MHSRS-24-12897)
Presentation Author: Lt Col Andres Mendoza

4 LEGGED WARRIORS: MILITARY WORKING DOGS AT THE TIP OF THE SPEAR

#1600 | Comparing Resuscitative Strategies in a Canine Hemorrhage Model and the Potential Effect on Glycocalyx Damage (MHSRS-24-10838)

Presentation Author: Dr. Alan Weaver Jr.

#1601 | In Vitro Evaluation of the Coadministration of Canine Blood Products and Drugs Used in Critical Illness (MHSRS-24-11218)

Presentation Author: Dr. Thomas Edwards

#1602 | Do Breed, Sex, Neuter Status, Procurement Location, and Certification Affect the Likelihood of Fatal Heat Stroke in Military Working Dogs? (MHSRS-24-11399)

Presentation Author: MAJ Lisa Crevoiserat

#1603 | Comparison of In Vitro Canine and Human Endothelial Cell Barrier Permeability in Response to Endotheliopathy-Promoting Factors (MHSRS-24-11868)

Presentation Author: Mr. Juan Curbelo

#1604 | Automated Interpretation of Point of Care Ultrasound for Military Working Dogs (MHSRS-24-12472)

Presentation Author: Ms. Sofia Hernandez Torres

PROTECTING THE WARFIGHTER FROM NUCLEAR THREATS: ACUTE RADIATION SYNDROME AND RADIATION POLYTRAUMA

#1605 | Impact of Radiation Dose and Temporal Delay on Host-Microbiome Relationship and Fecal Metagenomics (MHSRS-24-10880)

Presentation Author: Mr. Nabarun Chakraborty

#1606 | Cross-Species Conserved Circulating miRNA Biomarkers to Diagnose Irradiation and Determine the Time Since Irradiation (MHSRS-24-10885)

Presentation Author: Mr. Nabarun Chakraborty

#1607 | HOPO 14-1: A Clinical-Stage, Orally Available Decorporation Agent as a Medical Countermeasure Against Internal Radionuclide Contamination (MHSRS-24-10934)

Presentation Author: Dr. Julian Rees

#1608 | FSL-1: A Promising Prophylactic Countermeasure in the AFRRI Murine H-ARS Mouse Model (MHSRS-24-11017)

Presentation Author: Dr. Venkateshwara Rao Dronamraju

#1609 | Development of a Bone-Marrow-on-a-Chip Model to Study Radiation Exposure Sequelae (MHSRS-24-11072)

Presentation Author: Dr. Nicholas Chartrain

#1610 | Development of Gamma-Tocotrienol as a Countermeasure for Acute Radiation Syndrome: Radioprotective Efficacy and Biomarker Identification Using Nonhuman Primate Model for Approval Following the Animal Rule (MHSRS-24-11108)

Presentation Author: Dr. Vijay Singh

#1611 | Development of RadioDefender as a Prophylactic Medical Countermeasure for Hematopoietic Acute Radiation Syndrome (MHSRS-24-11154)

Presentation Author: Dr. Xu Li

#1612 | Development and Characterization of a Novel Three-Dimensional Ex Vivo Model of Radiation-Induced Microvascular Injury (MHSRS-24-11295)

Presentation Author: Dr. Jennifer McDaniel

#1613 | Ketone Ester, (R)-3-Hydroxybutyl (R)-3-hydroxybutyrate as a Prophylactic Medical Countermeasure to Non-Lethal Mixed-Field Neutron-Induced Neurocognitive Deficits Impacting Medical Readiness (MHSRS-24-11322)

Presentation Author: Dr. Alexandra Miller

#1614 | Development and Evaluation of an Orally Available Prophylactic Medical Countermeasure for Acute Radiation Syndrome (MHSRS-24-11342)

Presentation Author: Dr. Michael Kaytor

#1615 | Development of a Porcine Cutaneous Radiation Injury Model and the Promising Countermeasure NEPE14 (MHSRS-24-11479)

Presentation Author: Dr. Gregory Holmes-Hampton

#1616 | Advanced Simulation of Nuclear Event Scenarios in the Zaporizhzhia Nuclear Power Plant During the Ukraine Conflict: Implications for Health Security and NATO Response (MHSRS-24-11617)

Presentation Author: Dr. Mehdi Benhassine

#1617 | Identification of a Potential Decorporation Agent for Depleted Uranium Toxicity (MHSRS-24-11682)

Presentation Author: Ms. Vernieda Vergara

#1618 | Development of 5-AED Formulation by Self-Emulsifying Drug Delivery Systems for Acute Radiation Syndrome Prevention (MHSRS-24-11714)

Presentation Author: Dr. Ling Ding

#1619 | Triage of Polytrauma Patients in a Radiation/Nuclear Event Using Hematology and Protein Diagnostics (MHSRS-24-11840)

Presentation Author: Dr. Richard Kowalski

#1620 | Advanced Development of Radiological and Nuclear Medical Countermeasures at the Biomedical Advanced Research and Development Authority (BARDA) (MHSRS-24-12014)

Presentation Author: Dr. Julie Bergmann

#1621 | A Threat Agnostic Approach to Treating Injuries with Host Directed Therapeutics (MHSRS-24-12023)

Presentation Author: Dr. Julie Bergmann

#1622 | A Novel Radiomitigating Medical Countermeasure Against Acute High Dose Ionizing Radiation Exposure Using a Designer Cerium Oxide Nanozyme and P7C3 (MHSRS-24-12166)

Presentation Author: Dr. Fei Wei

#1623 | Enhanced Mitochondrial ROS Production May Lead to Musculoskeletal Disintegration in Ionizing Radiation-Exposed Veterans and Possibly Active-Duty Military (MHSRS-24-12188)

Presentation Author: Dr. Ha-Neui Kim

#1624 | Pharmacokinetics and Bone Marrow Accumulation of Captopril for the Prevention of Acute Radiation Syndrome (ARS) (MHSRS-24-12330)

Presentation Author: Dr. Sandeep K. Singh

#1625 | The Temporal Flux in Microbiome Diversity Post-Acute Radiation Exposure: Gut Dysbiosis Prior to Injury Enhances Morbidity and Mortality (MHSRS-24-12515)

Presentation Author: Mr. Gilbert Pratt III

#1700 | Developing a Plasma Protein Signature for Rats Exposed to Acute Radiation or Hemorrhage (MHSRS-24-12889)

Presentation Author: Mr. Isaac Abaasah

#1701 | A Prototype Wearable Device for Remote Monitoring of Combined Chemical, Biological, Radiological, and Nuclear Exposure with Traumatic Injury in the Austere Battlefield (MHSRS-24-12920)

Presentation Author: Ms. Tara Hendry-Hofer

#1702 | Rapid Point-of-Care Analysis of Whole Blood After Exposure to Blast and Radiation (MHSRS-24-13036)

Presentation Author: Ms. Jemima McCluskey-Johnson

#1703 | Predicting Susceptibility to Radiation Health Effects in Combination with Gravity and Hyperbaric Alterations in Miniature Swine and Rodent Models (MHSRS-24-13231)

Presentation Author: Mrs. Holly Chapapas

#1704 | Advancing Military Preparedness in Nuclear Security Events: A Multiphysics and Machine Learning-Driven Approach to Internal Dose Assessment in Operational Scenarios (MHSRS-24-13245)

Presentation Author: Dr. Shaheen Dewji

#1705 | Addressing the Impact of Chest Wall Thickness on In Vivo Radionuclide Assay Accuracy in Military Populations (MHSRS-24-13336)

Presentation Author: Dr. Shaheen Dewji

#1706 | A Focused Screen Identifies Essential Genes Enabling Increased Expansion in Hematopoietic Stem Cells to Generate Human Neutrophils (MHSRS-24-13366)

Presentation Author: Dr. Michael Mansour

#1707 | Optimized Hematopoietic Stem Cell Source for the Ex Vivo Production of Mature Human Neutrophils as a Potential Cell-Based Therapy for Neutropenia (MHSRS-24-13386)

Presentation Author: Dr. Michael Mansour

DIRECTED ENERGY HEALTH EFFECTS RESEARCH FOR THE WARFIGHTER

#1708 | Retinal Dose Response from Exposure to the Supercontinuum Generated by a NIR Femtosecond Laser (MHSRS-24-11010)

Presentation Author: Dr. Emily Boice

#1709 | Spatio-Temporal Localization of High Frequency Pulses for Diagnostics of Directed Energy Effects (MHSRS-24-11038)

Presentation Author: Dr. Daniel van der Weide

#1710 | Superficially Penetrating Radio Frequency Health Effects (MHSRS-24-11478)

Presentation Author: Dr. Jeffrey Whitmore

#1711 | Investigation of Effects from Suprathreshold Near-Infrared Laser Exposures to Skin on Anatomical and Physiological Parameters in a Swine Model (MHSRS-24-12010)

Presentation Author: Mr. Pete Sprenger

#1712 | Comparison of Thermal Contact and 1070 nm Laser Burns in Human Tissue Surrogates (MHSRS-24-12013)

Presentation Author: Mr. Pete Sprenger

#1713 | Effects of Photobiomodulation in an Ex Vivo Model of Laser-Induced Ocular Damage (MHSRS-24-12555)

Presentation Author: Dr. Annette Rodriguez

#1714 | Unveiling the Spectrum of Challenges: Health Implications and Injury Patterns in the Era of Directed Energy Weapons (MHSRS-24-12648)

Presentation Author: MAJ Paul Dhillon

#1715 | Validation of Laser Dazzle Effects in a Virtual Reality Environment (MHSRS-24-12863)

Presentation Author: Dr. Julie Lovell

#1716 | Biomedical Effects, Management, and Diagnosis of High Power Microwave Overexposure (MHSRS-24-13265)
Presentation Author: Dr. Bianca Cerqueira

CURRENT CHALLENGES IN DOD AEROSPACE MEDICINE

#1717 | Activated Apoptosis and Inhibited Cell Migration: Molecular Etiology Behind Spaceflight-Induced Impediment of Rodent Bone Fracture Repair (MHSRS-24-10881)
Presentation Author: Mr. Nabarun Chakraborty

#1718 | Difference of Cardiac Responses Between the Pass and Fail Groups During the High G Training (MHSRS-24-11195)
Presentation Author: Lt Col Chung-Yu Lai

#1719 | Factors That Influence Pilot Healthcare Avoidance and Fitness for Duty: Applying Lessons from Civilian Trainee Pilots to Meet the Mental Health Needs of Military Pilot Trainees (MHSRS-24-11636)
Presentation Author: CAPT William Hoffman

#1720 | Vection Measured During the 2023 Military Health Service Research Symposium (MHSRS) Using a Virtual Reality (VR) Display (MHSRS-24-11809)
Presentation Author: Dr. Leonard Temme

#1721 | CBDP (2-(2-cresyl)-4H-1,3,2-benzodioxaphosphorin-2-oxide) in the Context of the Aerotoxic Syndrome - Determination of the Inhibition Kinetics of Acetylcholinesterase and Butyrylcholinesterase from Various Species In Vitro (MHSRS-24-11836)
Presentation Author: Dr. Gabriele Horn

#1722 | Effects of Mild Continuous Normobaric Hypoxia and High Cognitive Load on Autonomic Nervous System Function in Military Aircrew (MHSRS-24-12027)
Presentation Author: Mr. Harrison Wittels

#1723 | Autonomic Nervous System Response While Executing Specific Aviation Combat Drills (MHSRS-24-12347)
Presentation Author: Mr. Harrison Wittels

#1724 | Core Body Temperature Elevation in Army Aviators During In-Flight Combat Exercise Training (MHSRS-24-12411)
Presentation Author: Mr. Harrison Wittels

#1725 | Respiratory and Subjective Adaptation to a Suboptimal Flight Mask by Naïve Users (MHSRS-24-12118)
Presentation Author: Dr. Frank Robinson

#1800 | Wound Healing-Relevant Gene Expression Changes in Response to Spaceflight (MHSRS-24-12233)
Presentation Author: Ms. Allison Hoke

#1801 | Restoration and Maintenance of Physical and Neurosensory Performance in Naval Aviation (MHSRS-24-12331)
Presentation Author: Mr. Trevor Kingsbury

#1802 | Assessing Dynamic Visual Acuity Across Career Phases and Military Occupational Specialties in Naval Aviation (MHSRS-24-12372)
Presentation Author: Mr. Trevor Kingsbury

#1803 | Optimizing Human Performance in Military Operational Environments: Maintaining Hydration and Improving Bladder Relief & Waste Management Solutions in PPE and CBRN Ensembles (MHSRS-24-12467)
Presentation Author: Dr. Kelly VandenBossche

#1804 | Carbon Dioxide and Acute Cognitive Impairment: Effects on Complex Task Performance in a Randomized Crossover Trial (MHSRS-24-12541)
Presentation Author: Dr. Frederic Lu

#1805 | Quantifying the Impact of Sustained Acceleration of U.S. Air Force Critical Care Air Transport Team Medical Equipment (MHSRS-24-12604)
Presentation Author: MAJ Craig Nowadly

#1806 | Development of a U.S. Army Aircrew Spine-Conditioning and Resiliency Program (ASCRP) for Military Rotary-Wing Populations (MHSRS-24-13100)
Presentation Author: Dr. Adrienne Madison

#1807 | Assessing History of Self-Reported Low Back Pain and Healthcare Seeking Behaviors in Military Aircrew: Preliminary Findings (MHSRS-24-13196)
Presentation Author: Ms. Amelia Barrett

#1808 | Exploring the Feasibility of Accessible Spatial Disorientation Training with an Integrated Vestibular-Visual Simulated Environment (MHSRS-24-13310)
Presentation Author: Dr. Joseph Cohn

UNDERSEA OPERATIONAL RESEARCH PANEL

#1809 | Dragon Breath: Oxygen Closed-Circuit Rebreather with Regenerable Scrubber and Torso Heating Capability (MHSRS-24-10929)
Presentation Author: Mr. Evan Jacque

#1810 | Point of Care Ultrasound for Swimming Induced Pulmonary Edema in Special Operations Trainees (MHSRS-24-11709)
Presentation Author: Capt John Henry L. Dean

#1811 | Genomic and Proteomic Immune Responses Associated with Normobaric Hypercapnic-Hyperoxia in Navy Divers (MHSRS-24-12040)
Presentation Author: Lt Dylan Holly

#1812 | Exploring Connections Between Acute Illnesses and Contaminated Water Diving (2016 to 2022) (MHSRS-24-12290)
Presentation Author: Dr. Brian Maguire

#1813 | Evaluating Immunological and Hormonal Changes During Submariner Deployment (MHSRS-24-12605)
Presentation Author: LCDR Neal McNeal

#1814 | Pilot Study to Induce Tunnel Vision in a Visuospatial Localization Task (MHSRS-24-12664)
Presentation Author: Lt Jennifer Louie

#1815 | Follow-Up Analysis of Breath Based Volatile Organic Compounds for Prediction of Pulmonary Oxygen Toxicity in Divers (MHSRS-24-13035)
Presentation Author: Dr. Alan Metelko

#1816 | Development of a Dive Optimized Localizing fNIRS (DOLFN) Device to Monitor the Neurocognitive Performance in Navy Divers at Depth (MHSRS-24-13240)
Presentation Author: Dr. Joel Cooper

NOVEL TREATMENTS, STRATEGIES AND TECHNOLOGIES IN HEARING AND BALANCE HEALTH

#1817 | Therapeutic Levels of Stochastic Vestibular Stimulation (SVS) from VIPES Device Yields Improvements in Postural Sway and Gait Function in Patients with Vestibular Dysfunction Reporting Moderate to Severe Symptoms in Randomized Pilot Trial (MHSRS-24-10952)
Presentation Author: Mr. Josh Colls

#1818 | Randomized Controlled Trial Demonstrating How Timing of Physical Therapy Influences Outcomes in People with Subacute mild Traumatic Brain Injury (MHSRS-24-11031)
Presentation Author: Dr. Laurie King

#1819 | Exploring Gait Disparities in mild Traumatic Brain Injury Inside and Outside the Laboratory (MHSRS-24-11185)
Presentation Author: Dr. Laurie King

#1820 | Use of Real-Time Ambient Noise Monitoring in Conjunction with the Automated Method for Testing Auditory Sensitivity (AMTAS) in the LIMBIC-CENC Multicenter Study (MHSRS-24-11277)
Presentation Author: Mr. Andrew Hwang

#1821 | VestAid: Tools for Vestibular Rehabilitation and Assessment (MHSRS-24-11343)
Presentation Author: Dr. Pedram Hovareshti

#1822 | Practical Considerations and Usability of Praxis, a Portable Mixed-Reality Platform for Multisensory Rehabilitation to Inform Return-to-Duty (RTD) Decision Making After mild Traumatic Brain Injury (mTBI) (MHSRS-24-11769)
Presentation Author: Dr. Pedram Hovareshti

#1823 | The Impact of PTSD on Tinnitus-Related Distress and Associated Neurobiological Correlates (MHSRS-24-11469)
Presentation Author: Dr. John Moring

#1824 | The Association of Post-Deployment Hearing and Balance Problems with Warfighter Readiness (MHSRS-24-11789)
Presentation Author: Dr. Andrew MacGregor

#1825 | Incidence and Risk Factors for Tinnitus Among Service Members in the Millennium Cohort Study (MHSRS-24-11903)
Presentation Author: Ms. Toni Rose Geronimo-Hara

#1900 | Improved Measurement of Light Delivery to the Cochlea Using a Trans-Tympanic Fiber-Based Approach (MHSRS-24-11976)
Presentation Author: Mr. Alejandro Ortega

#1901 | "Endoscopic Stylet" of Cochlear Implant for Intraoperative OCT Imaging During Cochlear Implantation (MHSRS-24-11991)

Presentation Author: Dr. Fang Hou

#1902 | Comparing Performance of a Dynamic Balance Task with a Visually Complex Environment Using a Virtual- or Augmented-Reality System (MHSRS-24-12032)

Presentation Author: Dr. Kerry Rosen

#1903 | Remote Assessment and Management of Patients with Dizziness Related to mild Traumatic Brain Injury (mTBI): Development of a Gamified Vestibular Rehabilitation Therapy (VRT) Application (APP) (MHSRS-24-12081)

Presentation Author: Dr. Courtney Hall

#1904 | Automatic Waveform Anomaly Realtime Detector (AWARD) to Improve Impulsive Noise Data Collection (MHSRS-24-12214)

Presentation Author: Dr. Elizabeth Brokaw

#1905 | Blast-Induced Auditory Injury in Rat and Ovine Models: Shock Tube Device (MHSRS-24-12349)

Presentation Author: Dr. Ricardo Mejia

#1906 | Long-Term Effects of mild Traumatic Brain Injury on Postural, Vestibular, and Oculomotor Function Detectable by Novel Virtual Reality Technology Applications (MHSRS-24-12531)

Presentation Author: Dr. WG Wright

#1907 | Assessing Photobiomodulation Therapy for Noise-Induced Hearing Loss in a Mouse Model (MHSRS-24-13064)

Presentation Author: Ms. Lillian Wang

#1908 | Development of an Intensimetric Probe for Wideband Immittance and Otoacoustic Emission Testing (MHSRS-24-13101)

Presentation Author: Dr. Gabrielle Merchant

#1909 | Development of Protective Strategies for the Auditory System Using an Innovative Frequency-Based Approach (MHSRS-24-13199)

Presentation Author: Mr. Santino Cozza

#1910 | Differences in Baseline Symptom and Mobility Measures in Military and Civilian Individuals with mild TBI (MHSRS-24-13466)

Presentation Author: Dr. Margaret Weightman

OCULAR OPTIMIZATION: BEFORE AND AFTER INJURY

#1911 | Development of a Novel 3D Printed Simulator for Practical Training of the Retrobulbar Block (MHSRS-24-10894)

Presentation Author: MAJ Remigio Flor

#1912 | Behavioral Health Status After Eye Globe Removal in Service Members, U.S. Armed Forces (MHSRS-24-11208)

Presentation Author: Dr. Haana McMurray

#1913 | A Lateral Flow Assay to Diagnose Open Globe Injury (MHSRS-24-11171)

Presentation Author: Mrs. Lauren Costella

#1914 | Novel Concepts of Management in Ocular and Orbital Trauma: Ophthalmic Zones of Care (ZOCs) (MHSRS-24-10978)

Presentation Author: CPT Ian Lee

#1915 | Nontraumatic Rhegmatogenous Retinal Detachment Incidence and Association with Refractive Error in United States Service Members (MHSRS-24-11216)

Presentation Author: CPT Ian Lee

#1916 | An Enhanced Regenerative Therapy for the Treatment of Corneal Injuries (MHSRS-24-11524)

Presentation Author: Dr. Jun Wang

#1917 | Pirfenidone Inhibits Epithelial Mesenchymal Transition and Modulates Growth Factor/Cytokine Secretion in Induced Pluripotent Stem Cell-Derived Retinal Pigment Epithelium During Wound Healing (MHSRS-24-11785)

Presentation Author: Dr. Annette Rodriguez

#1918 | Computer-Assisted Detection of Retinal Tears Using Machine Learning Algorithms (MHSRS-24-11787)

Presentation Author: Dr. Heuy-Ching Wang

#1919 | Epidemiology of Systemic Autoimmune Disease in U.S. Service Members with Non-Infectious Uveitis (MHSRS-24-12568)

Presentation Author: CPT Amia Green

#1920 | Exploring the Impact of Traumatic Brain Injury on Ocular Symptomatology and Visual Photosensitivity (MHSRS-24-12612)

Presentation Author: Dr. Mariela Aguilar

#1921 | Comparing Visual Outcomes of SMILE, PRK, and LASIK Procedures in the Military Population (MHSRS-24-12740)

Presentation Author: MAJ Toan Trinh

#1922 | Every Last Drop: A Quality Intervention to Reduce Proparacaine Waste in a Military Training Facility Emergency Department (MHSRS-24-12927)
Presentation Author: CAPT William Coburn

#1923 | A Steroid and Antibiotic Eluting Contact Lens (MHSRS-24-12839)
Presentation Author: Dr. Nikolay Boychev

EXPERIMENTATION – BEYOND THE BENCH

#1924 | Assessing the Impact of Telemedical Network Threats (MHSRS-24-12447)
Presentation Author: Dr. James McEachen

#1925 | Association of Nontechnical Skills and Cognitive Load with Technical Performance During Simulated En Route Critical Care Missions (MHSRS-24-12193)
Presentation Author: MAJ William Davis

FROM THEORY TO PRACTICE: TRANSITIONING S&T FINDINGS INTO ACTIONABLE KNOWLEDGE

#2000 | Quantifying the Potential Oxygen Saved During Critical Care Air Transport with Implementation of Targeted Normoxemia Practice Guidelines (MHSRS-24-11520)
Presentation Author: MAJ William Davis

#2001 | Transitioning from Research: Using Determinants to Improve the Implementation of Hearing Protector Fit Testing in the Department of Defense (MHSRS-24-10871)
Presentation Author: Mrs. Sara Murphy

#2002 | Reevaluation of Disaster Core Competencies: Updates for a New Decade (MHSRS-24-10914)
Presentation Author: Ms. Norma Quintanilla

#2003 | Measuring Trust in Automation in Aeromedical Settings: A Systematic Literature Review (MHSRS-24-10921)
Presentation Author: Dr. Bethany Raney

#2004 | Assessing the Efficacy of Pre-Deployment Training in the Development and Sustainment of Operationally Relevant Medical Skills – A Survey Study (MHSRS-24-10998)
Presentation Author: Dr. Melissa Clemons

#2005 | Delphi Panel Study for an Educational Website About Vascularized Composite Allograft Donation for the U.S. Public (MHSRS-24-11027)
Presentation Author: Mr. Max Downey

#2006 | Optimizing Triage Team Training: JESSA Role 2 – Dynamic Role-play for Forward Surgical Teams (MHSRS-24-11167)
Presentation Author: COL Bruno de la Villeon

#2007 | Expanding Case Management Surge Capabilities of the Military Health System (MHS) (MHSRS-24-11314)
Presentation Author: Dr. Emily Post

#2008 | The Impact of Reserve Components Mobilizations in Support of Large-Scale Combat Operations on Domestic Healthcare Staffing (MHSRS-24-11392)
Presentation Author: Ms. Alison Ng

#2009 | Testing Real World Scenarios When Standard Operating Procedures Don't Exist (MHSRS-24-11396)
Presentation Author: Mr. Richard Bergs

#2010 | Establishing a Rapid Research Response System for Medical Countermeasure Development Through the Chemical and Biological Defense Program (MHSRS-24-11402)
Presentation Author: Mr. AC Camacho

#2011 | Exploratory Uses of the Battlefield Assisted Trauma Distribution Observation Kit (BATDOK) Application in En Route Care: It Is Not Simply for Documentation! (MHSRS-24-11571)
Presentation Author: Mr. Christopher Bennett

#2012 | Improving Health Care Access and Engagement for Veterans and Service Members with TBI Morbidity (IHEAL): A CDMRP Focused Program Award Implementation Science Grant (MHSRS-24-11784)
Presentation Author: Dr. Risa Nakase-Richardson

#2013 | Computed Tomography of the Abdomen and Pelvis (CTAP) Ordering in the Emergency Department: A Prospective Analysis (MHSRS-24-11808)
Presentation Author: CPT Michael Gianelle

#2014 | Bridging the Gap: Lessons Learned to Optimize Evidence to Practice for the Management of Concussion (MHSRS-24-12045)
Presentation Author: Dr. Seth Kiser

#2015 | Strat-S&T Engine – A Prioritization Capability to Modernize the Navy's Expeditionary Medical Systems (MHSRS-24-12080)
Presentation Author: Mr. Michael Obringer

#2016 | The Critical Role the Army Acquisition Process Played in Guiding the Development, Validation, and Implementation of an FDA-Cleared Blood Test for Concussion (MHSRS-24-12203)
Presentation Author: Dr. Deborah Shear

Poster Session 1

#2017 | Building a Medical Technology Development Ecosystem That Reduces Risk and Accelerates Technology Maturation into Marketable Products for Military Use: The MTEC Provides That Integration of Information, Services and Maintenance of the Ecosystem (MHSRS-24-12248)

Presentation Author: Dr. Lauren Palestrini

#2018 | Improving Access to Care for Service Members and Veterans with Traumatic Brain Injury Using a Partner-Engaged Human Centered Design Approach: A CDMRP Focused Program Award Implementation Science Grant (MHSRS-24-12611)

Presentation Author: Dr. Jolie Haun

#2019 | Creation of an Integrated Practice Unit Assessment Tool for the Military Health System (MHSRS-24-12672)

Presentation Author: Dr. Cathaleen Madsen

#2020 | Exoskeleton Boots: A Model for Accelerating How Science and Technology Drives Innovation and Growth in the DoD (MHSRS-24-13051)

Presentation Author: Mr. Mark Roser

#2021 | Healthcare Failure Modes and Effects Analysis as a Design Needs Assessment Tool for Respiratory Protection: Powered Air Purifying Faceshield (MHSRS-24-13146)

Presentation Author: Dr. Bethany Lowndes

#2022 | Engaging Family Members, Veterans and Service Members with Experience of Traumatic Brain Injury (TBI) in Research: Strategies from the Improving Health Care Access and Engagement for Veterans and Service Members with TBI Morbidity (IHEAL) Program Award (MHSRS-24-13225)

Presentation Author: Dr. Megan Moore

#2023 | Implementing OMOP/OHDSI Frameworks in Military Health Systems: Advancing Data Privacy, Research Scalability, and Real-Time Analytics (MHSRS-24-13428)

Presentation Author: Dr. Atif Adam

BRAIN IMPACT OF SUB-CONCUSSIVE BLAST EXPOSURE IN MILITARY SERVICE MEMBERS: IMPLICATIONS FOR PREVENTION AND HEALTH

#2024 | Blast Overpressure (BOP) Tool Protects Service Members from Blast Exposure During Training with Heavy Weapons (MHSRS-24-12670)

Presentation Author: Dr. Raj Gupta

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Poster Session 2

Tuesday, 27 August
1530 - 1730



MHS Military Health System
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Poster Session 2

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TBI Management: Epidemiology and Down Range Management	100	500-700
Brain Impact of Sub-concussive Blast Exposure in Military Service Members: Implications for Prevention and Health	102	700-800
Advances in Blast Polytrauma: Implications to Warfighter Function and Combat Casualty Care	104	800-900
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Presentation Author: Dr. Jennifer Perusini

#103 | Subject-Specific Analysis of Longitudinal White Matter Abnormalities in Sport-Related Concussion (MHSRS-24-11030)
Presentation Author: Dr. Ho-Ching Yang

#105 | A Comprehensive Panel of Regional Neuroelectric Measures: A TEAM-TBI/CamCAN Study (MHSRS-24-11046)
Presentation Author: Mr. Don Krieger

#107 | Ocular Motor Function and Related Brain Metrics in Military Veterans with Extended History of mild Traumatic Brain Injury: Work-in-Progress Report (MHSRS-24-11127)
Presentation Author: Dr. Jeffrey Hebert

#109 | Association of Selected Pupillometry Parameters and the Time of Return to Unrestricted Activity After mild Traumatic Brain Injury (mTBI) in United States Military Academy Cadets: A Military Traumatic Brain Injury Initiative (MTBI2) Study (MHSRS-24-11525)
Presentation Author: Lt Col Bradley Dengler

#111 | Development and Validation of a Survival Curve for Blunt Impact Traumatic Brain Injury (TBI) in Rats (MHSRS-24-11628)
Presentation Author: Dr. YungChia Chen

#113 | The Use of a Novel Deep Neural Network-Based EEG Biomarker Supports the IGF2 Receptor as a Target for TBI Therapeutic Development (MHSRS-24-11665)
Presentation Author: Dr. Jeffrey Burgdorf

#115 | Tissue-Specific Phospho-Proteome Alterations Post-Blast Exposure Utilizing a Ferret Animal Model (MHSRS-24-11674)
Presentation Author: Dr. Lily Neff

#117 | Longitudinal Changes in Oculomotor Function and Brain Activity in Active Duty Military Personnel with mild Traumatic Brain Injury (MHSRS-24-11690)
Presentation Author: Dr. Mark Ettenhofer

#119 | MR Brain Findings in 333 CSI Study Participants (MHSRS-24-11817)
Presentation Author: Dr. Ryan Beck

#121 | Identifying Robust Objective mTBI Neuromarkers Measured Across Time, Location, and Devices within Active-Duty Service Members (MHSRS-24-11857)
Presentation Author: Dr. Weimin Zheng

#123 | Non-Invasive Monitoring of Intracranial Pressure (ICP) Through Shape Analysis of the Peripapillary Retinal Pigment Epithelium (ppRPE) Layer (MHSRS-24-11884)
Presentation Author: Dr. Pengfei Dong

#125 | Impact of Post-Processing Data Analysis with the DX100 Eye-Tracking System (MHSRS-24-11968)
Presentation Author: Dr. John King

#200 | A Human Brain Organoid Platform for Traumatic Brain Injury (MHSRS-24-11992)
Presentation Author: Dr. Ester Kwon

#201 | HitCheck Air Force – Concussion Assessment Mobile App (MHSRS-24-12019)
Presentation Author: Mr. Dayne DuVall

#202 | Comparing Health Domains Between Former Professional Football Players and Matched Controls (MHSRS-24-12031)
Presentation Author: Mrs. Allison Borrasso

#203 | Network-Based Statistic and Connectome-Based Predictive Modeling for Structural Connectome and Neurobehavioral Relationships in Military Service Members with mild Traumatic Brain Injury (MHSRS-24-12052)
Presentation Author: Dr. Ping-Hong Yeh

#204 | Platform for Automated Detection of Circulating and Exosomal miRNAs (MHSRS-24-12138)
Presentation Author: Dr. Lap Man Lee

#205 | Automated and Multiplexed Platform for Serum TBI Circulating miRNAs (MHSRS-24-12222)
Presentation Author: Dr. Judy Obliosca

#206 | Establishing an Extracellular Vesicle-Based Laboratory Platform for Traumatic Brain Injury Specific Biomarker Discovery: An MTBI2 Presentation (MHSRS-24-12302)
Presentation Author: Dr. Chen Lai

#207 | Head Kinematics and Protein Release in Large Animal Models of mild to moderate Traumatic Brain Injury (MHSRS-24-12324)
Presentation Author: Dr. Andy Mayer

#208 | A Collaborative Laboratory Platform Provides Biorepository Management and Multidimensional Biomarker Analysis for Brain Injury Research: An MTBI2 Presentation (MHSRS-24-12339)
Presentation Author: Mr. Yifan He

#209 | Effect of Prophylactic Administration of Metformin in Moderate Traumatic Brain Injury in a Swine (*Sus scrofa*) Model (MHSRS-24-12370)
Presentation Author: Dr. Madelaine Paredes

#210 | Transcriptomic Profiles in Blast-Trauma Exposed iPSC-Derived Cerebral Organoids Recapitulate Animal Models (MHSRS-24-12420)

Presentation Author: Capt Cougar Jimenez Jaramillo

#211 | Evaluating the Feasibility of Assessing Longitudinal Microstructural Changes in mild Traumatic Brain Injury with Mean Apparent Propagator MRI (MHSRS-24-12443)

Presentation Author: Dr. Mihika Gangoli

#212 | A Mixture of Probability Distributions Approach for Data-Driven Discovery of Putative Injury and Outcome Groupings in Traumatic Brain Injury (MHSRS-24-12453)

Presentation Author: Dr. Alan Kaplan

#213 | Toward Developing Methods to Study Blast Injury with Organoids (MHSRS-24-12560)

Presentation Author: Dr. Andrea Timm

#214 | Injuries in Fatalities of Blast: Identification of Mechanisms of Head Injury (MHSRS-24-12653)

Presentation Author: Lt Emily Ashworth

#215 | Differentiating Acute mild TBI from Orthopaedic-Injured Controls Using a Multidomain Assessment Battery: A NEXUS (NeuroImmunoEndocrine Interface: Exploring a Unifying Axis for Studying Precision Care in Psychological Health and TBI) Study (MHSRS-24-12734)

Presentation Author: Dr. Aaron Zynda

#216 | Assessing the Utility of the Vestibular/Ocular-Motor Screening (VOMS) Tool Longitudinal Chronic TBI Outcome Measures: An MTBI Study (MHSRS-24-12780)

Presentation Author: Dr. Dominic Nathan

#217 | Is Apolipoprotein E Associated with Chronic TBI symptoms? Implications for Personalized Medicine and Screening: An mTBI Study (MHSRS-24-12793)

Presentation Author: Dr. Dominic Nathan

#218 | Interleukin-1 Receptor-1 Signaling Mediates Neuroinflammation, Neuronal Dysfunction, and Cognitive Decline After Diffuse Traumatic Brain Injury (MHSRS-24-12783)

Presentation Author: Dr. Jonathan Godbout

#219 | WAVEFRONT, a Noninvasive Approach for Automated Detection and Parameter Estimation of Spreading Depolarizations to Determine Worsening Brain Condition in Brain Injury Patients Using Scalp EEG (MHSRS-24-12816)

Presentation Author: Dr. Alireza Chaman Zar

#220 | Acute Proteome Changes in the Brain and Plasma of Ferrets After Blast Exposure (MHSRS-24-12861)

Presentation Author: Dr. James DeMar

#221 | Feasibility Assessment of Rapid Response EEG in the Identification of Nonconvulsive Seizures During Military Medical Air Transport (MHSRS-24-12884)

Presentation Author: Capt Joshua Luster

#222 | Strategies to Augment Ketosis in mild Traumatic Brain Injury – Targeted mTBI Biomarkers (MHSRS-24-13012)

Presentation Author: Dr. Jeremy McAdam

#223 | Kinetic Characterization of Serum Biomarkers in Blunt Impact and Penetrating Traumatic Brain Injury in Rat Injury Models (MHSRS-24-13016)

Presentation Author: CPT Robert Bruce

#224 | Neuro-QSP Based Quantification of Dose-Reaction-Response to TBI for Noninvasive Diagnostics (MHSRS-24-13047)

Presentation Author: Dr. Teja Garimella

#225 | Extraction Technique for Retrieving Connected Skull-Brain Samples for Ex Vivo Mechanical Analysis (MHSRS-24-13049)

Presentation Author: Dr. Corinne Henak

#300 | Mild Fluid Percussion Injury Induces Motor Cortex Alteration and Motor Behavior Deficits in Rats (MHSRS-24-13060)

Presentation Author: Dr. Ying Li

#301 | Predictive Blood Biomarkers of Targeted Treatment Response for Chronic Sleep Sequelae Secondary to Blast-Related Traumatic Brain Injury (MHSRS-24-13066)

Presentation Author: Dr. Shawn Eagle

#302 | Head Sensor System for Determining the Acceleration Field of Occupants in a Fuselage Drop Test (MHSRS-24-13068)

Presentation Author: Mr. Yang Wan

#303 | Increased Brain Phosphatidylethanolamine Levels Following Traumatic Brain Injury (MHSRS-24-13121)

Presentation Author: Ms. Gracie James

#304 | Brain Magnetic Resonance Elastography (MRE) Implemented in a High-Performance Gradient System for Development of an Anthropomorphic TBI Model Towards Establishment of Non-Invasive Diagnostic Biomarkers (MHSRS-24-13297)

Presentation Author: Ms. Emily Long

#305 | Axonal Diameter Mapping (ADM) as a Biomarker for mTBI as Detected by High-Bvalue Diffusion Weighted Imaging (DWI) in a High Performance Head-Only Gradient System, MAGNUS (MHSRS-24-13331)

Presentation Author: Dr. Herman Morris

#306 | Sharing Clinically Relevant TBI Research Results with Active-Duty Special Operations Forces Personnel: Toward an Ethical Framework for Responsible Disclosure (MHSRS-24-13356)
Presentation Author: Dr. Michael Young

#307 | Towards Improved Diagnosis of mTBI at the Military Frontlines: Measuring Brain Function with Blink-Related Brainwaves Using Garment Electrodes (MHSRS-24-13377)
Presentation Author: Dr. Careesa Liu

#308 | Acute Stress-Sensitive Blood-Based Inflammatory Biomarkers in Patients with mild Traumatic Brain Injury (mTBI): A NEXUS (NeuroImmunoEndocrine Interface: Exploring a Unifying Axis for Studying Precision Care in Psychological Health and TBI) Study (MHSRS-24-13507)
Presentation Author: Dr. David Barton

#309 | Early Life Adversity as a Pre-Injury Risk Factor Contributing to TBI Induced Neurobehavioral Outcomes in Mice: A Role for Microglia? (MHSRS-24-13550)
Presentation Author: Dr. Kathryn Lenz

#310 | Characterizing Acute Infections and Their Associations with Injury Severity, Hospital Course and Seizure Risk After Moderate-to-Severe TBI (MHSRS-24-13561)
Presentation Author: Dr. Amy Wagner

#311 | Factors Associated with Psychological Health Symptoms Following Acute mTBI: A NEXUS (NeuroImmunoEndocrine Interface: Exploring a Unifying Axis for Studying Precision Care in Psychological Health and TBI) Study (MHSRS-24-13193)
Presentation Author: Dr. Anthony Kontos

#312 | Risk Factors for Mental Health Symptoms in Military Service Academy Cadets and Midshipmen: Preliminary Evidence (MHSRS-24-12039)
Presentation Author: Dr. Franchesca Scott

#313 | Predicting Self-Report Sleep Scores Using Diffusion Tensor Imaging (DTI) Metrics After mild Traumatic Brain Injury (mTBI) (MHSRS-24-13293)
Presentation Author: Mrs. Melissa Reich-Fuehrer

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Presentation Author: Mrs. Melissa Reich-Fuehrer

#315 | Effects of Sleep Extension on Cognitive Performance in Military-Aged Adults: A Systematic Review (MHSRS-24-10828)
Presentation Author: CPT Talia Barrow

#316 | Sodium Pyruvate: A Substrate with the Potential to Treat Serotonin Deficiency Related Depressive Mood Disorders Secondary to Traumatic Brain Injuries (MHSRS-24-10844)
Presentation Author: Dr. Pushpa Sharma

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Presentation Author: Dr. Max Smith

#318 | Exploratory Factor Analysis of Cognitive Performance Metrics in the U.S. Military (MHSRS-24-11174)
Presentation Author: Dr. Anna Oppenheimer

#319 | Electrochemical Sensor for Neurotransmitter Detection in a Pilot Breathing Mask (MHSRS-24-11176)
Presentation Author: Dr. Victoria Coyle

#320 | The Effectiveness of Intensive Outpatient Program at Eglin Intrepid Spirit Center Documented by One Service Member Subjective Response, Intake Forms and Quantitative EEG Brain Mapping – A Case Report (MHSRS-24-11217)
Presentation Author: Dr. Jaroslaw Lucas Koberda

#321 | Rapid Impact of Integrative Therapies and Neurofeedback Documented Through Quantitative EEG – An Anomalous Health Incident Case Report at Eglin Intrepid Spirit Center (MHSRS-24-12440)
Presentation Author: Dr. Jaroslaw Lucas Koberda

#322 | A Service Member Facing Software Platform for Continuous Assessment and Optimization of Brain Health (MHSRS-24-11260)
Presentation Author: Dr. Leslie Saxon

#323 | A Novel Use of Microinteraction Ecological Momentary Assessment Using Smartwatch Technology After mild Traumatic Brain Injury in an Active Duty Service Member: A Case Report (MHSRS-24-11287)
Presentation Author: Dr. Katrina Monti

#324 | Self-Reported Pain Experience at Intake Predicts Sleep Efficiency and Duration in SOCOM Personnel Completing a Three-Week Intensive Evaluation and Treatment Program (IETP) Controlling for Impact of PTSD and Neurobehavioral Symptoms (MHSRS-24-11293)
Presentation Author: Dr. Roberto Sandoval

#325 | MindCap: Brief Smartphone-Based Objective Tests for Baseline Assessment and Longitudinal Continuous Monitoring of Cognitive Performance Across Multiple Domains (MHSRS-24-11297)

Presentation Author: Dr. Sridhar Ramakrishnan

#400 | Evolution of the CARE Consortium: Rationale, Methods and Status of the CARE-SALTOS Integrated Study (CSI) (MHSRS-24-11415)

Presentation Author: Dr. Thomas McAllister

#401 | Neurostimulation for Enhanced Alertness (MHSRS-24-11447)

Presentation Author: Mr. Rodman Tompkins

#402 | Explosive Ordnance Disposal Service Members with TBI Demonstrate Enhanced Music Skill Acquisition in Longitudinal Music Therapy Treatment (MHSRS-24-11467)

Presentation Author: Ms. Meire Palmer

#403 | ENDURE: Investigating the Effects of Acute Operational and Environmental Stressors on Executive Functioning and Decision-Making in Healthy Military Personnel (MHSRS-24-11610)

Presentation Author: Mr. Frank Schilder

#404 | Self-Assessment Measures Help Student Pilots to Gain Valuable Insights into Their Mental Performance (MHSRS-24-11737)

Presentation Author: Dr. John Gassaway

#405 | Reactive Visual Attention Performance: Test-Retest Reliability and Development-Aging Profile (MHSRS-24-11915)

Presentation Author: Dr. Jamshid Ghajar

#406 | A Wearable Multimodal Vital Sign Detection and Photobiomodulation Device for Early Brain Injury Treatment (MHSRS-24-11920)

Presentation Author: Mrs. Debbie Kantor

#407 | Fluid Intelligence as a Predictor of Working Memory in Virtual Reality (MHSRS-24-11982)

Presentation Author: Mr. Leandro Ledesma

#408 | The Neurogenesis Effects of Mindfulness-Based Interventions on the Hippocampal Regions: A Literature Review (MHSRS-24-11984)

Presentation Author: Mr. Isaac Montes

#409 | Development and Evaluation of the Cognitive Battery Data Dashboard: Interpreting Performance on Military-Relevant Tasks at a Glance (MHSRS-24-12192)

Presentation Author: Ms. Anna Jane Brown

#410 | Validation of Cognitive Enhancement Techniques (VoCET) for mild TBI: Cost Effectiveness Analysis (MHSRS-24-12262)

Presentation Author: Dr. Jessica Ryan

#411 | Facilitators and Barriers to PTSD Treatment for USASOC Personnel (MHSRS-24-12295)

Presentation Author: Dr. Amanda Garcia

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Presentation Author: Dr. Kris Martens

#413 | Oculometric Assessment of Brain Health and Operational Performance (MHSRS-24-12463)

Presentation Author: Dr. Dorion Liston

#414 | Simple Reaction Time Performance on ANAM UltraMobile and ANAM4-TBI-MIL (MHSRS-24-12505)

Presentation Author: Mr. Jacques Arrieux

#415 | Comparing User Experience on ANAM UltraMobile and ANAM4-TBI-MIL (MHSRS-24-12513)

Presentation Author: Mr. Jacques Arrieux

#416 | Assessment of Cognitive Workload During Virtual Reality Aviation Tasks Using EEG and Eye-Tracking Data (MHSRS-24-12509)

Presentation Author: Dr. Christine Beauchene

#417 | Cognitive Enhancement of Warfighters: A Single-Blind Examination of HD-tDCS on Operational Readiness and Perceptions (MHSRS-24-12523)

Presentation Author: Mr. John Hayes

#418 | Neuromodulation of the Default Mode Network to Optimize Sleep and Cognition (MHSRS-24-12550)

Presentation Author: COL William Killgore

#419 | Mapping Pathways to Recovery: Using a Program Logic Model to Characterize Implementation of a Residential Inpatient Program for Service Members and Veterans with mild TBI (MHSRS-24-12559)

Presentation Author: Dr. Jolie Haun

#420 | Exploring Salivary DNA Methylation Signatures with Machine Learning for Predicting Long-Term Exposure to Repetitive Blast Overpressure in Military Breachers and Snipers (MHSRS-24-12603)

Presentation Author: Dr. Jing Zhang

#421 | Neurostimulation for Performance Optimisation: Understanding the Effects of transcranial Direct Current Stimulation (tDCS) on Visual Search and Vigilance Performance (MHSRS-24-12646)
Presentation Author: Mr. Kieran Chillingsworth

#422 | The Effects of Individual Differences and transcranial Direct Current Stimulation (tDCS) on Aviation Task Performance (MHSRS-24-12663)
Presentation Author: Dr. Katie Feltman

#423 | Relating Subjective and Objective Measures of Cognitive Performance: Effects of Diagnosis and Comorbid Factors (MHSRS-24-12763)
Presentation Author: Ms. Kelly Marshall

#424 | Strategies to Augment Ketosis in mild Traumatic Brain Injury (STAK mTBI) – Ketone Dose-Response and Preliminary Cognitive Behavioral Analysis (MHSRS-24-12820)
Presentation Author: Dr. Toshiya Miyatsu

#425 | Association Between mild Traumatic Brain Injury History, Sleep Quality, and Mental Health in Cadets Following a Collegiate Career (MHSRS-24-13024)
Presentation Author: Mr. Adrian Boltz

#500 | Differential Strategic Approaches in Exploring Uncertain Environments: Findings in General and Military Populations (MHSRS-24-13056)
Presentation Author: Dr. Cathy Chen

#501 | Transcranial Direct Current Brain Stimulation During Sleep Deprivation (MHSRS-24-13202)
Presentation Author: Dr. Tracy Jill Doty

#502 | Enhancing Cognitive Performance Using LED-Based Transcranial Photobiomodulation (MHSRS-24-13260)
Presentation Author: Mr. Michael Lundie

#503 | Identifying the Neurobiology of Performance and Training Retention in Pilots via Task-Based Functional Magnetic Resonance Imaging (MHSRS-24-13290)
Presentation Author: Dr. Bianca Cerqueira

#504 | Passive Brain Computer Interface with Wearable Textile-Based Electroencephalography (MHSRS-24-13347)
Presentation Author: Dr. Sujoy Ghosh Hajra

#505 | Exploring the Impact of Mal de Debarquement Syndrome on Cognitive Function in Sailors: A Study Aboard the USNS Mercy (T-AH 19) (MHSRS-24-13368)
Presentation Author: LCDR Charlotte Hughes

#506 | A Flight-Helmet Compatible Closed-Loop Electrooculography and Vagal Nerve Stimulation Device for Fatigue Mitigation in Pilots (MHSRS-24-13408)
Presentation Author: Dr. Walid Soussou

#507 | Changes in Brain Structure and Age in Veterans with TBI Following Treatment with Magnesium-Ibogaine (MHSRS-24-13415)
Presentation Author: Dr. John Coetzee

#508 | Locus Coeruleus Activation Potentially Optimizes Verbal Working Memory (MHSRS-24-13458)
Presentation Author: Mr. David Negelspach

#509 | Strategic Memory Advanced Reasoning Training (SMART) as an Effective and Efficient Alternative to Traditional Cognitive Rehabilitation of Service Members with mild Traumatic Brain Injury: Same Bang, Fewer Bucks (MHSRS-24-13013)
Presentation Author: Dr. Jason Bailie

TBI MANAGEMENT: EPIDEMIOLOGY AND DOWN RANGE MANAGEMENT

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Presentation Author: Mrs. Melissa Reich-Fuehrer

#511 | The NCAA-DoD CARE-SALTOS Integrated (CSI) Study: An Update on the Explosive Ordnance Disposal (EOD) Cohort (MHSRS-24-12035)
Presentation Author: Dr. Elsa Ermer

#512 | Silent Struggles: Unveiling the Prevalence of Traumatic Brain Injuries and Their Connection with PTSD and Depression Among Law Enforcement Officers (MHSRS-24-10896)
Presentation Author: Dr. Jaclyn Caccese

#513 | The Impact of Post-Traumatic Stress Disorder/ Post-Traumatic Stress Symptoms on the Relationship Between Pre-Injury Depression and Post-Injury Depressive Symptoms (MHSRS-24-10980)
Presentation Author: Dr. Rosemay Remigio-Baker

#514 | Normoxic versus Hyperoxic Management of Moderate Traumatic Brain Injury at Ground Level and During Simulated Aeromedical Evacuation in Swine (MHSRS-24-11035)
Presentation Author: Dr. Yanyi Zang

#515 | Comparison of Veterans Affairs Screening and Diagnosis of Historical mild TBI with LIMBIC-CENC Research Protocol and Features of False Negatives (MHSRS-24-11180)
Presentation Author: Dr. William Walker

#516 | Adverse Prehospital Care Events and Outcomes After Traumatic Brain Injury (MHSRS-24-11196)

Presentation Author: Dr. Amelia Maigia

#517 | Public Health Tools and Military Traumatic Brain Injury: Presenting a Causal Loop Diagram to Visualize Traumatic Brain Injury Related Variables in U.S. Service Members, an MTBI2 Study (MHSRS-24-11246)

Presentation Author: Mr. Martin Cota

#518 | A Retrospective Cohort Study of TBI Exposed Military Population and Reported Outcomes and Recovery, an MTBI2 Study (MHSRS-24-11253)

Presentation Author: Mr. Martin Cota

#519 | Association of mild Traumatic Brain Injury and Risk of Musculoskeletal Injury Among United States Service Members (MHSRS-24-11298)

Presentation Author: Dr. Amy Silder

#520 | Demographics and Clinical Characteristics of Patients Seen Through the Defense Intrepid Network for TBI and Brain Health (MHSRS-24-11368)

Presentation Author: Dr. Chandler Rhodes

#521 | Brain-Inspired Soft Materials for Intracerebral Injection and Local Drug Delivery (MHSRS-24-11372)

Presentation Author: Dr. John Clegg

#522 | Acute Treatment for Axonal Damage After Concussive Traumatic Brain Injury: Insights from Preclinical Testing of 4-Aminopyridine (4-AP) Therapy (MHSRS-24-11406)

Presentation Author: Dr. Kryslaine Radomski

#523 | Comparison of LIMBIC-CENC Research Findings Among Veterans with a Department of Veterans Affairs Positive Screen for Traumatic Brain Injury (TBI) Who Complete or Do Not Complete a Comprehensive TBI Evaluation (MHSRS-24-11452)

Presentation Author: Dr. Terri Pogoda

#524 | Patient Characteristics to Inform Medical Evacuation Decision-Making in Mild Isolated Head Injury: Findings from a Prolonged Care, Resource-Limited Civilian Setting (MHSRS-24-11533)

Presentation Author: LCDR Ian Eisenhauer

#525 | Feasibility Assessment of Rapid Response EEG in the Identification of Nonconvulsive Seizures During CCAT Training Simulations (MHSRS-24-11656)

Presentation Author: Mr. William Gissendanner

#600 | Factors Associated with Military Health System (MHS) Costs Post Traumatic Brain Injury (TBI) for Service Members Treated in VA Polytrauma Rehabilitation Centers: A Veterans Affairs (VA) TBI Model Systems (TBIMS) Study (MHSRS-24-11675)

Presentation Author: Dr. Clara Dismuke-Greer

#601 | Comparing Traumatic Brain Injury Diagnoses, Intensive Care Utilization, Length of Stay and Costs between Department of Defense and Veterans Affairs Hospitals: A Long-Term Impact of Military-Relevant Brain Injury Consortium (LIMBIC) Study (MHSRS-24-11686)

Presentation Author: Dr. Clara Dismuke-Greer

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Presentation Author: Dr. Sandy Lwi

#603 | Noninvasive Cranial Nerve Stimulation to Enhance Brain Clearance After Traumatic Brain Injury (MHSRS-24-11757)

Presentation Author: Dr. Kip Ludwig

#604 | Differentiating Properties That Increase the Potential of the Cerebroprotectant AST-004 as a TBI Therapy (MHSRS-24-11777)

Presentation Author: Dr. Theodore Liston

#605 | The Occupational Prevalence of Traumatic Brain Injury in the U.S. Navy and Marine Corps (MHSRS-24-11792)

Presentation Author: Dr. Andrew MacGregor

#606 | Intranasal Delivery of Elovonoids, a Novel Class of Homeostatic Lipid Mediators, Improves Behavioral Functions and Confers Neuroprotection in a Rat Model of Experimental Traumatic Brain Injury (MHSRS-24-11849)

Presentation Author: Dr. Ludmila Belayev

#607 | Assessing the Impact of a Targeted Dietary Intervention for Post-Traumatic Headache Among Service Members on Cognitive Functioning and TBI Symptom Reporting: Secondary Outcome Analyses (MHSRS-24-11895)

Presentation Author: Dr. Wesley Cole

#608 | Potential Therapeutic Effects of Angiotensin IV and LVV Hemorphin-7 on Traumatic Brain Injury-Induced Memory and Cognition Defects (MHSRS-24-11971)

Presentation Author: Dr. Eagle Yi-Kung Huang

#609 | Are Survey Reports of Blast Exposure Associated with Medical Records of TBI? An Examination of Mechanism of Injury and Low-Level Blast Exposure (MHSRS-24-12154)

Presentation Author: Dr. Samuel Chung

#610 | Ultrasound Responsive Cyclosporine Microbubbles for the Frontline Care of TBI (MHSRS-24-12160)

Presentation Author: Dr. Sophie Haddad

#611 | Validation of the Millennium Cohort Traumatic Brain Injury Questionnaire – Long Version (MCTBIQ-L) (MHSRS-24-12229)

Presentation Author: Mr. Javier Villalobos

#612 | Acute Concussion Care in the Military Health System: A Focused Review of a Single Healthcare Market (MHSRS-24-12280)

Presentation Author: Ms. Lauren Earyes

#613 | The CARE-SALTOS Integrated (CSI) Study: Characterizing Potential Chronic Brain Health Effects of Concussion and Repetitive Head Impact Exposures - Tier 3 (MHSRS-24-12378)

Presentation Author: Mr. Drake Ryff

#614 | mTBI Therapeutics for Prolonged Field Care (MHSRS-24-12418)

Presentation Author: Dr. Jess White-Phillip

#615 | Hypobaric Conditions in Cabin Altitude Restricted Aeromedical Evacuation Induce Systemic Inflammation Following Porcine Traumatic Brain Injury (MHSRS-24-12578)

Presentation Author: Dr. Michael Goodman

#616 | Ultrasound-Modulated Theranostic Microbubbles for Ferroptosis Inhibition in Traumatic Brain Injury (MHSRS-24-12606)

Presentation Author: Dr. Kathrine Curtin

#617 | Factors Influencing Rates of Vestibular Symptoms Reported by Civilian Patients Examined by Brain Rehabilitation Specialists Following Traumatic Brain Injury (MHSRS-24-12636)

Presentation Author: Dr. Jeffrey Staab

#618 | Role of Subanesthetic Intravenous Ketamine Infusion on Stress Hormones and Synaptic Plasticity in a Rodent Model of Closed Head Injury (MHSRS-24-12681)

Presentation Author: Mr. Kwang Choi

#619 | Novel Functional Near-Infrared Spectroscopy Signal Analysis Methodology for the Identification of mild Traumatic Brain Injuries in Field and Clinical Environments (MHSRS-24-12708)

Presentation Author: Dr. Cory Smith

#620 | Mitigating Neurological Injury in Military Trauma: The Therapeutic Potential of Itaconate (MHSRS-24-12905)

Presentation Author: Mr. Pedro Cabrales

#621 | Introduction to the Joint Trauma System's Anomalous Health Incident (AHI) Registry (MHSRS-24-12953)

Presentation Author: Mrs. Lyndsey Faas

#622 | Dietary Omega-3 and Omega-6 Fatty Acid Modification for Post-Traumatic Headache: A Randomized Controlled Trial (MHSRS-24-13017)

Presentation Author: Dr. Daisy Zamora

#623 | Randomized Controlled Trial of Targeted Rehabilitation for Vestibular (T-REV) mild Traumatic Brain Injury: Primary Outcome Analysis of the T-REV Clinical Trial (MHSRS-24-13118)

Presentation Author: Dr. Anthony Kontos

#624 | Randomized Controlled Trial of Targeted Multidomain (T-MD) Interventions for mild Traumatic Brain Injury: Primary Outcome Analysis of the T-MD Clinical Trial (MHSRS-24-13127)

Presentation Author: Dr. Anthony Kontos

#625 | Retrospective Analysis of Potentially Concussive Events With and Without Traumatic Brain Injury of a U.S. Military Mass Casualty Event Incident in U. S. Central Command (CENTCOM) (MHSRS-24-13164)

Presentation Author: Mr. Joonyoung Kwak

#700 | A Portable 3D Transcranial Ultrasound Brain Imaging Instrument for Diagnosis of Intracranial Hematomas During Early Stages of Evacuation and Management of Traumatic Brain Injuries (MHSRS-24-13236)

Presentation Author: Dr. Roman Maev

#701 | Non-Invasive Diagnosis of Intracranial Hypertension, Cerebral Edema, and Cerebral Hemorrhage with an Optical Spectroscopy System (MHSRS-24-13375)

Presentation Author: Dr. Rodrigo Menezes Forti

BRAIN IMPACT OF SUB-CONCUSSIVE BLAST EXPOSURE IN MILITARY SERVICE MEMBERS: IMPLICATIONS FOR PREVENTION AND HEALTH

#702 | Assessment of Sound Localization Ability in Tactical Training Environments (MHSRS-24-10994)

Presentation Author: Mr. Jonathan Salib

#703 | Characterization of Military Instructor Blast Exposure During Routine M141 BDM Training (MHSRS-24-12722)

Presentation Author: Mr. Jonathan Salib

#704 | Simulation Based Design of Protective Equipment for Impulse Noise (MHSRS-24-11047)

Presentation Author: Dr. Gary Tan

#705 | Abnormal Memory Linking and PTSD in Males Following mild Traumatic Brain Injury (MHSRS-24-11102)

Presentation Author: Lt Choang Lai

#706 | Evidence of Astrocyte Injury Following Blast Exposure: A Novel Hypothesis (MHSRS-24-11221)

Presentation Author: Dr. David Priemer

#707 | Repeated Exposure to Low-Level Blasts Induces Acute Increases in Plasma Cytokines and Triggers Glial Responses Consistent with mild Brain Trauma (MHSRS-24-11337)
Presentation Author: Dr. James Meabon

#708 | Natural Oscillatory Modes and MRI-Detected Deformation of the Biofidelic ANGUS Phantom Under Mild Head Impacts (MHSRS-24-11344)
Presentation Author: Dr. Yuan-Chiao Lu

#709 | Impact of Repeated Blast Exposure on Active-Duty United States Special Operations Forces (MHSRS-24-11387)
Presentation Author: Dr. Yelena Bodien

#710 | Cross-Species MicroRNA Signatures Related to Blast Exposure (MHSRS-24-11432)
Presentation Author: Ms. Aarti Gautam

#711 | The BLAST Risk Algorithm: An Integral Part of a Comprehensive Risk Assessment Program for Mitigating the Impact of Exposure to Repeated Low Level Blast Overpressure (MHSRS-24-11941)
Presentation Author: Dr. Tim Walilko

#712 | Detection and Management of Blast-Related Brain Health Effects Using Eye-Tracking Technology (MHSRS-24-11970)
Presentation Author: Dr. John King

#713 | Thresholds of Subconcussive Blast Exposure Associated with Differences in Brain Structure and Function (MHSRS-24-12079)
Presentation Author: Dr. Jared Rowland

#714 | Examining the Construct Validity and Test-Retest Reliability of the Blast Exposure Threshold Survey (BETS) in U.S. Military Service Members and Veterans (MHSRS-24-12283)
Presentation Author: Dr. Rael Lange

#715 | Evaluations of Rats Following Repetitive Blast-Induced TBI Applying Electroencephalographic and Electromyographic Recordings with Histochemical Assessments of Neuroinflammation and Cell Senescence (MHSRS-24-12318)
Presentation Author: Dr. Franco Rossetti

#716 | Know Your ABC: Attenuating Blast Cone Designed by DEVCOM AC for the 120mm Mortar (MHSRS-24-12527)
Presentation Author: Dr. Walter Carr

#717 | A Data-Driven Method for Setting Thresholds for Blast Exposure in Training and Operations (MHSRS-24-12570)
Presentation Author: Dr. Walter Carr

#718 | Variance in Post Traumatic Stress Symptoms (PTSS) After Low Level Blast Exposure (MHSRS-24-12824)
Presentation Author: Dr. Walter Carr

#719 | The Effect of Transient Overpressure Duration on Performance of a Learned Task and In Vivo Stress Responses in Rats (MHSRS-24-12558)
Presentation Author: Dr. Theodore Argo

#720 | Using the Modified Vestibular/Ocular Motor Screening Tool (mVOMS) to Evaluate Blast Exposure Effects in Military Service Members (MHSRS-24-12608)
Presentation Author: Ms. Alis Kranfli

#721 | Using Body-Mounted Blast Overpressure Sensor Data Analysis and a Preliminary Cumulative Event Score for the INVICTA Program (MHSRS-24-12634)
Presentation Author: Dr. Suthee Wiri

#722 | Creating Blast Overpressure Visual Aids for Service Members Using Field Data and High-Fidelity Simulations to Mitigate Blast Exposure in Training (MHSRS-24-12635)
Presentation Author: Dr. Suthee Wiri

#724 | Continuous Tracking of Eye and Body Movement During Breaching Training Towards Preventing Blast Injury (MHSRS-24-12699)
Presentation Author: Dr. Jeremy Kemmerer

#725 | Composite Helmet Liner to Mitigate Concussive Forces (MHSRS-24-12721)
Presentation Author: Dr. Girish Srinivas

#800 | Blast Overpressure (BOP) Tool for Monitoring of Blast Dose During Training of M107 Sniper Rifle, M136 (AT4) Shoulder Mounted, M120 Mortar Weapon Systems, and Breaching Charges (MHSRS-24-12739)
Presentation Author: Dr. Teja Garimella

#801 | Evaluation of the HGU-99/P Sound Wave Protection Helmet for Attenuating Impulsive Waves in the Brain During Sub-Concussive Impulsive Events (MHSRS-24-12750)
Presentation Author: Mr. Jed Wilbur

#802 | Effects of Liraglutide on Mitigation of Hearing Loss After Repeated Blast Exposures – A Summary of Studies in Animal Model of Chinchilla (MHSRS-24-12753)
Presentation Author: Dr. Rong Gan

#803 | Validation of Cognitive Rehabilitation for Individuals with High Levels of Lifetime Blast Exposure (MHSRS-24-13237)
Presentation Author: Dr. Jason Bailie

#804 | The COmbat and traINing QUeryable Exposure/event Repository (CONQUER) Operational Monitoring Program: Epidemiological Examination of Overpressure Exposures (MHSRS-24-13277)
Presentation Author: Dr. Eric Schneider

#805 | Evaluation of Acoustic Impedance, Attenuation, and Materials for Human Tissues of Blast Surrogates: A Literature Review (MHSRS-24-13351)
Presentation Author: Mr. Blake Muzinich

#806 | Directional Analysis of a Wearable Blast Sensor for Determining Equivalent Incident and Reflected Overpressures (MHSRS-24-13357)
Presentation Author: Mr. Kyle Willens

#807 | Investigation of External Shock Waves Impact on a Manikin Surrogate (MHSRS-24-13427)
Presentation Author: Dr. Rohan Banton

#808 | Cross-Platform Immunoinflammatory Proteomic Profiling in Military Personnel with Exposure to Repetitive Blast Overpressure: Comparing ELLA and Olink Platforms with TruCulture Stimulation (MHSRS-24-13439)
Presentation Author: Dr. Shawn Rhind

#809 | Optimizing Small Arms Blast Exposure (SABE) with Informed Weapon Mapping: Extending the Role of 3D High-Fidelity Computer Simulations to Predict and Reduce User Exposure During Large Caliber Small-Arms Fire (MHSRS-24-13493)
Presentation Author: Dr. James Engall

ADVANCES IN BLAST POLYTRAUMA: IMPLICATIONS TO WARFIGHTER FUNCTION AND COMBAT CASUALTY CARE

#810 | Chronic Neurobehavioral Outcomes Following Multiple Simulated Flights in a Ferret Model of Under-Vehicle Blast-Induced Traumatic Brain Injury (MHSRS-24-10918)
Presentation Author: Dr. Molly Goodfellow

#811 | Diver Lung Underwater Explosion (UNDEX) Modeling and Surrogate Physical Testing (MHSRS-24-11061)
Presentation Author: Dr. Daniel Hammerand

#812 | A Cluster Analysis of Outpatient Prescription Medications During the First Year Following Combat-Related Amputations (MHSRS-24-11079)
Presentation Author: Mr. Ted Melcer

#813 | Minimally Invasive Extremity Fracture Fixation Device (MHSRS-24-11238)
Presentation Author: Dr. Abiraman Srinivasan

#814 | Exposure to High Stress Situations Prior to a Blast-Induced Traumatic Brain Injury Leads to Differential Behavioral Outcomes in Male and Female Rats (MHSRS-24-11376)
Presentation Author: Dr. Jessica Strickler

#815 | Blast Injury Prevention Standards Recommendation (BIPSR) Process: Dermal Burns Blast Injury Type (MHSRS-24-11506)
Presentation Author: Dr. Matthew Downs

#816 | Longitudinal Functional and Pathological Assessment of Pulmonary Changes Associated with Low-Level Repeated Blast Overpressure (BOP) Exposure (MHSRS-24-11518)
Presentation Author: Dr. Shataakshi Dahal

#817 | Utilizing AIS Codes, Including Comparison of Versions, for Autopsy Injury Research (MHSRS-24-11625)
Presentation Author: Dr. Kathryn Loftis

#818 | Dual Threat Injury: A Translational Swine Model of Combined Trauma and Chemical Agent Exposure to Optimize Combat Casualty Care (MHSRS-24-11720)
Presentation Author: Ms. Genna Nault

#819 | Alterations in Mechanosensitive Ion Channels Piezo-1 and Piezo-2 in Lungs Following Sub-Threshold Repeated Blast Exposure (MHSRS-24-11722)
Presentation Author: Dr. V Sujith Sajja

#820 | Early Protein Phosphorylation Events in Mouse Brain Following Blast Exposure (MHSRS-24-11806)
Presentation Author: Dr. Burook Misganaw

#821 | Acute Metabolic Alterations in the Brain After Blast-Induced Traumatic Brain Injury in Ferret and Mouse Models (MHSRS-24-11961)
Presentation Author: Dr. Mital Patel

#822 | Immunomodulatory Effects of a Novel Cholinergic Agonist Following Shockwave-Induced Traumatic Brain Injury in Mice (MHSRS-24-12055)
Presentation Author: Dr. Crystal Noller

#823 | Blast Injury Prevention Standards Recommendation (BIPSR) Process: Skull Fracture Blast Injury Type (MHSRS-24-12098)
Presentation Author: Dr. Ryan Byrne

#824 | Examining Thoracic and Abdominal Aorta Rupture Risk and Directional Dependency Using Computational Human Body Models (MHSRS-24-12260)

Presentation Author: Mr. Brian Von Kleeck

#825 | A National Facility for Advanced TBI Research Through Sheep Blast Exposure: Integrating Controlled Blasts, Motion Capture, Biomarkers, and Imaging for Enhanced Diagnostics and Protection (MHSRS-24-12356)

Presentation Author: Dr. Walter Schneider

#900 | Biodegradable Multifunctional Polyesters as Tissue Adhesives for Non-Compressible Torso Hemorrhage (MHSRS-24-12543)

Presentation Author: Dr. Abraham Joy

#901 | Repeated Low-Level Blast Exposure Induces Pathways Leading to Traumatic Stress and Depression in Rat Experimental Models (MHSRS-24-12694)

Presentation Author: Mr. Gaurav Phuyal

#902 | Unraveling the Pathophysiology of Concomitant Burn and Blast-Induced Brain Injury: Therapeutic Insights from a Novel Preclinical Model (MHSRS-24-12716)

Presentation Author: Dr. Jason Gardner

#903 | Real-Time Measurement of Cochlear Basilar Membrane Movement Induced by Blast Exposure (MHSRS-24-12745)

Presentation Author: Dr. Yijie Jiang

#904 | Blast Exposure Induces Neuroinflammatory Phenotypes and Axonal Injury in the Ferret Spinal Cord (MHSRS-24-12930)

Presentation Author: Dr. Manoj Govindarajulu

#905 | Occupational-Level Blast Exposure Induces Inflammatory Phenotypes and Affects Calcium Buffering in the Inner Ear in Rats (MHSRS-24-13032)

Presentation Author: Dr. Manoj Govindarajulu

#906 | Comparative Study of Blast Induced Traumatic Brain Injury Across Various Animal Models (MHSRS-24-12984)

Presentation Author: Dr. Bryan Pfister

#907 | Three Distinct Histologic Patterns of Rejection in Porcine Vertical Rectus Abdominis Myocutaneous Vascularized Composite Allotransplants (MHSRS-24-12996)

Presentation Author: Ms. Zari Dumanian

#908 | Effects of Traumatic Brain Injury Combined with Hemorrhagic Shock on Hippocampal Synaptic Plasticity and Short-Term Memory (MHSRS-24-13172)

Presentation Author: Dr. James Orfila

NOVEL INTERVENTIONS TO ADDRESS POST-TRAUMATIC STRESS DISORDER IN SERVICE MEMBERS AND VETERANS

#909 | COMISA-MARES: Understanding PTSD, Nightmares, Insomnia, and Obstructive Sleep Apnea in the Sleep Health of U.S. Military Personnel (MHSRS-24-10827)

Presentation Author: Dr. Kristi Pruiksmas

#910 | Dreaming Big: Launching a Web-Based Provider Training for Cognitive Behavioral Therapy for Nightmares (MHSRS-24-10829)

Presentation Author: Dr. Kristi Pruiksmas

#911 | CAREN versus Augmented Reality: Expanding 3MDR Therapy for PTSD: A Randomized Controlled Trial (CARE4PTSD) (MHSRS-24-11122)

Presentation Author: Dr. Michael Roy

#912 | A Randomized Noninferiority Study Protocol for Comparing Individual versus Group Written Exposure Therapy Among Active Duty Servicemembers (MHSRS-24-11433)

Presentation Author: Dr. Craig Woodworth

#913 | Addressing PTSD and Other Mental Health Problems in the Reserve Component (MHSRS-24-11767)

Presentation Author: Dr. Shelley MacDermid Wadsworth

#914 | Multimodal Image Analysis and Guidance of Neuromodulation for Trauma-Related Symptoms (MAGNETS) (MHSRS-24-11810)

Presentation Author: Dr. Davin Quinn

#915 | Prevention of Posttraumatic Stress: Study Design for a Randomized Controlled Trial of Brief Prolonged Exposure Therapy for Injured Individuals Admitted to a Level I Trauma Center (MHSRS-24-11943)

Presentation Author: Dr. Ann Marie Warren

#916 | Synergistic Sleep and Multimodal Motion-Assisted Memory Desensitization and Reconsolidation (3MDR) Therapy for Post-Traumatic Stress Disorder: Preliminary Results from a Feasibility Study (MHSRS-24-12127)

Presentation Author: Dr. Emmanuel Espejo

#917 | Targeted Plasticity Therapy for the Treatment of Post-Traumatic Stress Disorder (MHSRS-24-12133)

Presentation Author: Dr. Seth Hays

#918 | A Novel Audio-Visual Neuromodulation Device for Treating PTSD: A Parallel Arm, Randomized Controlled Trial (MHSRS-24-12175)

Presentation Author: Dr. Jeffrey Bower

#919 | The Impact of Post-Traumatic Stress Disorder on Sleep Quality and Vitamin D Levels in Gulf War Veterans (MHSRS-24-12179)

Presentation Author: Dr. Kamila Pollin

#920 | Preliminary Findings from a Prospective Cohort Study of Stellate Ganglion Block for Treatment of Post-Traumatic Stress Disorder and Other Non-Pain Conditions (MHSRS-24-12196)

Presentation Author: Ms. Kristine Rae Olmsted

#921 | How Durable Are the Treatment Effects of Stellate Ganglion Block (SGB) on Symptoms of Post-Traumatic Stress Disorder (PTSD)? (MHSRS-24-12727)

Presentation Author: Ms. Kristine Rae Olmsted

#922 | Tailoring Military Mindfulness Meditation for Delivery to Airmen in High Risk Squadrons: Feasibility of an Evidence-Informed Intervention (MHSRS-24-12236)

Presentation Author: Dr. Katharine McMillan

#923 | The Impact of Service Dog Training on Resilience and Stress in Service Members (MHSRS-24-12282)

Presentation Author: Ms. Shannon Fichter

#924 | Altered Power-Law Scaling Behavior of Beta Band Oscillation Amplitude Envelopes in PTSD (MHSRS-24-12314)

Presentation Author: Dr. John Hughes

#925 | PTSD Symptomatology and fMRI Default Mode Network Effects of Art Therapy (MHSRS-24-12342)

Presentation Author: Ms. Laura Jones

#1000 | Monochromatic Light Therapy Effects and Potential Relevance for PTSD (MHSRS-24-12544)

Presentation Author: Mr. David Negelspach

#1001 | Two Clinical Trials of Bedtime Sublingual Cyclobenzaprine (TNX-102 SL) in Military-Related Post-Traumatic Stress Disorder (PTSD) Provide Rationale to Study TNX-102 SL in the Aftermath of Trauma to Reduce Acute Stress Disorder (ASD) and Prevent PTSD (MHSRS-24-12799)

Presentation Author: Dr. Megan Parmenter

#1002 | The Potential for Use of Sleep Data from Wearable Devices in Treatment of PTSD-Related Sleep Challenges—Results from a Subject Matter Expert Survey (MHSRS-24-12998)

Presentation Author: Dr. Laura Bajor

#1003 | Service Dog Training Program Impacts Blood-Based Biomarkers in Military Service Members with Post-Traumatic Stress Disorder and Traumatic Brain Injury Symptomatology (MHSRS-24-13011)

Presentation Author: Dr. Manish Bhomia

#1004 | Randomized Pilot Trial of Emerging Exposure and Non-Exposure Treatments for Trauma-Related Nightmares (MHSRS-24-13149)

Presentation Author: Dr. Patricia Spangler

#1005 | Emotional Intelligence and Experiential Avoidance in ROTC Cadets (MHSRS-24-13288)

Presentation Author: Mrs. Melissa Reich-Fuehrer

#1006 | Influences on the Moral Development of Military Service Members (MHSRS-24-13364)

Presentation Author: 1LT Guadalupe Rivera

#1007 | PPL-138, a Mixed NOP/OPIOID Receptor Modulator, Reduces Pain Sensitivity and Anxiety-Like Behavior in a Preclinical Model of Post-Traumatic Stress Disorder (PTSD) (MHSRS-24-13437)

Presentation Author: Dr. Kelly Standifer

#1008 | MDMA-Assisted Therapy for PTSD (MHSRS-24-13450)

Presentation Author: MAJ Aaron Wolfgang

#1009 | The Impact of a Service Dog Training Program on Quality of Life Among Military Members with PTSD and mTBI (MHSRS-24-13480)

Presentation Author: Ms. Tiffany Riggleman

#1010 | Evaluation of Comprehensive In-Patient Models of Care for Veterans and Service Members with mild Traumatic Brain Injury (MHSRS-24-13501)

Presentation Author: Dr. Karen Skop

#1011 | Associations Between Lifetime Psychotropic Medication Exposures and Behavioral Health Conditions Among Veterans with TBI (MHSRS-24-13531)

Presentation Author: Dr. Kathleen Carlson

#1012 | Emotional Intelligence Training Improves Interoceptive Awareness in ROTC Cadets (MHSRS-24-12573)

Presentation Author: CPT Lindsey Hildebrand

#1013 | Emotional Intelligence Training Reduces Emotional Blunting within a Reserve Officer Training Corps Sample (MHSRS-24-12577)

Presentation Author: CPT Lindsey Hildebrand

#1014 | Benefits of a Canine Training Program for Veterans with Post-Traumatic Stress Disorder (MHSRS-24-12582)

Presentation Author: CPT Lindsey Hildebrand

#1015 | Preliminary Findings on An Integrated Cognitive Behavior Treatment (CBT) and Supported Education Program Addressing Educational Barriers Among PSE Students with PTSD (MHSRS-24-12963)

Presentation Author: Dr. Weili Lu

#1016 | Gender Differences in Treatment Outcomes Following Evidence-Based Psychotherapies for U.S. Service Members with Comorbid PTSD and MDD (MHSRS-24-12474)

Presentation Author: Dr. Pia Khandekar

MOVING THE NEEDLE ON PREVENTING HARMFUL BEHAVIORS IN THE MILITARY COMMUNITY – IMPLEMENTING CROSS AGENCY RESEARCH PRIORITIES – CURRENT AND FUTURE STATE

#1017 | Conducting a Randomized Clinical Trial with Service Members at High Risk for Suicide: Exploring Military Factors and Implementation Considerations (MHSRS-24-12519)

Presentation Author: Dr. Pia Khandekar

#1018 | Work-Related Conversational Skills Training for Persons with Substance Use Disorders (MHSRS-24-12991)

Presentation Author: Dr. Weili Lu

#1019 | Factors Associated with Mental Health Utilization Among U.S. Active Duty Service Members with Depression or PTSD Symptoms (MHSRS-24-10877)

Presentation Author: Dr. Neika Sharifian

#1020 | Comparison of Risk Factors Associated with Firearm Suicide and Non-Firearm Suicide Among U.S. Service Members and Veterans: Findings from the Millennium Cohort Study (MHSRS-24-10956)

Presentation Author: Ms. Cynthia LeardMann

#1021 | The Association Between Alcohol Use and Sexual Assault Victimization Across Demographics Among Sailors (MHSRS-24-10957)

Presentation Author: Dr. Amanda Gilmore

#1022 | Discrimination, Bullying, and Hazing Experiences Among United States Military Personnel in the Millennium Cohort Study (MHSRS-24-10983)

Presentation Author: Ms. Anna Baccetti

#1023 | Reasons for Personal Firearm Ownership, Firearm Storage Practices and Suicide Risk in Servicemembers (MHSRS-24-11317)

Presentation Author: Dr. Catherine Dempsey

#1024 | Sex Differences in Immune Cytokine Profile Markers in Acute Repeated Stress Exposure Abstract Type/Scientific Area/Clinical Specialty: Basic Science, Trauma/Critical Care, Precision Medicine/Biomarkers (MHSRS-24-11362)

Presentation Author: ENS Isaias Torres

#1025 | Principles for the Design of Electronic Problem-Solving Training for Traumatic Brain Injury (MHSRS-24-11380)

Presentation Author: Dr. Matthew Schmidt

#1100 | Identification of Diagnostic Markers for Cocaine Use Disorder in Different Ancestries Using a Novel Approach to Detect Epistasis (MHSRS-24-11484)

Presentation Author: Dr. Michael Garvin

#1101 | Predatory Marketing and Low Quality of Dietary Supplements Promoted for Weight Loss Pose a Threat to Military Members: Preventative Approaches and Lessons Learned from an Analysis of Select Products (MHSRS-24-11487)

Presentation Author: Ms. Cindy Crawford

#1102 | Spotlighting the Impact of Weekend Drinking: Linking Day-Specific Alcohol Use Quantity and Frequency with Problematic and Deleterious Alcohol-Related Behaviors (MHSRS-24-11668)

Presentation Author: Dr. Nathan Kearns

#1103 | Training and Consultative Supports Used in Suicide Prevention Pilot Training for Brief Cognitive Therapy for Suicide Prevention (BCBT-SP) Delivery (MHSRS-24-12012)

Presentation Author: Dr. Virginia DeRoma

#1104 | Firearm Screening and Intervention Beliefs and Practices Among U.S. Air Force (USAF) Mental Health Providers and Behavioral Health Technicians (MHSRS-24-12041)

Presentation Author: Dr. Ian Stanley

#1105 | The Evolution of Project Safeguard in the National Guard: Towards an Integrated Sustained Approach to Firearm Injury Prevention (MHSRS-24-12047)

Presentation Author: Mr. Daniel Ayers

#1106 | Affect Variability When Experiencing Suicidal Ideation: Results of an Ecological Momentary Assessment Study with Military Personnel and Veterans (MHSRS-24-12139)

Presentation Author: Dr. Craig Bryan

#1107 | Analysis and Evaluation of Military Suicide Prevention Efforts (MHSRS-24-12143)

Presentation Author: Dr. Ramya Sundararaman

#1108 | Collaboration, Analytics, and Policy: A Pathway to Developing a Standard "Suicide Cluster" Definition in the Military (MHSRS-24-13175)

Presentation Author: Dr. Ramya Sundararaman

#1109 | Impacts of Traumatic Brain Injury and Severe Limb Injury on Death by Suicide: Concurrent Investigations Using Path Analysis (MHSRS-24-12218)

Presentation Author: Dr. Samuel Chung

#1110 | Exploring the Indirect Association of Drinking Motivations with Career Traumatic Exposure and Hazardous Drinking in the Army JAG Corps (MHSRS-24-12225)

Presentation Author: Ms. Kristiana Carrasquillo

#1111 | Community Based Participatory Research for Studies Involving Military-Connected Individuals (MHSRS-24-12272)

Presentation Author: Dr. Maegan Paxton Willing

#1112 | Exploring the Impact of Bullying on Soldiers' Mental Health, and Unit Cohesion in Military Environments (MHSRS-24-12291)

Presentation Author: Mrs. Stephanie Bricault

#1113 | Automated Suicidal Ideation Alert System for Prospective Cohort Study of Stellate Ganglion Block for Treatment of Post-Traumatic Stress Disorder and Other Non-Pain Conditions (MHSRS-24-12371)

Presentation Author: Mr. Russ Vandermaas-Peeler

#1114 | Translating Alaska Native Research on Protective Factors to Increase Performance and Counter Harmful Behaviors Among Alaska's Military Installations (MHSRS-24-12561)

Presentation Author: Dr. James Morton Jr

#1115 | Get Better Together: Results of an Open Pilot Trial of a Cross-Cutting Primary Prevention Intervention for Military Couples (MHSRS-24-12686)

Presentation Author: Dr. Sarah Carter

#1116 | Feasibility of a Brief Lethal Means Safety Intervention Utilizing Concerned Significant Others: The Family Firearms Safety Training Intervention (MHSRS-24-12787)

Presentation Author: Dr. Alexis Blessing

#1117 | Morning Bright Light Therapy on Mood and Sleep in Military Servicemembers (MHSRS-24-12860)

Presentation Author: Ms. Gabriela Franca

#1118 | The Brief Cognitive Behavioral Therapy for Suicide Prevention (BCBT-SP) Pilot: Acceptability and Feasibility of BCBT-SP in Military Treatment Facility Clinics (MHSRS-24-12913)

Presentation Author: Ms. Ramatu Ibrahim

#1119 | Efficacy of Tailored Sexual Assault and Alcohol Misuse Prevention Programs at the U.S. Air Force Academy (MHSRS-24-12994)

Presentation Author: Dr. Shannon Blakey

#1120 | A Quality Assurance Process Model of the Comprehensive Integrated Primary Prevention Plan to Reduce Harmful Behaviors in the United States National Guard (MHSRS-24-13015)

Presentation Author: Ms. Christy Collette

#1121 | Hazing Experiences and Outcomes in Service Members at a U.S. Military Installation (MHSRS-24-13401)

Presentation Author: Ms. Elizabeth Metzger

#1122 | Fostering Heroic Leadership in the Army: An Action Research Exploration of Leaders Impact on Organizational Wellbeing (MHSRS-24-13445)

Presentation Author: Ms. Anastasia Moody

#1123 | Contextual Factors of Assaults Associated with PTSD Among U.S. Service Members and Veterans Who Experienced Sexual Assault: Findings from the Millennium Cohort Study (MHSRS-24-10818)

Presentation Author: Dr. Jesse Wood

MILITARY FAMILY HEALTH AND READINESS: UNDERSTANDING THE INTERDEPENDENCE OF THE MILITARY FAMILY SYSTEM

#1124 | Higher Educational Attainment Among Military Spouses in the Millennium Cohort Family Study (MHSRS-24-11082)

Presentation Author: Dr. Jesse Wood

#1125 | Differing Types of Social Support Reduces Facets of Servicemember Burnout (MHSRS-24-10908)

Presentation Author: CPT Lindsey Hildebrand

#1200 | Military Spouses' Perceptions of Suicide within the Military Spouse Community: A Survey Study (MHSRS-24-10793)

Presentation Author: Dr. Rebekah Cole

#1201 | Post Discharge Assessment of Caregiver Guidance of Patients with Brain Injury Hospitalized in Acute Inpatient Rehabilitation at a Veterans Affairs Medical Center (MHSRS-24-10820)

Presentation Author: Ms. Kimberly Samson

#1202 | Family Planning Desires and Barriers Among LGBTQ+ Military Service Members (MHSRS-24-10848)

Presentation Author: Dr. Cynthia Shen

#1203 | Neonatal Health Risks Among Children of Female Military Aviation Officers (MHSRS-24-10942)

Presentation Author: MAJ Christopher Stark

#1204 | Pediatric Health Risks Among Children of Female Military Aviation Officers (MHSRS-24-11688)

Presentation Author: MAJ Christopher Stark

#1205 | Supporting Family Caregivers of Veterans and Service Members with TBI: The REACH TBI Clinical Trial (MHSRS-24-11149)

Presentation Author: Dr. Paul Perrin

#1206 | Military Life Stress and the Well-Being of Military Spouses: Millennium Cohort Family Study Panel 2 (MHSRS-24-11215)

Presentation Author: Dr. Jeanine Hanna

#1207 | An Examination of Operational Stressor Exposures and Parenting Alliance: Mediation by Service Member Traumatic Stress and Depression (MHSRS-24-11595)

Presentation Author: CAPT Abigail Marter

#1208 | Findings for Pregnancy Peer Support: Building Resilient Military Families (MHSRS-24-11694)

Presentation Author: Mrs. Katherine Walker-Rodriguez

#1209 | Multiple Comorbidities and Access to Care Among Military Families (MHSRS-24-11741)

Presentation Author: Dr. Jangho Yoon

#1210 | Healthcare Costs and Health-Related Quality of Life Among Adult Civilian Beneficiaries of the Military Health System with Multiple Comorbid Conditions (MHSRS-24-13106)

Presentation Author: Dr. Jangho Yoon

#1211 | Behavioral Health Risk Factors and Protective Factors Associated with Military Relocations (MHSRS-24-11813)

Presentation Author: MAJ Thomas Nassif

#1212 | Barriers to Care and Mental Functioning Among Military Spouses (MHSRS-24-11911)

Presentation Author: 1LT Daniel Burke

#1213 | The REACH Military Spouse Program: Testing the Effectiveness of Peer Support for Improving Military Spouse Mental Health and Social Support (MHSRS-24-12009)

Presentation Author: Dr. Elisa Borah

#1214 | Military Family Perspectives on Enrollment and Engagement in the WIC Program (MHSRS-24-12354)

Presentation Author: Dr. Binny Chokshi

#1215 | Intimate Partner Distress Is Associated with Worse Warfighter Brain Health Following mild Traumatic Brain Injury (MHSRS-24-12361)

Presentation Author: Dr. Tracey Brickell

#1216 | Relationship Satisfaction and Health Outcomes in Military Couple Dyads Following Traumatic Brain Injury in Warfighters (MHSRS-24-12373)

Presentation Author: Dr. Tracey Brickell

#1217 | Is Traumatic Brain Injury Severity in Warfighters Related to Worse Outcomes in Military Families? (MHSRS-24-12385)

Presentation Author: Dr. Tracey Brickell

#1218 | Military Family Resilience and Service Member Deployment: Findings from a Scoping Review (MHSRS-24-12501)

Presentation Author: MAJ Wendy Hamilton

#1219 | Priorities for Addressing the Behavioral Health Needs of Military Children and Families (MHSRS-24-12673)

Presentation Author: Dr. Erin Frick

#1220 | The Effects of Romantic Relationships on the Effectiveness of Emotional Intelligence Training in Reducing Traumatic Stress in an Active-Duty Military Population (MHSRS-24-12741)

Presentation Author: Mr. Palmer Grabner

#1221 | Differences in Mental Health Care Visit Rates by State for Military Connected Children (MHSRS-24-12921)

Presentation Author: Mr. Matthew Mester

#1222 | Effects of Injury Type, Family, and Demographic Factors on Mental Health Care Needs of Soldiers Returning to the Active Force After Serious Injury (MHSRS-24-12929)

Presentation Author: Mr. Ian Sorensen

#1223 | Patient and Military Health System Catchment Area Characteristics Associated with HPV Vaccination Rates (MHSRS-24-13027)

Presentation Author: Dr. Joel Segel

#1224 | Exploring How Different Stressors Predict General Family Functioning in Military Families (MHSRS-24-13447)

Presentation Author: CPT George Mesias

APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN PSYCHOLOGICAL DISORDERS

#1225 | Conducting a Clinical Trial Remotely to Optimize Digital Behavior Treatment for Co-Occurring Insomnia and Depression: Opportunities and Challenges Identified After One Year of Recruitment (MHSRS-24-11907)
Presentation Author: Dr. Wilfred Pigeon

#1300 | Facilitating Objective Diagnosis of Major Depressive Disorder Through Enhanced Artificial Intelligence (EAI) (MHSRS-24-11990)
Presentation Author: Dr. Tongli Zhang

#1301 | Utilizing Ensemble Models to Predict Suicide Among Service Members and Veterans with Traumatic Brain Injury (MHSRS-24-12186)
Presentation Author: Ms. Melinda Tung

#1302 | Assessing the Impact of Antidepressant Use in PTSD Patients with Elevated Suicide Risk by Using Real-World Data (MHSRS-24-12334)
Presentation Author: Ms. Oshin Miranda

#1303 | Retrospective Assessment of Smart Watch Haptic Feedback to Treat Nightmares in the U.S. Military (MHSRS-24-12360)
Presentation Author: Ms. Emily Wargo

#1304 | Epigenetic Profiles Associated with PTSD in War-Zone Exposed Active Duty Personnel (MHSRS-24-12797)
Presentation Author: Dr. Ruoting Yang

#1305 | Simpl Healthcare: Modernizing and Automating Healthcare Through Improved Software Workflows and Artificial Intelligence (MHSRS-24-13416)
Presentation Author: Mr. Vineet Daniels

#1306 | Drivers and Evidence-Based Solutions of Military Health Provider Burnout (MHSRS-24-10928)
Presentation Author: Dr. Bolanle Olapeju

MENTAL AND BEHAVIORAL HEALTH MANIFESTATIONS OF ANGER

#1307 | "You Just Get Frustrated": Understanding Emotional Burden, Frustration, and Burnout in Military Health Care Providers (MHSRS-24-12956)
Presentation Author: Dr. Bolanle Olapeju

#1308 | Anger Profiles and Health Behaviors in Active Duty U.S. Service Members (MHSRS-24-12671)
Presentation Author: 2LT William Brooks

#1309 | Anger Predicts Future Suicide Attempts Beyond Current Suicide Risk (MHSRS-24-12679)
Presentation Author: Dr. Michael Crowe

#1310 | Examining the Link Between Self-Reported Anxiety and Aggressive Behaviors (MHSRS-24-12948)
Presentation Author: Ms. Shivani Desai

#1311 | Suicidal Behavior in the German Armed Forces-Comparison of Suicide Registry Data and the German Armed Forces Survey (MHSRS-24-13312)
Presentation Author: Lt Col Christian Helms

WARFIGHTER OPERATIONAL RESILIENCE: NEXT GENERATION PROGRAMS TO SUSTAIN PERFORMANCE UNDER FIRE

#1312 | Contingency Mental Health Summit: Research Needs Consensus (MHSRS-24-10883)
Presentation Author: Dr. Rena Nicholas

#1313 | Development of the AURORA Platform Trial Network to Test Interventions to Reduce Acute Stress Reaction Symptoms, and Illustration of Use Testing Sublingual Cyclobenzaprine TNX-102 SL (MHSRS-24-11045)
Presentation Author: Dr. Samuel McLean

#1314 | Cognitive and Personality Data as Predictors of Performance During Career Field Training for U.S. Air Force Weather Personnel (MHSRS-24-11092)
Presentation Author: Dr. Ivan Colon

#1315 | "That Stuck with Me": A Thematic Analysis of Medical Student Experience with Pediatric Death in Combat Simulation Training (MHSRS-24-11164)
Presentation Author: MAJ Sara Bibbens

#1316 | A Point-of-Use Salivary Allostatic Load Sensor (MHSRS-24-11175)
Presentation Author: Dr. Kiera Courts

#1317 | Technology Enhanced Mobile Platform for Performance Optimization (TEMPPPO): Holistic Total Force Fitness Web-Based Mobile Application for the Army National Guard - Will They Come if We Build It? (MHSRS-24-12054)

Presentation Author: Mr. Michael Smuda

#1318 | An Overview of Self-Reported Total Fitness Among ARNG Soldiers (MHSRS-24-12146)

Presentation Author: Mr. Michael Smuda

#1319 | Psychological Resilience to Maximise Human Performance: A Testing ARENA (MHSRS-24-12093)

Presentation Author: Dr. Leonie Webster

#1320 | Pivoting from Resilience: Associations Between PTSD, Alcohol, and Resilience in Service Member and Veterans with mTBI (MHSRS-24-12208)

Presentation Author: Dr. Shannon Miles

#1321 | Non-Clinical Personality Indices and Stress Coping Behaviors Predict Attrition from the Navy Nuclear Training Pipeline (MHSRS-24-12278)

Presentation Author: Dr. Justin Handy

#1322 | Assessing the Validity of a Spiritual Readiness Measure in a Sample of Active-Duty Army Personnel (MHSRS-24-12391)

Presentation Author: Ms. Dana Henry

#1323 | Evaluation of Facility Dog Program Effects on Individuals Working in High Stress Environments (MHSRS-24-12434)

Presentation Author: LTC Kristen Shear

#1324 | Benefits of Psychological Resilience on Daytime Outcomes in U.S. Naval Personnel (MHSRS-24-12554)

Presentation Author: Dr. Alice LaGoy

#1325 | Acute Effects of Intensive Trauma and Surgical Skills Course on Psychological Symptoms (MHSRS-24-12751)

Presentation Author: Dr. Robyn Recker

#1400 | Burnout and Its Associated Factors Among Army Medics Across the Deployment Cycle (MHSRS-24-12788)

Presentation Author: Mrs. Kristina Clarke-Walper

#1401 | Do Training and Tools Improve Rates of Behavioral Health Profiling? Results from the B-REDI Study (MHSRS-24-12822)

Presentation Author: Mrs. Kristina Clarke-Walper

#1402 | Demographic, Health, and Lifestyle Factors Predict Self-Reported Hardiness and Grit in Army Trainees Entering Basic Combat Training (MHSRS-24-12802)

Presentation Author: Ms. Andrea Taylor

#1403 | Effectiveness of the BH GEAR Training on Preparing Non-Providers to Address Behavioral Health Concerns on the Far-Forward Battlefield (MHSRS-24-13004)

Presentation Author: Dr. Katie Nugent

#1404 | Enhancing Operational Resilience Skills in ROTC Cadets: The Role of Emotional Intelligence (MHSRS-24-13099)

Presentation Author: Ms. Nekabari Yakpogoro

#1405 | Developing a Psychometrically Valid Measure of Service Member Lethality (MHSRS-24-13147)

Presentation Author: SPC Amanda Pinkston

#1406 | Non-Provider's Stigma Related to Offering Behavioral Health Help (MHSRS-24-13150)

Presentation Author: Ms. Mary Sampson

#1407 | Meta-Coaching for Resilience, Readiness, and Lethality: Applied Case Studies in Support of an Emergent Approach to Warfighter Training (MHSRS-24-13181)

Presentation Author: CPT John Eric M Novosel-Lingat

#1408 | Building Operational Resiliency to Acute Psychological Traumatic Stress Through Pharmacological Interventions (MHSRS-24-13186)

Presentation Author: Dr. Emily Lowery-Gionta

#1409 | Using Haptics-Enhanced Mixed Reality (MR) to Train Care Under Fire (CUF) Skills: A Case Study and Lessons Learned (MHSRS-24-13188)

Presentation Author: Ms. Angela Alban

SOLUTIONS ADDRESSING BEHAVIORAL HEALTH CLINICIAN SHORTAGE - LEVERAGING TELEBEHAVIORAL HEALTH

#1410 | Remote Health Observation in Combat Veterans: A Novel Approach by the War-Related Illness and Injury Study Center (WRIISC) to Understand Habitual Sleep Patterns, Autonomic Function, and Post-Traumatic Stress Disorder (PTSD) Symptoms (MHSRS-24-11655)

Presentation Author: Dr. Calvin Lu

#1411 | Development of Web-Based Trainings in Suicide-Focused Interventions; Lessons Learned and Promising Steps Forward (MHSRS-24-11844)

Presentation Author: Dr. Christina Bauder

#1412 | Virtual Innovations in Research in the U.S. Military: Lessons Learned from the Psychometric Testing of an Assessment Tool for Adjustment Disorders During COVID-19 and Beyond (MHSRS-24-11870)

Presentation Author: Dr. Jouhayna Bajjani-Gebara

#1413 | Group Brief Cognitive Behavioral Therapy for Suicidal Servicemembers: Preliminary Demographics, Strength of Study Design, and Lessons Learned (MHSRS-24-11900)

Presentation Author: Dr. Justin Baker

#1414 | How the COVID-19 Pandemic Changed Telebehavioral Healthcare Utilization Among Military Personnel (MHSRS-24-11923)

Presentation Author: Dr. Emily Schmied

#1415 | PsychFit – A Screening and Training Landscape for Psychological Fitness (MHSRS-24-12004)

Presentation Author: Ms. Sarah Eberhardt

#1416 | trainSLEEP: Your Pathway to Superior Sleep A Self-Administered Online Training in the German Armed Forces (MHSRS-24-12639)

Presentation Author: Ms. Sarah Eberhardt

#1417 | Emotional Intelligence Training Reduces Burnout in Combat Exposed Servicemembers (MHSRS-24-12576)

Presentation Author: CPT Lindsey Hildebrand

#1418 | Validation of a Burnout Measure for Use with Military Medical Staff (MHSRS-24-12759)

Presentation Author: Dr. Joshua Wilk

#1419 | Preliminary Examination of Enrollment, Retention, and Satisfaction of Service Members with mild Traumatic Brain Injury in a Teletherapy for Emotional Awareness (MHSRS-24-12949)

Presentation Author: Dr. Dawn Neumann

#1420 | Extending the Accessibility of Transcranial Magnetic Stimulation Treatments for Depression and PTSD to Remote Environments via a Small, Portable, Telemedicine-Enabled Device (MHSRS-24-12981)

Presentation Author: Dr. Jonathan Downar

#1421 | Evaluation of Clinical Support Staff Training Curriculum and Virtual Chatbot Interaction: Improving the Practical Skills of Clinical Support Staff (MHSRS-24-13488)

Presentation Author: LCDR Brian Ford

#1422 | Scope of Care in the Military Health System by Provider Type (MHSRS-24-13515)

Presentation Author: LCDR Brian Ford

WOMEN'S HEALTH AND READINESS: HEALTH FOCUSED UPDATES

#1423 | An Evidenced Based Approach to Incorporating Race as a Factor in Postpartum Hemorrhage Risk Management (MHSRS-24-10895)

Presentation Author: MAJ Christie Lang

#1424 | The U.S. Maternal Mortality Health Crisis: Determinants, Impacts, and Interventions (MHSRS-24-10931)

Presentation Author: LCDR Veronica Gomez

#1425 | Relationships Between mild Traumatic Brain Injury History and Mental Health Screening Outcomes Among Male and Female Service Members and Veterans (MHSRS-24-10979)

Presentation Author: Dr. Samuel Walton

#1500 | Pilot Case Series for Vlissee™: Coologics Vaginal Cooling Device (VCD) for the Treatment of Vulvovaginal Candidiasis (MHSRS-24-11186)

Presentation Author: Dr. Michael Krychman

#1501 | An Examination of Musculoskeletal Injuries, Injury Rehabilitation, and Return-to-Duty Times Among Female Active Duty Service Members Treated in the Military Health System (MHSRS-24-11222)

Presentation Author: Ms. Rebecca Schulz

#1502 | Physical Activity Behaviors and Self-Reported Quality of Life Ratings Among Female Veterans (MHSRS-24-11244)

Presentation Author: Dr. Alexandra DeJong Lempke

#1503 | Association Between Binge Eating Frequency and Preeclampsia in Pregnant Active-Duty Service Women (MHSRS-24-11339)

Presentation Author: Ms. Ruby Schrag

#1504 | Mental and Psychological Health Outcome Differences Between Female Service Members and Veterans With and Without mild Traumatic Brain Injury History: A LIMBIC-CENC Study (MHSRS-24-11385)

Presentation Author: Dr. Landon Lempke

#1505 | HYACINTH: A Hydrogel-based, Adhesive, Contraction-Inductive, Therapeutic Hemostatic Material for Postpartum Hemorrhage (MHSRS-24-11772)

Presentation Author: Ms. Sarah Hargett

#1506 | Decision and Economic Analysis of Abortion Availability in the Military Health System (MHSRS-24-11888)

Presentation Author: Lt Elizabeth Gill

#1507 | Intimate Partner Violence Screening in a Pregnant Military Population: Implementation of the E-HITS Protocol (MHSRS-24-11890)

Presentation Author: Capt Rebecca Gregg

#1508 | Surgical Management of Endometrial Intraepithelial Neoplasia and Atypical Endometrial Hyperplasia at a Military Treatment Facility (MHSRS-24-12564)

Presentation Author: Capt Rebecca Gregg

#1509 | Prognostic Biomarker Validation in High Grade Serous Carcinoma with the Ovarian Tumor Tissue Analysis Consortium and the Multidisciplinary Ovarian Cancer Outcomes Group (MHSRS-24-12289)

Presentation Author: Dr. Kathleen Darcy

#1510 | Racial Disparities in Survival and Molecular Features in Black vs. White Patients with Uterine Serous Carcinoma: An Integrated Study in Real World Registries and Legacy NRG Oncology/Gynecologic Oncology Group Clinical Trials (MHSRS-24-12479)

Presentation Author: Dr. Kathleen Darcy

#1511 | Disparities in Clinical Outcomes and Molecular Features in Black and White Patients with Endometrioid Endometrial Carcinoma Persist in Real-World Registries and Randomized Clinical Trials (MHSRS-24-12917)

Presentation Author: Dr. Kathleen Darcy

#1512 | Impact of a Mobile Application for Contraceptive Decision Making (MHSRS-24-12647)

Presentation Author: Dr. Lori Trego

#1513 | A Comprehensive Examination of Military Women's Health (MHSRS-24-12826)

Presentation Author: Dr. Elizabeth Hisle-Gorman

#1514 | Development of a Partial Occlusion Model to Assess Venous Thromboembolic Event for Combat Casualty Care Modeling Using the Sprague-Dawley Rat (*Rattus norvegicus*) (MHSRS-24-12945)

Presentation Author: Ms. Maiya Snowton

#1515 | Deep Quantitative Proteomics Identifies Conserved Proteome Alterations in Low and High-Grade Serous Ovarian Cancers (MHSRS-24-13086)

Presentation Author: Lt Col Christopher Tarney

#1516 | Differences and Similarities Between Military Women and Men Receiving Evidence-Based Psychotherapy for Post-Traumatic Stress Disorder (MHSRS-24-13250)

Presentation Author: Dr. Stacey Young-McCaughan

#1517 | Standardization of Cervical Cancer Screenings in the Marine-Centered Medical Homeport (MHSRS-24-13393)

Presentation Author: Lt Morgan Fuller

#1518 | Evaluating a Neck Strength Protocol for Neuromuscular Indicators in Military College Cadets to Reduce the Incidence of Concussion (MHSRS-24-13461)

Presentation Author: Dr. Alexander McDaniel

MILITARY FEMALE HEALTH RESEARCH AIMED AT OVERCOMING THE CHALLENGES AND BARRIERS IMPACTING OPTIMAL WARFIGHTER PERFORMANCE & OPERATIONAL READINESS

#1519 | Sex Differences in Body Image, Eating Behaviors, and Diet Quality in U.S. Army Soldiers (MHSRS-24-11007)

Presentation Author: MAJ Bridget Owens

#1520 | Investigating Hypothyroidism and Menopause as Sex-Specific Health Challenges Affecting Heart Failure Outcomes in a Rodent Infarct Model (MHSRS-24-11043)

Presentation Author: Dr. Carly Filgueira

#1521 | Resting Metabolism and Energy Intake Across the Menstrual Cycle in Physically Active Females (MHSRS-24-11128)

Presentation Author: Dr. Samantha Goldenstein

#1522 | Females Disproportionately Affected by Anorectal Chlamydia in a Sample of U.S. Army Service Members and Their Medical Beneficiaries (MHSRS-24-11209)

Presentation Author: CPT John McArthur

#1523 | Presenteeism and Sleep Disturbance Profiles in U.S. Active-Duty Service Members (MHSRS-24-11267)

Presentation Author: Ms. Teresa Russell

#1524 | Neither Environmental Conditions nor Exertion Alter Gait More Than the Load Alone Following a Loaded March in Women (MHSRS-24-11697)

Presentation Author: Dr. David Hostler

#1525 | Musculoskeletal Injuries in Female and Male U.S. Marines from 2011–2021: A Retrospective Epidemiological Study (MHSRS-24-12018)

Presentation Author: Dr. Matt Hoch

#1600 | Sex Differences in Performance Decrements During a Long-Term Operational Training Scenario (MHSRS-24-12115)

Presentation Author: SSG Phillip Corona

#1601 | Sex Differences in Soldier Hydration by Urine Specific Gravity During a Long-Term Operational Training Scenario (MHSRS-24-12147)

Presentation Author: SSG Rigoberto Munoz

#1602 | Female Readiness-Enhancing Scoping Review of Health Literature: A Fresh Perspective Supporting Cis- and Gender Diverse Female Servicemember's Health (MHSRS-24-12632)

Presentation Author: Dr. Leilani Siaki

#1603 | Carry That Weight: Exploring the Influence of Gender, Anatomical Variations, and Physiological Factors on Back Load Carrying Abilities: A Literature Review (MHSRS-24-12887)

Presentation Author: Capt Shani Sultani

#1604 | Sex-Dependent Changes in Body Composition and Associations with Military Performance and Readiness During Marine Corps Officer Candidates School (MHSRS-24-13135)

Presentation Author: Dr. Kristen Koltun

#1605 | A Microbiome-Based Therapeutic for Drug-Resistant Pathogens Related to Women's Health (MHSRS-24-13348)

Presentation Author: Dr. Mina Izadjoo

#1606 | Evaluation of Performance and Women's Health in the Military in a Readiness Program for Active-Duty Service Women (MHSRS-24-13532)

Presentation Author: Capt Anita Pechenenko

BIG DATA AND MACHINE LEARNING FOR FULL SPECTRUM MILITARY HEALTH READINESS, PERFORMANCE AND CARE

#1607 | Enhancing Targeted Outreach for Longitudinal Health Surveys: Predictive Analytics for Participant Response in the Millennium Cohort Study (MHSRS-24-11016)

Presentation Author: Mr. Wisam Barkho

#1608 | Biomarkers Associated with Poor Prognosis of Acute Respiratory Distress Syndrome May Also Predict the Development of This Same Condition by the Day of Hospital Admission (MHSRS-24-11085)

Presentation Author: 2LT Esther Kim

#1609 | Using 12 Cytokines to Accurately Predict Pneumonia and Total Hospital Days After Rib Fractures (MHSRS-24-11115)

Presentation Author: Dr. Renhua Li

#1610 | Burden of Musculoskeletal Injuries in U.S. Active Duty Service Members: A 12 Year Study Spanning Fiscal Years 2010-21 (MHSRS-24-11271)

Presentation Author: Dr. Xiaoning Yuan

#1611 | Machine Learning Model to Optimize Bomb Suit Size Selection (MHSRS-24-11371)

Presentation Author: Dr. Jean Philippe Dionne

#1612 | Ready or Not? Using Artificial Intelligence/Machine Learning/Data Mining as a Methodology to Determine Medical Readiness Using Electronic Health Record Data (MHSRS-24-11411)

Presentation Author: CAPT Lalon Kasuske

#1613 | Applications of Machine Learning to Improving Primary Care Suicide Screening in the Military Health System (MHSRS-24-11416)

Presentation Author: Lt Nathan Carnes

#1614 | Differences in Survival Between Black and White Patients with Lung Cancer: Comparison of Data from the DoD Central Cancer Registry (CCR) and the National Surveillance, Epidemiology and End Results (SEER) Program (MHSRS-24-11532)

Presentation Author: Dr. Jie Lin

#1615 | Post-Diagnosis Statin Use and Survival Among Lung Cancer Patients: A Study Based on MilCanEpi, Linked Database of the DoD Central Cancer Registry (CCR) and MHS Data Repository (MDR) (MHSRS-24-11534)

Presentation Author: Dr. Jie Lin

#1616 | Comparing Black and White Patients with Rectal Cancer in Treatment and Outcomes in the U.S. Military Health System Using the Department of Defense's Big Data on Cancer (MHSRS-24-11561)

Presentation Author: Dr. Yvonne Eaglehouse

#1617 | Using DoD Big Data to Address Cancer Health Disparities: Comparing Racial-Ethnic Groups in Receipt of Treatment(s) for Papillary Thyroid Cancers (MHSRS-24-11565)

Presentation Author: Dr. Yvonne Eaglehouse

#1618 | Words Matter: An Association Study Between Natural Language Processing of Clinical Mental Health Notes and Suicide Risk (MHSRS-24-11603)

Presentation Author: Mr. Jiang Gui

#1619 | Optimizing Military Recruitment and Medical Readiness Through Predictive Analytics and Longitudinal Data: The Mission of MSAR (MHSRS-24-11640)

Presentation Author: Ms. Amanda Kelley

#1620 | Hypertension in Young Adults in the U.S. Military (MHSRS-24-11786)

Presentation Author: CPT Sean Rogers

#1621 | Utilizing Early Continuous Physiologic Data to Develop Automated Measures of Clinical Severity in a Traumatic Brain Injury Population (MHSRS-24-11938)

Presentation Author: Dr. Shiming Yang

#1622 | A Machine Learning Based Coagulation Risk Index Predicts Acute Traumatic Coagulopathy in Bleeding Trauma Patients (MHSRS-24-11983)

Presentation Author: Dr. Shiming Yang

#1623 | Predicting the Need for Life-Saving Interventions During Triage Using a Deep Time-Series Predictor Pipeline (MHSRS-24-12064)

Presentation Author: Dr. Rachel Clipp

#1624 | An Artificial Intelligence Solution to Human-Trusted Medical Triage Decision Making (MHSRS-24-12106)

Presentation Author: Dr. Rachel Clipp

#1625 | Musculoskeletal Injury Surveillance in the U.S. Military: Analysis of the ICD10 Transition and Descriptive Report of Healthcare Utilization at Four Sites Adopting MHS GENESIS (MHSRS-24-12090)

Presentation Author: Dr. Benjamin Hando

#1700 | Cardiorespiratory Responses to Distributed Pathophysiology: An In Silico Performance Prediction (MHSRS-24-12108)

Presentation Author: Mrs. Mihiret Redi

#1701 | Intelligent Automation and Transcription of the DD-1380 Advanced Medical Technologies Initiative (MHSRS-24-12120)

Presentation Author: CAPT Joseph Lopreiato

#1702 | Microbiome Data Fusion and Multi-Task Learning for Evaluating and Predicting Military-Relevant Human Health States (MHSRS-24-12273)

Presentation Author: Dr. Nicholas Be

#1703 | Leveraging Artificial Intelligence, Machine Learning & Real-Time Data Analytics to Increase Warfighter Resilience and Performance - The Future of Adaptive Training (MHSRS-24-12286)

Presentation Author: COL Natalie Nevins

#1704 | Outcomes of Admissions Related to Suicide – OARS: A 10-Year Analysis (MHSRS-24-12433)

Presentation Author: Dr. Jess White-Phillip

#1705 | Automatic Airway Segmentation for the Assessment of Proximal Airway Volume in Acute Respiratory Distress Syndrome Using Optical Coherence Tomography and Deep-Learning (MHSRS-24-12441)

Presentation Author: Ms. Raksha Sreeramachandra Murthy

#1706 | Early Detection of Acute Respiratory Distress Syndrome (ARDS) Using Optical Coherence Tomography (OCT) Images by Deep Learning (MHSRS-24-13338)

Presentation Author: Ms. Raksha Sreeramachandra Murthy

#1707 | Predicting and Personalizing Human Performance Interventions Through Counterfactual Forecasting (MHSRS-24-12455)

Presentation Author: Dr. Evan Anderson

#1708 | Machine-Learning Blood Loss Prediction Model for Tracking Hemorrhage in Swine (MHSRS-24-12476)

Presentation Author: Mr. Jose Gonzalez

#1709 | Sensitivity and Consistency of Image-Based and Statistical Approaches to Harmonizing Brain Volume Measurements from Heterogeneous Magnetic Resonance Imaging Data (MHSRS-24-12482)

Presentation Author: Dr. Yuan-Chiao Lu

#1710 | A Machine Learning Approach to Discover Bacterial Antigens and Virulence Factors for Bacteriophage Biologics and Thereby Predict Phage-Host Tropism (MHSRS-24-12791)

Presentation Author: Mr. Gregory Rice

#1711 | Development of AI Natural Language Processing Tools in Clinical Decision Support Systems: An MTBI2 Presentation (MHSRS-24-12832)

Presentation Author: Dr. Dominic Nathan

#1712 | Sex Differences in Obstructive Sleep Apnea Diagnoses Among Active-Duty Service Members: Comparing Direct On-Base and Private Sector Care (MHSRS-24-12879)

Presentation Author: Dr. Emerson Wickwire

#1713 | Stress Testing Large Language Model-Based Automated Assessments to Ensure They Perform as Expected in Deployment (MHSRS-24-13107)

Presentation Author: Mr. Adam Amos-Binks

#1714 | Integration of Edge Computation and Generative Artificial Intelligence with Wearable Technology for Optimizing Performance and Health (MHSRS-24-13138)

Presentation Author: Dr. Dhruv Seshadri

#1715 | Development of Machine-Learning Based Algorithms for Remote Respiratory Disease Monitoring and Assessment (MHSRS-24-13216)

Presentation Author: Dr. Hersh Sagreiya

#1716 | Enhancing Military Medical Simulation Training: Establishing a Pilot Registry for Comprehensive Educational Assessment (MHSRS-24-13223)

Presentation Author: CPT Scott Szymanski

#1717 | Endotracheal Intubation Performance Assessment: Video-Based AI Evaluation (MHSRS-24-13271)
Presentation Author: Mr. Gabriel Gazette

#1718 | Type 2 Diabetes Mellitus Incidence Among Active Duty Military Members from January 2019 to October 2022 (MHSRS-24-13301)
Presentation Author: Mr. Tonay Flattum-Riemers

#1719 | Incidence of Post-COVID-19 Condition Among Active Duty Military Members from October 2021 to October 2022 (MHSRS-24-13316)
Presentation Author: Mr. Tonay Flattum-Riemers

#1720 | Developing a Structural Equation Model to Quantify the Relative Influence of Microbes, Wound Characteristics, and Patient Factors on Wound Healing Time of Chronic Wounds (MHSRS-24-13330)
Presentation Author: Mr. Jacob Ancira

#1721 | Integration of Multi-Omic and Multi-Phenotypic Data to Predict Army Combat Fitness Test Scores (MHSRS-24-13343)
Presentation Author: Dr. Azar Alizadeh

#1722 | Automated Bayesian Analysis of Normal Sinus Rhythm Predicts the Incidence of New-Onset Atrial Fibrillation in Ethnically Diverse Ostensibly-Healthy Men and Women Independent of Conventional Risk Factors (MHSRS-24-13381)
Presentation Author: Dr. Deepankar DeMazumder

#1723 | Adapting Open-Source Artificial Intelligence to Combat Casualty Care: The Case Study of Our Joint Human and Skin Segmentation Neural Network (MHSRS-24-13394)
Presentation Author: Mr. Garrick Jensen

#1724 | What 4 Million Trauma Case Teach Us About the Risk of Nonunion (MHSRS-24-13405)
Presentation Author: Mr. Yasser Bouklouch

#1725 | A Pragmatic Randomized Controlled Trial to Evaluate the Effectiveness of AI-Enable ECG on Atrial Fibrillation Detection (MHSRS-24-13432)
Presentation Author: COL Chin-Sheng Lin

#1800 | Enhancing the DoD Medical Screening Processes by Leveraging Natural Language Processing and Machine Learning (MHSRS-24-13444)
Presentation Author: Dr. Jesus Caban

#1801 | An Ensemble Approach to Emergency Medicine Task Skill Assessment (MHSRS-24-13455)
Presentation Author: Dr. Fnu Rahul

MILITARY EXPOSURES AND SUBSEQUENT LONG-TERM OUTCOMES

#1802 | Polysomnographic Predictors of Neuropsychological Performance Two Years After Traumatic Brain Injury: A Multicenter Cohort Study (MHSRS-24-10811)
Presentation Author: Dr. Marc Silva

#1803 | Population Increases in Obesity Among Active Duty Personnel: De-Aggregating Long-Term Trends and Effects of COVID-19 Lockdowns (MHSRS-24-10821)
Presentation Author: Mr. Josh Kazman

#1804 | Is Pain Related to Alexithymia in Individuals with Traumatic Brain Injury and Chronic Pain? (MHSRS-24-10837)
Presentation Author: Dr. Dawn Neumann

#1805 | Longitudinal Assessment of Ocular Biomarkers in Individuals with Gulf War Illness Symptoms (MHSRS-24-10839)
Presentation Author: Ms. Heather Durkee

#1806 | Sexual Health Difficulties Associated with Adverse Occupational Outcomes Among U.S. Service Members: Findings from the Millennium Cohort Study (MHSRS-24-10902)
Presentation Author: Dr. Judith Harbertson

#1807 | Preliminary Investigation of Predictors of Rehabilitation Needs 10-15 Years After Traumatic Brain Injury: A Veterans Affairs TBI Model Systems Study (MHSRS-24-11004)
Presentation Author: Dr. Marc Silva

#1808 | Military Sexual Trauma Among Veterans with Posttraumatic Headache (MHSRS-24-11069)
Presentation Author: Mr. Christopher Marcotullio

#1809 | Differing Profile of Intervertebral Disc Degenerative Changes in F-35 Pilots Compared to Civilians: The Medical College of Wisconsin Military Aircrew Neck and Back Pain Study (MHSRS-24-11103)
Presentation Author: Dr. Brian Stemper

#1810 | All-Cause Mortality Among United States Military Personnel: Findings from the Millennium Cohort Study, 2001-2021 (MHSRS-24-11233)
Presentation Author: Dr. Felicia Carey

#1811 | Military-Specific Risk and Protective Factors for Melanoma Using Longitudinal Survey Data and Medical Record Diagnoses Among Millennium Cohort Study Participants, 2001-2018 (MHSRS-24-11264)
Presentation Author: Mrs. Anna Rivera

#1812 | Blast Exposure and Diagnoses of TBI and Mental Health Conditions Among Veterans: A Millennium Cohort Study Investigation of High-Level Blast and Low-Level Blast (MHSRS-24-11404)

Presentation Author: Ms. Claire Kolaja

#1813 | Soft Tissue Sarcoma Incidence Among U.S. Military Servicemen: Comparison with the Rates in the General U.S. Population (MHSRS-24-11496)

Presentation Author: Dr. Julie Bytnar

#1814 | Incidence Rates of Bladder and Kidney Cancers Among U.S. Military Servicemen: Comparison with the Rates in the General U.S. Population (MHSRS-24-11497)

Presentation Author: Dr. Julie Bytnar

#1815 | TPOm Treatment to Mitigate Acute Radiation Injury: Multi-Omic Analysis of the Heart (MHSRS-24-11659)

Presentation Author: Dr. Lily Neff

#1816 | U.S. Army and Marine Aviation Corps Exposome Signatures from the Pharmaceutical Impacts on Tinnitus and Hearing Loss (MHSRS-24-11666)

Presentation Author: Dr. Carlos Maldonado

#1817 | Exposure to Airborne Hazards Contributes to Interstitial Lung Diseases Among Deployed Military Personnel: A Weight of Evidence Synthesis of the Scientific Literature (MHSRS-24-11677)

Presentation Author: Dr. James Parrott

#1818 | Factors Associated with PTSD Recovery in a National Sample of Service Members and Veterans (MHSRS-24-11684)

Presentation Author: Dr. Sarah Jurick

#1819 | Longitudinal Trajectories of PTSD and Alcohol Misuse Among Service Members With and Without Combat-Related mild Traumatic Brain Injury (MHSRS-24-11862)

Presentation Author: Dr. Cameron McCabe

#1820 | VA's LIFE Study: Understanding Long-Term Health Effects Related to Military Jet Fuel Exposures (MHSRS-24-11865)

Presentation Author: Dr. Terra Vincent-Hall

#1821 | Chronic Repetitive Head Trauma Disrupts Glymphatic Clearance and the Elimination of Extracellular Tau in an apoE isoform Dependent Manner (MHSRS-24-11869)

Presentation Author: Dr. Benoit Mouzon

#1822 | Immune and Respiratory Health Effects of Exposure to Jet Fuels Used by the U.S. Military: A Systematic Review (MHSRS-24-11901)

Presentation Author: Dr. Samantha Snow

#1823 | Deployment of an Activity Monitoring Program to Complement a Clinical Intervention for Veterans with Gulf War Illness (MHSRS-24-11908)

Presentation Author: Dr. Selene Mak

#1824 | Differential Psychological Impact of Combat Exposure and TBI Among U.S. Vietnam Veterans (MHSRS-24-11918)

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#1825 | Does TBI History or Sleep Quality Moderate the Relationship Between Age and Lateral Ventricle Volume in NICoE Patients? (MHSRS-24-12110)

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#1900 | Understanding Moral Injury in a Marine Student Sample and Its Associations with Mental Health Outcomes (MHSRS-24-12137)

Presentation Author: Dr. Nicole Barczak-Scarboro

#1901 | Gulf War Illness Severity Is Associated with Genetic, Biological, and Deployment Characteristics Using Bayesian Network Analysis (MHSRS-24-12212)

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#1902 | Sense of Responsibility for Combatant and Non-Combatant Injury and Death Among U.S. Army Unmanned Aerial Systems Operators and Maintainers: Associations with Behavioral Health Outcomes (MHSRS-24-12252)

Presentation Author: Ms. Kristiana Carrasquillo

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#1905 | Military Exposures on Marine Student Holistic Health: Moderating Role of Resilience (MHSRS-24-12317)

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#1906 | A Case Series of 39 United States Veterans with mild Traumatic Brain Injury/Brain Wounds Treated with Hyperbaric Oxygen Therapy (MHSRS-24-12337)

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#1907 | Neurological, Cognitive, and Behavioral Health Effects of Exposure to Jet Fuels Used by the U.S. Military: A Systematic Review (MHSRS-24-12450)

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#1910 | The Seamen's Semen: Male Infertility by Military Occupation (MHSRS-24-12562)

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#1913 | Amnion-Derived Multipotent Cell Secretome-Mediated Therapy for Gulf War Illness (MHSRS-24-12719)

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#1914 | A Data Tracking System for the PROject for Military Exposures and Toxin History Evaluation in U.S. Servicemembers (DTS-PROMETHEUS) (MHSRS-24-12726)

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#1915 | Mortality Among Veterans with Epilepsy: Temporal Relationship of TBI Exposure and Epilepsy (MHSRS-24-12779)

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#1916 | Epilepsy Comorbidity Phenotypes: Consistency Between Patient Reported Outcomes and Computational Phenotypes (MHSRS-24-12965)

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#1917 | Effect of Inhalation Exposure of Mn Fumes on Hearing loss (MHSRS-24-12818)

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#1918 | Introversion Moderates the Adverse Effects of Loneliness (MHSRS-24-12830)

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#2000 | Microglia Adaptation with Prolonged High Altitude in a Preclinical Mouse Model (MHSRS-24-13039)

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#2001 | Perceived Military and Occupational Exposures Among Veterans in the Million Veteran Program by Survey Self-Report (MHSRS-24-13044)

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#2002 | Endocrine Disrupting Chemical Mixture Exposure and Risk of Papillary Thyroid Cancer in U.S. Military Personnel: A Nested Case-Control Study (MHSRS-24-13083)

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#2003 | Combat Exposure as a Predictor of Frequent Traumatic Brain Injury and Increased Severity of PTSD Symptoms Among Post-9/11 and Gulf War Veterans (MHSRS-24-13085)

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#2006 | Longitudinal Functional and Neuropsychological Outcomes Five Years after Neuroinvasive La Crosse Virus Exposure in a Marine Recruit: A Case Report (MHSRS-24-13165)
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#2008 | Evaluation of Active Duty Military Personnel with Chronic Respiratory Symptoms Post-COVID Using Cardiopulmonary Exercise Testing (MHSRS-24-13217)
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#2012 | Pulmonary Function Testing in Active Duty Servicemembers Post-COVID-19 Infection (MHSRS-24-13294)
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#2014 | Military Exposures Conceptualized to Promote a Learning Healthcare System: Organizing Complex Occupational and Environmental Exposure Information for Practicing Clinicians, Researchers, and Policy Makers (MHSRS-24-13319)
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MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



MHSRS
2024

Poster Session 3

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Presentation Author: Dr. Simon Pollett

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Presentation Author: Dr. Nhi Khuong

#505 | Development of Thermostable Bivalent Subunit Vaccines Against Nipah Virus (MHSRS-24-11815)

Presentation Author: Mr. Chih-Heng Huang

#506 | mRNA Vaccine Candidate Selection via Cell Surface Antigen Detection for Development of Next Generation Vaccines (MHSRS-24-12320)

Presentation Author: Dr. Thujitha Thuraiamy

#507 | Developing a Military Medical Countermeasure: Contributions of Immune Cell Types to a Live Attenuated Tularemia Vaccine Response (MHSRS-24-12350)

Presentation Author: Dr. Derek Barthels

#508 | Solicited Prospective New Onset Chest Pain Symptoms as Part of Improved Vaccine Safety Surveillance Research: Significant Differences Between Smallpox and Influenza Vaccines Using Existing Data from Prior Published Studies (MHSRS-24-12659)

Presentation Author: Dr. Renata Engler

#509 | Enhanced Immunomonitoring of Vaccine-Specific Cellular Responses in Candidate HIV Vaccine Trials (MHSRS-24-12730)

Presentation Author: Dr. David Leggat

#510 | Extracellular Vesicle Isolation Methods Identify Distinct HIV-1 Particles Released from Chronically Infected T-cells (MHSRS-24-12935)

Presentation Author: Dr. Fatah Kashanchi

#511 | Effective Upper Respiratory Antiviral Therapy Using Nitric Oxide as Infection Mitigation in Military Settings (MHSRS-24-12982)

Presentation Author: Dr. Gilly Regev

#512 | Vaccine Acceleration by Modular Progression (VAMP): Augmenting Today's Plague Vaccine with Tomorrow's Biological Response Modifier (MHSRS-24-13050)

Presentation Author: Ms. Wai Kwan Chung

#513 | Mechanisms of Induction of Protective Immunity by Small Extracellular Vesicles Released During Infection with Viral or Bacterial Human Pathogens (MHSRS-24-13137)

Presentation Author: Dr. Ramin Hakami

#514 | Evaluation of Tetravalent Dengue DNA Prime-Boost Vaccination for Immunogenicity and Efficacy in Non-Human Primates (MHSRS-24-13256)

Presentation Author: Dr. Peifang Sun

#515 | Enhancing Combat Healthcare: The Paradigm Shift to Intramuscular Antibiotic Delivery (MHSRS-24-13266)

Presentation Author: COL Sean Hollonbeck

#516 | Demonstration of VaxiPatch, a Thermostable, Low-Cost Microarray Patch Vaccine Platform – Application to Vesicular Stomatitis Viral (VSV) Vector-Based Vaccines for Emerging Infectious Diseases (MHSRS-24-13317)

Presentation Author: Dr. Thomas Ellison

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Presentation Author: Dr. Kunal Mitra

#518 | Investigation of the Frictional Characteristics of a Manufactured Tendon Lubricant in Canine Peroneus Longus (PL) Tendons In Vitro (MHSRS-24-11039)
Presentation Author: Dr. Peter Amadio

#519 | The Effects of a Copper-Iodine Complex-Based Wound Irrigation Solution on the Reduction of Biofilms Grown on Implant Materials and In Vivo Porcine Wounds (MHSRS-24-11198)
Presentation Author: Dr. Steven Kavros

#520 | Do They All Need Surgical Debridement? Infection in Operative Ankle Fractures (MHSRS-24-11313)
Presentation Author: Dr. Nicholas Healy

#521 | Outpatient Limb Deformity & Reconstruction Surgery (MHSRS-24-11316)
Presentation Author: Dr. Ainsley Bloomer

#522 | Avoiding the Olecranon Osteotomy: The Anconeus-Triceps Hemipeel Approach for Displaced Intra-Articular Distal Humerus Fractures (MHSRS-24-11331)
Presentation Author: Dr. Andrew Rees

#523 | Open Reduction and Internal Fixation Compared with Primary Subtalar Arthrodesis for Treatment of Displaced Intraarticular Calcaneal Fractures (MHSRS-24-11336)
Presentation Author: Dr. Jenna-Leigh Wilson

#524 | Comparison of Outpatient vs. Inpatient Lower Extremity Nonunion Surgery (MHSRS-24-11341)
Presentation Author: 2LT Bradley Lauck

#525 | Hydrolyzed Collagen Powder Dressing Has Direct Favorable Effects on Wound Inflammation, Perfusion, and Tensile Strength (MHSRS-24-11384)
Presentation Author: Dr. Manishekhar Kumar

#600 | Plant Cysteine Protease Enzymes Improve Wound Inflammation by Modifying Macrophage Function (MHSRS-24-11389)
Presentation Author: Dr. Manishekhar Kumar

#601 | Is Fecal Diversion Necessary in the Treatment of Open Pelvic Fractures with Rectal Injuries? (MHSRS-24-11417)
Presentation Author: Dr. Clay Spitler

#602 | Can Patients Have a Regional Block if the Limb Is or Was Infected? (MHSRS-24-11426)
Presentation Author: Dr. Alicia Williams

#603 | An Exosome Laden Hydrogel Wound Dressing That Can Be Point-of-Need 3D Manufactured in Austere Environments (MHSRS-24-11527)
Presentation Author: Dr. Cate Wisdom

#604 | Applications and Outcomes of Physician-Directed Antibiotic-Loaded Cement and Calcium Sulfate in Orthopaedic Surgeries: A Retrospective Study (MHSRS-24-11689)
Presentation Author: Dr. Bailey Fearing

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Presentation Author: Ms. Alicia Lofgren

#606 | Novel Antibiotic for the Treatment of Multidrug-Resistant ESKAPEE Pathogen Infections (MHSRS-24-11803)
Presentation Author: Mr. Michael Liu

#607 | Chitosan oligosaccharides Regulate the Expression and Activity of Thrombomodulin in the HUVEC cell from Large Scale Trauma on the Battlefield Injury (MHSRS-24-11835)
Presentation Author: Col Sheng-Der Hsu

#608 | A Retrospective Analysis of Trauma Patients Who Received Thoracic Epidural Catheters versus Erector Spinae Plane Regional Blocks (MHSRS-24-11952)
Presentation Author: Capt Kaitlin Beyrau

#609 | Clinical Observational Study of Bacteriophage Therapy in Skin and Soft Tissue Infections in Georgia (MHSRS-24-12000)
Presentation Author: Dr. Anna Nanava

#610 | Dietary Interventions to Prevent Heterotopic Ossification Following Trauma (MHSRS-24-12078)
Presentation Author: Dr. Robert Tower

#611 | Tissue-Specific VEGF-D Overexpression Induces Lymphangiogenesis and Heterotopic Bone Resorption (MHSRS-24-12097)
Presentation Author: Ms. Neda Vishlaghi

#612 | CXCL12-Expressing Limosilactobacillus reuteri Has Clinically Relevant Antimicrobial Effects of Multidrug-Resistant Bacteria (MHSRS-24-12130)
Presentation Author: Dr. Hava Lofton Tomenius

#613 | Can Electrical Stimulation Enhance Warfighter Readiness by Preventing Keloid and Excessive Scar Formation: A Scoping Review (MHSRS-24-12162)
Presentation Author: Lt Robert George

#614 | Reducing Excessive Posttraumatic Scarring in Musculoskeletal Tissues and Peripheral Nerves Through Collagen Fibrillogenesis Targeting (MHSRS-24-12537)
Presentation Author: Dr. Andrzej Fertala

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Presentation Author: Dr. Jonathan Saxe

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Presentation Author: Dr. Jonathan Snedeker

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Presentation Author: Dr. Joseph Levy

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Presentation Author: Dr. Hyun-Sang Park

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Presentation Author: Dr. Nathaniel Bates

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Presentation Author: Dr. Ryan McAuley

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Presentation Author: Mr. Jared Robinson

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Presentation Author: Dr. Nasser Koopaei

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Presentation Author: Dr. Elayaraja Kolanthai

#625 | Integrating Automated High-Throughput Scratch Assay and Cell Painting for Comprehensive Analysis of Cell Migration and Wound Healing (MHSRS-24-11464)
Presentation Author: Dr. Krishna Kota

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#702 | Therapeutic Bacteriophages Active Against Diverse Lineages of Extensively Drug-Resistant *Klebsiella pneumoniae* (MHSRS-24-11055)
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#703 | Claromer® Peptoids as a Potential Treatment for *N. gonorrhoea* Infections (MHSRS-24-11066)
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#713 | Role of Uncharacterized Toxin-Antitoxin System in Growth and Biofilms of *Pseudomonas aeruginosa* (MHSRS-24-12366)

Presentation Author: Dr. Monique van Hoek

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Presentation Author: Dr. Mikeljon Nikolich

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#717 | Polyproline Peptide Biofilm Disruption of *Klebsiella pneumoniae* MRSN Diversity Panel (MHSRS-24-12947)

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Presentation Author: Dr. Corley Mills

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#721 | A Digital Microfluidic Sepsis Diagnostic Predicts Bacterial Infection Status Using Host Transcriptomic Response (MHSRS-24-13422)

Presentation Author: Dr. Rainer Ng

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Presentation Author: Dr. Prakash Nallathamby

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Presentation Author: Dr. Mina Izadjoo

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Presentation Author: Ms. Kylie Rapso

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#805 | Microfluidic Technology for Bacteriophage Isolation and Purification (MHSRS-24-11575)

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Presentation Author: Dr. Mohamed El Masry

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Presentation Author: Dr. Sheetal Vali

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Presentation Author: Mrs. Laisa Bonafim Negri

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Presentation Author: Dr. Alexander Bobrov

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Presentation Author: Ms. Monica Campbell

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Presentation Author: Ms. Erica Sercy

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Presentation Author: Ms. Sofia Assent

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Presentation Author: Mr. AJ Singhal

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Presentation Author: Dr. Miloslav Sailer

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Presentation Author: Mr. Gregg Peterson

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Presentation Author: Dr. Nicholas Ashton

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Presentation Author: Mr. Alec Carruthers

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Presentation Author: LTC Brian Gregg

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Presentation Author: Ms. Katerena Sirhan

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Presentation Author: Mr. Nabarun Chakraborty

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Presentation Author: Mr. Nabarun Chakraborty

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Presentation Author: Dr. Robert Moritz

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#1100 | Simple, Consistent Method to Calculate Loading Rates With or Without an Impact Peak (MHSRS-24-12114)
Presentation Author: Dr. Brian Baum

#1101 | Exploring Gait Symmetry: Implications for Physical Performance and Psychosocial Factors During Recovery from Acute Tibia or Femur Fracture (MHSRS-24-12144)
Presentation Author: Mr. William Charlton

#1102 | Save a Limb in Prolonged Field Care: Assessment of Perfusion with Novel Ultrasound and Power Doppler-Techniques in Extremities at Risk of Compartment Syndrome (MHSRS-24-12176)
Presentation Author: MAJ Philipp Hube

#1103 | Military Orthopaedics Tracking Injuries and Outcomes Network (MOTION) (MHSRS-24-12178)
Presentation Author: Mr. Matthew Bradley

#1104 | Trunk-Pelvic Coordination During Submaximal and 3-Repetition Maximal Deadlift (MHSRS-24-12292)
Presentation Author: Mr. Lucas Sarantos

#1105 | A Wearable Leg Sleeve with Integrated Soft Textile Electrodes for Electroneurographic Assessment of Lower Extremity Injury Risk and Rehabilitation (MHSRS-24-12609)
Presentation Author: Dr. Megan Blackwell

#1106 | Application of Explainable AI (XAI) for the Prediction and Prevention of MSKIs, TBI Detection and Performance Optimization (MHSRS-24-12629)
Presentation Author: Mr. George Gosieski

#1107 | Using Knee Extensor-Flexor Torque and Functional Performance Measurement with Biomechanical Analysis to Understand the Risk of Musculoskeletal Injury in the Intact Limb of Young Veterans with Lower Limb Amputations Due to Battlefield Trauma (MHSRS-24-12674)
Presentation Author: Mr. Jose Manuel Frias Bocanegra

#1108 | Musculoskeletal Simulation Tools for Investigating Neck Pain in Military Pilots and Aircrew (MHSRS-24-12752)
Presentation Author: Dr. Nathaniel Pickle

#1109 | Assessing Effects of Load Carriage on Gait Kinematics: Screening for Musculoskeletal Injury Risk Using Instrumented Insoles (MHSRS-24-12922)
Presentation Author: 2LT Megan Sax van der Weyden

#1110 | Title: Tumefactive Fibrofatty Pseudotumor of the Nuchal Region and Upper Back: A Clinicopathological Analysis of the Findings in 24 Adult Male Active-Duty Soldiers and Veterans (MHSRS-24-12971)
Presentation Author: Dr. Justin Wells

#1111 | Body-Worn Sensors for Risk of Injury Prediction During Military Training: Prospective Injuries Observed in the 82nd Airborne Division (MHSRS-24-13053)
Presentation Author: Dr. Donald Goss

#1112 | Lessons from Enhanced Injury Surveillance in Exercise Setting of the Canadian Armed Forces (CAF) (MHSRS-24-13059)
Presentation Author: Dr. Natalia Abraham

#1113 | Achilles Tendon Novel Ultrasound Measures to Inform Clinical Care (MHSRS-24-13184)
Presentation Author: Mr. John Persinger

#1114 | Rethinking Acute Compartment Syndrome Management: Role of Continuous Pressure Monitoring (MHSRS-24-13258)
Presentation Author: Mr. Yasser Bouklouch

#1115 | Evaluating Smart Insoles to Track and Treat Lower Extremity Overuse Injuries (MHSRS-24-13275)
Presentation Author: Mr. Adam Curry

#1116 | A Computational Human Body Model of the Male Warfighter Developed for Injury and Incapacitation Prediction and Improved Personal Protective Equipment (PPE) Design (MHSRS-24-13287)
Presentation Author: Dr. Zachary Hostetler

#1117 | Rasch Analysis of the Anterior Knee Pain Scale in Adults with Patellofemoral Pain (MHSRS-24-13400)
Presentation Author: Dr. Michael Toland

#1118 | How Well Does the Knee Injury and Osteoarthritis Outcome Score Function in Adults with Patellofemoral Pain? A Rasch Analysis (MHSRS-24-13430)
Presentation Author: Dr. Michael Toland

#1119 | Evaluating the Efficacy of the KOOS Patellofemoral Subscale in Adults with Patellofemoral Pain: A Rasch Analysis Perspective (MHSRS-24-13440)
Presentation Author: Dr. Michael Toland

#1120 | Evaluation of The Pain Self-Efficacy Questionnaire in Adults with Patellofemoral Pain: Rasch Analysis (MHSRS-24-13494)
Presentation Author: Dr. Michael Toland

#1121 | Evaluation of a Single Torso-Worn Inertial Sensor for Military Occupational Low Back Disorder Risk Monitoring (MHSRS-24-13414)
Presentation Author: Mr. Charles Weisenbach

#1122 | Study of Head and Neck Injury Based on a Musculoskeletal Model for Automobile, Sports, and Blast-Induced Injuries (MHSRS-24-13459)
Presentation Author: Dr. Ashfaq Adnan

#1123 | Unveiling the Clinical Response to Platelet-Rich Plasma in Knee Osteoarthritis (MHSRS-24-13563)
Presentation Author: Ms. Kaitlyn Whitney

#1124 | Objective Self-Assessment of Chronic Ankle Instability – A Preliminary Study (MHSRS-24-11249)
Presentation Author: Dr. Mst Kamrun Kamrunnahar

SOLUTIONS TO ACCELERATE RECOVERY FROM NEUROMUSCULOSKELETAL INJURY

#1125 | Early Transcriptomic Markers to Predict the Outcome of a Critical Sized Tibial Bone Defect: Whole Genome Analysis of a Minipig Model (MHSRS-24-10903)
Presentation Author: Mr. Nabarun Chakraborty

#1200 | Application of a Topical Metformin Lotion to Prevent Tendon Overuse Injury in a Mouse Model (MHSRS-24-10836)
Presentation Author: Dr. James Wang

#1201 | Acceleration of Bone Fracture Repair with a Fracture-Targeted Bone Anabolic Agent (MHSRS-24-11037)
Presentation Author: Dr. Jeffery Nielsen

#1202 | Innervation of the Bioengineered Skeletal Muscle Construct in a Muscle-Nerve Injury Model (MHSRS-24-11190)
Presentation Author: Dr. Ji Hyun Kim

#1203 | Muscle Fiber Fragments as a Point of Care Therapy for Restoration of Muscle Tissue Function (MHSRS-24-11191)
Presentation Author: Dr. Ji Hyun Kim

#1204 | Safety and Efficacy of a Novel Therapy Collar for Forward Head Posture and Chronic Neck Pain in Active Duty Service Members (MHSRS-24-11257)
Presentation Author: Dr. Marin Smith

#1205 | Spectroradiometric Analyses of Commercial Photobiomodulation Technologies (MHSRS-24-11409)
Presentation Author: Ms. Margaret Hollander

#1206 | Pretreatment with 830nm Prevents Muscular Fatigue in Intense Exercise in Mice (MHSRS-24-11550)
Presentation Author: Dr. Nashwa Cheema

#1207 | Assessment of Implant-Associated Host Cell Response Reveals Distinct Immune Cell Populations (MHSRS-24-11696)
Presentation Author: Dr. Bailey Fearing

#1208 | Empowering Recovery: Enhancing Patient Preparedness and Education Post-Anterior Cruciate Ligament Injury (MHSRS-24-11748)
Presentation Author: Dr. Manuela Gaviria

#1209 | In Sequence Anti-Fibrotic Treatment and Rehabilitation for Volumetric Muscle Loss Injury (MHSRS-24-11773)
Presentation Author: Dr. Sarah Greising

#1210 | Nerve Lengthening Followed by End-to-End Repair Results in Superior Neuromuscular Outcomes versus Autografts for Large-Gap Nerve Injury (MHSRS-24-11794)
Presentation Author: Dr. Sameer Shah

#1211 | Optimize Performance and Mitigate Falls in Warfighters with Lower Limb Trauma and/or Loss - The Return-to-Duty with Lower Extremity Augmented Rehabilitation (ReLEARN) System (MHSRS-24-11863)

Presentation Author: Dr. Lars Oddsson

#1212 | Enhancing Military Rehabilitation Strategies: Diffusion Tensor Imaging for Non-Surgical Assessment of Axonal Regeneration in Traumatic Nerve Injury (MHSRS-24-11891)

Presentation Author: Ms. Sara Chaker

#1213 | Observed Running Biomechanics During a Multimodal Treatment Approach for Chronic Exertional Compartment Syndrome in an Active-Duty Service Member: A Case Study (MHSRS-24-12043)

Presentation Author: Dr. Teonette Velasco

#1214 | Identification of Skeleton-Innervating Peripheral Sensory Neurons and Their Role in Stress Fracture Repair (MHSRS-24-12048)

Presentation Author: Dr. Mingxin Xu

#1215 | Lower Extremity Torque Is Associated with Physical Health, but Not Mental Health in Females with Patellofemoral Pain (MHSRS-24-12084)

Presentation Author: Dr. Neal Glaviano

#1216 | Radiation Decreases Heterotopic Ossification (HO) Progenitor Cells Osteogenic Fate to Prevent Traumatic HO in a Burn- and Trauma-Relevant Mouse Model (MHSRS-24-12088)

Presentation Author: Dr. Yuanyuan Zhang

#1217 | Initiation of Bony Bar Formation by Sensory Neurons After Growth Plate Injury (MHSRS-24-12091)

Presentation Author: Dr. Xin Xing

#1218 | The Influence of Psychosocial Factors on Response to Epidural Steroid Injection for Chronic Radicular Pain: A Longitudinal Pilot Study (MHSRS-24-12238)

Presentation Author: Dr. Meredith Stensland

#1219 | Simultaneous Musculoskeletal Assessment with Real Time Ultrasound (SMART-US) for Muscle Level Monitoring After Neuromusculoskeletal Injury (MHSRS-24-12264)

Presentation Author: Ms. Erica King

#1220 | Graphene-Based Wearable Ultrasound Patch for Assessing Muscle Function and Injuries (MHSRS-24-12521)

Presentation Author: Dr. Shirin Movaghgharnezhad

#1221 | Non-Invasive Methods to Access Peripheral Nerve Quality (MHSRS-24-12704)

Presentation Author: Ms. Kelly Santos Roballo

#1222 | Effects of a Neurocognitive Multitask Activity on Lower Extremity Functional Performance Tests in Healthy Military Age Adults (MHSRS-24-12817)

Presentation Author: Dr. Sidney Stoddard

#1223 | Investigating Orthobiologics After Platelet-Rich Plasma and Photobiomodulation Treatment of Knee Osteoarthritis (MHSRS-24-13108)

Presentation Author: Mr. Robert Rossi

#1224 | Investigation of the Effectiveness of Shockwave Therapy, Photobiomodulation, and Physical Therapy in the Management of Non-Insertional Achilles Tendinopathy (MHSRS-24-13119)

Presentation Author: Mr. Robert Rossi

#1225 | Dynamic Multi-Planar Neuromuscular Neck Training (TopSpin360) Reduces Headache and Neck Pain Associated with Post-Concussion Syndrome: A Feasibility Randomized Controlled Trial (MHSRS-24-13303)

Presentation Author: Dr. Theo Versteegh

#1300 | Expedite Rehabilitation from Neuromuscular Injury via Local Muscle Vibration (MHSRS-24-13390)

Presentation Author: Dr. Nathan Wages

#1301 | MIRROR - Photobiomodulation Research Portfolio to Enhance Military Readiness (MHSRS-24-13454)

Presentation Author: Ms. Elizabeth Metzger

#1302 | Assessing the Impact of Post-Exercise Photobiomodulation Application on Performance, Recovery, and Behavioral State in a Trained Special Operator Population (MHSRS-24-13544)

Presentation Author: Dr. Nicholas Hughes

ADVANCEMENTS IN PROSTHETIC AND EXOSKELETAL TECHNOLOGIES THAT FACILITATE RETURN TO DUTY FOLLOWING NEUROMUSCULOSKELETAL INJURIES

#1303 | A Lighter, Smaller, and More User Friendly Goralign-PSA Self-Adaptive Prosthetic Ankle (MHSRS-24-11373)

Presentation Author: Dr. Mst Kamrun Kamrunnahar

#1304 | Clinical Outcome of Return to Run in IDEO Users with Lower Limb Musculoskeletal Injury (MHSRS-24-10859)

Presentation Author: Dr. Michelle Lockwood

#1305 | The Caesar Foot: A Bimodal Run-Walk Prosthetic Foot (MHSRS-24-11054)

Presentation Author: Mrs. Jennifer Johansson

#1306 | Development of a Pre-Clinical Ovine Model for an Osseointegrated Neural Interface (MHSRS-24-11073)
Presentation Author: Dr. Aaron Dingle

#1307 | Effects of Pneumatic-Powered Lightweight Knee Exoskeleton on Military-Relevant Tasks and User Feedback (MHSRS-24-11131)
Presentation Author: Dr. Tak Nagai

#1308 | The Effect of Carbon Fiber Custom Dynamic Orthosis Use and Design on Limb Loading After Lower Extremity Traumatic Injury (MHSRS-24-11132)
Presentation Author: Dr. Jason Wilken

#1309 | The Effect of Carbon Fiber Custom Dynamic Orthosis Type on Lower Extremity Kinematics and Kinetics After Traumatic Lower Limb Injury (MHSRS-24-11137)
Presentation Author: Dr. Jason Wilken

#1310 | The Effects of Carbon Fiber Custom Dynamic Orthosis Posterior Strut Stiffness on Foot Loading During Gait (MHSRS-24-12415)
Presentation Author: Dr. Jason Wilken

#1311 | The Effects of Proximal Cuff Tightness on Foot Loading During Gait with Carbon Fiber Custom Dynamic Orthoses (MHSRS-24-12432)
Presentation Author: Dr. Jason Wilken

#1312 | The Effects of Carbon Fiber Custom Dynamic Orthoses Proximal Cuff Design on Foot Loading During Gait (MHSRS-24-12842)
Presentation Author: Dr. Jason Wilken

#1313 | The Effect of a Carbon Fiber Custom Dynamic Orthosis on Patient-Reported Outcomes and Performance-Based Measures After Traumatic Lower Limb Injury (MHSRS-24-12885)
Presentation Author: Dr. Jason Wilken

#1314 | Perceived Socket Comfort and Function Does Not Correlate with Residual Limb Skin Shear Strain During Gait in Individuals with Transfemoral Amputation (MHSRS-24-11136)
Presentation Author: Mr. Tom Gale

#1315 | Development and Validation of an Assessment of Multi-Grip Prosthetic Performance (MHSRS-24-11173)
Presentation Author: Dr. Deanna Gates

#1316 | Utilizing a Disinfection Technology to Assist in Healing Infected Residual Limb Wounds in Veterans (MHSRS-24-11548)
Presentation Author: Mr. Xin "Justin" Zhou

#1317 | Thermal Imaging Methodology to Quantify Reactive Hyperemia Response (MHSRS-24-11583)
Presentation Author: Dr. Molly Baumann

#1318 | Predictors of Low Back Pain in Service Members with Traumatic Transfemoral Limb Loss (MHSRS-24-12135)
Presentation Author: Dr. Courtney Butowicz

#1319 | Assessment of Minimum Foot Clearance with Four Ankle-Foot Prostheses in Free-Living, Unsupervised Neighborhood Walks (MHSRS-24-12243)
Presentation Author: Ms. Katherine Fehr

#1320 | Comparison of Rollover-Shape Between Individuals with Unilateral Transtibial or Transfemoral Limb Loss Using of Passive and Powered Prosthetic Devices (MHSRS-24-12416)
Presentation Author: Mr. David Herlihy

#1321 | The Effects of Damping Componentry on Stance Phase Prosthetic Work (MHSRS-24-12843)
Presentation Author: Mr. Trevor Kingsbury

#1322 | Improvements on Upper Extrimity Function After Utilizing a Myoelectric Powered Wearable Orthotic Combined with Virtual Reality Gaming in Persons with Acute SCI (MHSRS-24-12859)
Presentation Author: Dr. Ghaith J. Androwis

#1323 | Amputee Limb Health Assessment Using Non-Invasive Spatial Frequency Domain Imaging of Tissue Oxygenation and Hemoglobin Perfusion (MHSRS-24-12919)
Presentation Author: Dr. Sashwati Roy

#1324 | The Influence of Socket Fit on Gait Kinematics in Individuals with Transfemoral Amputations (MHSRS-24-12946)
Presentation Author: Dr. Paige Paulus

#1325 | Device Complexity May Not Guarantee Improved Function in Individuals with Upper Extremity Amputations: A Case Study (MHSRS-24-13089)
Presentation Author: Dr. Paige Paulus

#1400 | Exoskeleton Boots Provide Equivalent Mediolateral Ankle Bracing While Preserving Agility Compared to Standard-Issue Equipment (MHSRS-24-13023)
Presentation Author: Dr. Corbin Rasmussen

#1401 | Toward Data Driven Prescription Personalization of Microprocessor Prosthetic Knees (MHSRS-24-13145)
Presentation Author: Ms. Kinsey Herrin

#1402 | Evaluation of a Novel Spray Foam Energy Return Ankle Splint for Self Evacuation (MHSRS-24-13153)
Presentation Author: Mr. Duke Loke

#1403 | Methods for Enabling Real-Time Human-in-the-Loop Optimization of a Powered Knee-Ankle Prosthesis (MHSRS-24-13376)
 Presentation Author: Dr. Ross Neuman

#1404 | 3-Dimensional Modeling of Omnidirectional Hip Exosuit Configurations for Accomplishing Various Movement Tasks (MHSRS-24-13387)
 Presentation Author: Dr. Ross Neuman

#1405 | Development of a Portable Monitoring System for Enhanced Prosthetic and Orthotic Assessments (MHSRS-24-13409)
 Presentation Author: Dr. Stephanie Carey

ADVANCES IN REGENERATIVE MEDICINE FROM POINT OF INJURY TO DEFINITIVE CARE AND BEYOND

#1406 | In Vivo Assessment of AMP2, a Novel Ceramic-Binding BMP-2, in a Sheep Interbody Fusion Model (MHSRS-24-10906)
 Presentation Author: Dr. David Stewart

#1407 | Engineering a Bioactive Medical Device for Large Bone Defect Repair in a Sheep Model (MHSRS-24-11015)
 Presentation Author: Dr. Yunzhi Yang

#1408 | Mechanical Stimulation Improves Functional Recovery After Volumetric Muscle Loss in Rats (MHSRS-24-11152)
 Presentation Author: Mrs. Ariana Fantakis Ettore

#1409 | Controlled Cooling Improves Functional Recovery After Volumetric Muscle Loss in Rats (MHSRS-24-13519)
 Presentation Author: Mrs. Ariana Fantakis Ettore

#1410 | Testing the Reliability of Optical Coherence Tomography to Measure Epidermal Thickness and Distinguish Volar and Non-Volar Skin (MHSRS-24-11288)
 Presentation Author: Dr. Molly Baumann

#1411 | Treatment of Cellular Spheroids with Bioactive Peptides to Support Human Hair Follicle Neogenesis in Xenografts (MHSRS-24-11355)
 Presentation Author: Dr. Donald Aduba

#1412 | Dermal Epidermal Composites Treated with Bioactive Peptides Show Improved Graft Durability and Epidermal Thickness (MHSRS-24-11422)
 Presentation Author: Dr. Sandhya Xavier

#1413 | In Vivo Safety of a Novel Nerve Coaptation Device on an Intact Nerve in a Rabbit Model (MHSRS-24-11549)
 Presentation Author: Dr. Geetanjali Bendale

#1414 | Usability of Nerve Tape: A Novel Sutureless Nerve Coaptation Device (MHSRS-24-12066)
 Presentation Author: Dr. Geetanjali Bendale

#1415 | Development of a Biofunctionalized, Blend-Electrospun Scaffold to Direct Biochemical Signaling in Nerve Repair (MHSRS-24-11626)
 Presentation Author: Dr. Greg Harris

#1416 | A Combinatorial Strategy for Peripheral Nerve Repair Utilizing Photobiomodulation Therapy (PBMT) and 3D Printed Collagen Nerve Conduits (MHSRS-24-11651)
 Presentation Author: Dr. Christopher Fellin

#1417 | Nerve Tape for Rapid and Reliable Nerve Repair in Military Settings (MHSRS-24-11669)
 Presentation Author: Dr. Isaac Clements

#1418 | Development of a Universal Bioreactor Platform for Regenerative Medicine Applications (MHSRS-24-11768)
 Presentation Author: Mr. Adit Mehta

#1419 | Thera-101 Secretome Influence on Angiogenesis and Bone Regeneration in a Rat Critical-Size Calvarial Defect Model (MHSRS-24-11860)
 Presentation Author: Dr. Annette Rodriguez

#1420 | Sensory Nerve Deficiency Enhances Achilles Tendinopathy in Models of Tendon Overuse (MHSRS-24-11906)
 Presentation Author: Dr. Manyu Zhu

#1421 | Development of a Sensor-Integrated Uniaxial Bioreactor for Maturation of Muscle Tissue (MHSRS-24-11948)
 Presentation Author: Dr. Po-Feng Lee

#1422 | Multiaxial Bioreactor Integrated with an Environmental Monitoring System for the Treatment of Skin Wounds (MHSRS-24-11954)
 Presentation Author: Dr. Seunggyu Jeon

#1423 | Bone Regenerated with 3D Printed Scaffolds and Autologous Adipose Derived Stem Cells Demonstrates Increased Bone Area and Bone Formation Rate Following Dynamization (MHSRS-24-11973)
 Presentation Author: Dr. David Margolis

#1424 | 3D Printed Composite Ceramic Polymer Scaffolds Demonstrate Increased Bone Growth and Mechanical Coupling in a Rat Model (MHSRS-24-12284)
 Presentation Author: Dr. David Margolis

#1425 | CD201 Expression Marks Distinct Human Osteoprogenitor cells Regulated by Wnt Signaling for Bone Regeneration (MHSRS-24-11978)
 Presentation Author: Dr. Neelima Thottappillil

#1500 | Sustained Dynamic Compression Device Provides Continuous Compression in the Setting of Bone Resorption Following Arthrodesis in an Ovine Model (MHSRS-24-12046)
Presentation Author: Dr. David Safranski

#1501 | Influence of Sexual Dimorphism on Volumetric Muscle Loss and Response to Regenerative Treatment (MHSRS-24-12207)
Presentation Author: Dr. Jessica Motherwell

#1502 | Large Scale Manufacturing and Evaluation of hTERT-Immortalized MSC-Derived Extracellular Vesicles for Reversal of Irradiation-Induced Cellular Damage (MHSRS-24-12266)
Presentation Author: Dr. Heather Branscome

#1503 | Development of Hydrogel Scaffolds with Tunable Mechanical Properties for Applications in Combat-Sustained Peripheral Nerve Injuries (MHSRS-24-12488)
Presentation Author: Ms. Kylie Schmitz

#1504 | A Pilot Study of Photochemical Augmentation of Ligament Repair in a Swine Model (MHSRS-24-12836)
Presentation Author: Dr. Robert Redmond

#1505 | Dynamic Self-Regenerating Tissue (dSRT) for Articular Cartilage and Meniscus Repair (MHSRS-24-12864)
Presentation Author: Dr. Robert Redmond

#1506 | Photochemical Tissue Passivation for Prevention of Joint Inflammation (MHSRS-24-12892)
Presentation Author: Dr. Robert Redmond

#1507 | Calcium-Zoledronic Acid Nanoparticles in Microparticles for Sustained and Targeted Delivery to Activated Macrophages: A Potential Immunomodulatory Therapy for Post-Traumatic Osteoarthritis (MHSRS-24-12862)
Presentation Author: Dr. Era Jain

#1508 | A New Combinatorial Approach for Temporomandibular Joint Repair: Fractional Laser Treatment with Dynamic Self-Regenerating Cartilage (MHSRS-24-12870)
Presentation Author: Mr. Fernando Guastaldi

#1509 | Generation of MHC Mismatched Porcine Embryos and Offspring Using Blastocyst Complementation Strategies (MHSRS-24-12909)
Presentation Author: Dr. Mary Garry

#1510 | Clinical Translation and Evaluation of Brief Electrical Stimulation Therapy to Accelerate Nerve Regeneration (MHSRS-24-12933)
Presentation Author: Dr. Eric Walker

#1511 | Intraspecies Blastocyst Complementation to Engineer Vascularized Skeletal Muscle (MHSRS-24-12950)
Presentation Author: Dr. Daniel Garry

#1512 | Development of Wearable Systems for the Early Detection of Vascular Composite Allograft Rejection (MHSRS-24-13006)
Presentation Author: Ms. Julia Slade

#1513 | A Porcine Vascularized Composite Allograft Model for Assessing Early Prognostic Biomarkers of Rejection (MHSRS-24-13079)
Presentation Author: Ms. Caitlin Blades

#1514 | Total Mandibular Arch Reconstruction in an Equine Patient: Utilizing A Novel Bone Void Filler for Comprehensive Fracture Repair (MHSRS-24-13116)
Presentation Author: Dr. Florin Onisor

#1515 | A Novel Injectable Composite Collagen Hydrogel for Soft Tissue Augmentation (MHSRS-24-13299)
Presentation Author: Dr. Jason Spector

#1516 | Mechanical Stimulation Improves Functional Recovery from Volumetric Muscle Loss Injury in Swine (MHSRS-24-13340)
Presentation Author: 2LT Mitchell Kennedy

#1517 | ImmuneChip+: Advancing Tissue Chip Usability and Immune System Modeling (MHSRS-24-13426)
Presentation Author: Dr. Ben Perman

#1518 | The Role of the Extracellular Matrix in Osteogenesis and Angiogenesis in Hydroxyapatite Scaffolds to Leverage for Critical Sized Bone Defect Regeneration (MHSRS-24-13477)
Presentation Author: Dr. Alisa Isaac

DESIGN, PREVENT, AND IMPLEMENT: ADVANCEMENTS IN OSSEOINTEGRATION TECHNOLOGY AND OUTCOMES

#1519 | Keratinocytes Hemidesmosomes Upregulation and Infection Prevention by Dual Peptide Nanocoatings for Osseointegrated Implants for Amputees (MHSRS-24-11282)
Presentation Author: Mr. Conrado Aparicio

#1520 | Optimized Osseointegration of Titanium Implant Surfaces for Maxillofacial Reconstructions (MHSRS-24-11830)
Presentation Author: Lt. Col. Andreas Pabst

#1521 | A Novel Porous Bio Ceramic Material, Adaptos, Used as a Bone Substitute in Skeletal Repair During Surgery with the Potential to Support Polytrauma in the Modern War Fighter During Combat and Civilian Discharge (MHSRS-24-11855)
Presentation Author: Dr. Kaarlo Paakinaho

#1522 | Catechol-Modified Multifunctional Hydrogel for Improved Durability of the Skin/Implant Interface (MHSRS-24-13353)
Presentation Author: Dr. Isha Mutreja

#1523 | Patient-Matched Orthopedic Implant Treating Segmental Defects with Mechanobiologic Activation for Limb Salvage Procedures (MHSRS-24-13371)
Presentation Author: Dr. Ali Kiapour

FORCE HEALTH PROTECTION: OPERATIONAL EXPOSURE RESEARCH AND PREDICTIVE RISK METHODS

#1524 | Effects of Occupationally Military-Relevant Particle Mixtures (SiO₂, CdO, Cr₂O₃) on A549 Human Pulmonary Epithelial Cells (MHSRS-24-10863)
Presentation Author: Capt Isabella Muffoletto

#1525 | Retrospective Cohort Study of Pure Tone Audiometry Hearing Changes from Ototoxic Metals and Solvents, Continuous Noise, and Impulse Noise Exposures at Hill Air Force Base from 2005 to 2019 (MHSRS-24-11084)
Presentation Author: Dr. Jeremy Slagley

#1600 | Detecting Changes in Volatile Organic Compounds with a Multi-Hazard Sampling Network (MHSRS-24-11330)
Presentation Author: Mr. Oliver Stroh

#1601 | Tools to Leverage for a Directed Energy Surveillance Program - Lessons Learnt from Blast Surveillance Programs (MHSRS-24-11531)
Presentation Author: LTC Brian Johnson

#1602 | Revolutionizing Field Medical Care: A Compact, Multifunctional Irradiator for Warfighter Medical Readiness (MHSRS-24-11587)
Presentation Author: Mr. Scott Cohen

#1603 | Explore the Exposure Model of Air Quality Inside Submarines and Its Possible Health Effects on Naval Personnel (MHSRS-24-11914)
Presentation Author: CDR Ke-Ting Pan

#1604 | Establishment of a Zebrafish Toolbox for Rapid Toxicity Screening (MHSRS-24-12053)
Presentation Author: Mr. Mark Widder

#1605 | Rapid Screening of Chemicals for Potential to Cause Specific Toxidromes (MHSRS-24-12136)
Presentation Author: Dr. Anders Wallqvist

#1606 | Development of an Analytical Pipeline to Evaluate of Effectiveness and Risk of Significant Injury Associated with Human Electromuscular Incapacitation Devices (MHSRS-24-12167)
Presentation Author: Dr. Constantine Demetropoulos

#1607 | The Veteran Military Occupational and Environmental Exposure Assessment Tool (VMOAT) Development and Revision to Version 2 (MHSRS-24-12539)
Presentation Author: Dr. John Barrett

#1608 | Exploring Gender-Based Disparities in Lung Injury from SO₂ Exposure in a Rodent Model (MHSRS-24-12710)
Presentation Author: Dr. Satheesh Sivasubramani

#1609 | A Hand-Held Ruggedized Operational/Occupational Vapor Hazard Detection Device (MHSRS-24-12733)
Presentation Author: Dr. Cate Wisdom

#1610 | Identifying Occupational Health Hazards Using Machine Learning Methods to Protect Service Members' Long-Term Health and Readiness (MHSRS-24-12800)
Presentation Author: Dr. Vicki Hart

#1611 | Hierarchical Exposure Record and Outcome (HERO): Development of a Clinically Relevant Military Occupational Exposure Summary for Identifying Associations with Veteran Health Outcomes (MHSRS-24-12912)
Presentation Author: Dr. Immanuel Babu Henry Samuel

#1612 | Emerging Health Risks in the Arctic: Predicting the Threat of Pathogen Reanimation from Thawing Permafrost Due to Climate Change (MHSRS-24-13076)
Presentation Author: Dr. Anna Adetona

#1613 | Early Acute Radiation-Induced Cardiomyopathy After Fractionated X-Ray Irradiation within Parameters of a Mission to Mars: A Porcine Model (MHSRS-24-13105)
Presentation Author: Capt Nina Porter

#1614 | Transient Acute Liver Inflammation During Fractionated X-Ray Irradiation within Parameters of a Lunar Mission: A Porcine Model (MHSRS-24-13128)
Presentation Author: Capt Sarah Hay

#1615 | Development and Characterization of a Set of Internal Standards, Chemical Libraries and Long Term Reference Samples to Enable Service-Member Related Exposure Studies (MHSRS-24-13169)
Presentation Author: Dr. Jennifer Kyle

#1616 | Acute and Persistent Lymphocyte Reduction After Chronic Exposure to X-Ray Ionizing Irradiation within Lunar and Martian Space Mission Parameters: A Porcine Model (MHSRS-24-13247)
Presentation Author: Capt Timothy Boorady

#1617 | Sorbent and Thermal Desorption Method for Sampling and Direct Analysis of TO-11, TO-15, and TO-17 Compounds (MHSRS-24-13314)

Presentation Author: Mr. Shoab Shaikh

#1618 | A Microfluidic Device to Capture Extracellular Vesicle (EV)-Based Biomarkers of Exposure (MHSRS-24-13337)

Presentation Author: Mr. Premanshu Kumar Singh

MILITARY INJURY BIOMECHANICS FOR THE PREVENTION OF BEHIND HELMET AND BEHIND ARMOR BLUNT TRAUMA

#1619 | Modeling of the Shock Wave Generated by a Projectile Impact on Body Armor with LISW (Laser-Induced Shock Wave) (MHSRS-24-11827)

Presentation Author: COL Machiko Kawasaki

#1620 | A Novel Test Apparatus for Simulating Operational Exposure to Head Impacts and Assessing Effectiveness of Military Helmets (MHSRS-24-11898)

Presentation Author: Mrs. Shuting Kou

#1621 | Evaluation of Human Skull Fractures Produced by Localized High-Rate Blunt Impacts Representative of Helmet Backface Deformation (MHSRS-24-12131)

Presentation Author: Mrs. Katie Logsdon

#1622 | Validation of Computed Tomography Methodology for Estimating Obliquity of Small Arms Fire Impacts to Helmets (MHSRS-24-12709)

Presentation Author: Dr. Kathryn Loftis

#1623 | Automated Generation of Service-Member-Specific Finite Element Models of the Head and Neck for BHBT Injury Risk Assessment (MHSRS-24-13248)

Presentation Author: Mr. Andrew DiSerfino

#1624 | Behind Helmet Blunt Trauma Due to Ballistic Mandible Protectors (MHSRS-24-13483)

Presentation Author: Mr. Alexander Iwaskiw

OPTIMIZING THE HUMAN WEAPON SYSTEM: UTILIZING WEARABLE SENSORS TO INFORM READINESS ACROSS THE JOINT FORCE

#1625 | E Textile Enabled Active Monitoring System (E TEAMS) (MHSRS-24-10889)

Presentation Author: Dr. Michele Pierro

#1700 | Wearable Device Sleep Tracking Feasibility within a U.S. Marine Corps Airwing (MHSRS-24-10904)

Presentation Author: Dr. Karen Kelly

#1701 | Advances Towards a Wearable, Real-Time CHEM-8 Sensor Panel for Health Monitoring (MHSRS-24-10937)

Presentation Author: Dr. Michael Brothers

#1702 | Deep Learning to Estimate Auditory Saliency (MHSRS-24-11290)

Presentation Author: Dr. Jeffrey B. Bolkhovsky

#1703 | Methodology for In Situ Person-Borne Blast Dosimeter Calibration (MHSRS-24-11370)

Presentation Author: Dr. Jean Philippe Dionne

#1704 | Evaluating Aviators' Situational Awareness and Workload Using Physiological Metrics (MHSRS-24-11423)

Presentation Author: CPT Matthew D'Alessandro

#1705 | AlphaWear – Algorithms and Models for Translating Wearables Data into Decision Aids Using Open-Source Techniques (MHSRS-24-11431)

Presentation Author: Ms. Meghan Hegarty-Craver

#1706 | Mind Your Voice: Vocal Biomarker Analysis for Mental and Cognitive Fitness Tracking (MHSRS-24-11480)

Presentation Author: Dr. Erik Larsen

#1707 | Evaluation of Environmental Sensors in Combatives Master Trainer Course: Correlating Head Impact Kinematics and Vestibular Sensory Performance (MHSRS-24-11495)

Presentation Author: Dr. Michelle Duffy

#1708 | Wearable Multimodal System for Aircrew Monitoring and Augmentation (MHSRS-24-11717)

Presentation Author: Dr. Thibault Roumengous

#1709 | Patient Monitoring with Ruggedized Wearable Sensor Patch During Large-Scale Casualty Evacuation Exercise (MHSRS-24-12918)

Presentation Author: Dr. Thibault Roumengous

#1710 | Correlating High-Wavenumber Raman Spectra to Hydration Status in High Performance Individuals (MHSRS-24-11959)
Presentation Author: Mr. Richard Liao

#1711 | RANGER Salivary Hormone Assessment for Deployed Resilience and Performance Plus Wearable Evaluation of Nocturnal Endocrine Recovery (SHARP+ENER) Study (MHSRS-24-11997)
Presentation Author: Dr. Robert Gifford

#1712 | Evaluating Physical Loads During Loaded Military Training Hikes Using a Minimal Sensor Set (MHSRS-24-12083)
Presentation Author: Dr. Amy Silder

#1713 | System Readiness Assessment Methodology for Wearable Physiological Monitoring Systems (MHSRS-24-12168)
Presentation Author: Ms. Jillian Cyr

#1714 | Tactical Network Bandwidth Analysis for Wearable Physiological Monitoring Systems (MHSRS-24-12182)
Presentation Author: Ms. Jillian Cyr

#1715 | Enhancing Warfighter Readiness: Real-Time Monitoring of Gait Changes During Loaded Foot Marches Using Wearable Insoles (MHSRS-24-12401)
Presentation Author: Dr. Joel Martin

#1716 | Applying Digital Systems Engineering Methods to Wearable Sensing Technologies Acquisition Programs for the Human Weapon System (MHSRS-24-12442)
Presentation Author: Dr. James Balcius

#1717 | Evaluation of Wearable Sensor Technology with Potential to Address Behavioral Health (MHSRS-24-12445)
Presentation Author: Brooke Fleischman

#1718 | Put a Ring on It: Assessment of Participant Compliance with Wearing Physiological Tracking Rings in Longitudinal Studies (MHSRS-24-12484)
Presentation Author: Dr. Nita Shattuck

#1719 | Are You Ready? An Examination of Wearable-Estimated Readiness and Self-Reported Impairment in Shipboard Settings (MHSRS-24-12512)
Presentation Author: Mr. Sean Deering

#1720 | Ft. Liberty Optimizing the Human Weapon System (OHWS) (MHSRS-24-12610)
Presentation Author: Dr. Dennis McGurk

#1721 | Performance of Blast Gauge Test Fixture for Measuring Free-Field BOP (MHSRS-24-12697)
Presentation Author: Ms. Angela D'Orazio

#1722 | Real-Time Adaptive Medical Monitoring Platform (RAMMP) (MHSRS-24-12712)
Presentation Author: Mr. J David Remer

#1723 | Expected and Perceived Usability of a Wearable Device That Monitors Physiological Metrics (MHSRS-24-12825)
Presentation Author: Dr. Danielle Lang

#1724 | Underwater Physiological Monitoring for Diver Performance Optimization and Risk Assessment (MHSRS-24-12907)
Presentation Author: Dr. Casey Boutwell

#1725 | Wearable Biosensor Captured Data Predicts Outcomes in Patients with Severe Infections in Austere Settings (MHSRS-24-12939)
Presentation Author: Dr. Josh Chenoweth

#1800 | Integrating Wearable Technology within Connected and Disconnected Operational Environments to Accelerate Readiness (MHSRS-24-12951)
Presentation Author: Dr. Maryrose Blank

#1801 | Manufacturing of Low-Cost Wearable Physiological and Molecular Marker Monitoring Patches for DoD Applications (MHSRS-24-13321)
Presentation Author: Dr. Azar Alizadeh

#1802 | eHealth Monitoring Garment (MHSRS-24-13442)
Presentation Author: Ms. Trang Young

#1803 | Standardizing and Contextualizing Real-World Wearable Validations (MHSRS-24-13499)
Presentation Author: Dr. Scott McLean

#1804 | Benchmarking Viable Ground Truth Devices for Wearable Heart Rate Validations (MHSRS-24-13508)
Presentation Author: Dr. Christopher DiCesare

GENETIC READINESS OF THE FORCE: GENETICS AND INTEGRATIVE OMICS FOR OPTIMIZING WARFIGHTER HEALTH AND PERFORMANCE

#1805 | The Military Cardiac Arrest Program: A Multi-Center, Multi-Institution Approach to Reducing Cardiac Arrest in the Military (MHSRS-24-11644)
Presentation Author: Dr. Lydia Hellwig

#1806 | Rapid, Colorimetric On-Site In Vitro Diagnostic for Pharmacogenetics (MHSRS-24-11681)
Presentation Author: Dr. CFD Research

#1807 | MultiplexMixer: An Enabling Utility for Rational Sample Randomization for Multiplexed, Quantitative Proteomic Workflows (MHSRS-24-12128)
Presentation Author: Mr. Jordan Driscoll

#1808 | Proteogenomic Analyses of Prostate Cancers from Patients of African and European Ancestries in a Military Patient Cohort Identify Novel Signatures of Aggressive Disease (MHSRS-24-12364)

Presentation Author: Dr. Shyh-Han Tan

#1809 | Leveraging Neural Networks to Identify Features of Microbial Gene Expression in Human Gut for Irritable Bowel Disease within the MHS BioBank System (MHSRS-24-12431)

Presentation Author: Dr. Kymerleigh Pagel

#1810 | The Development of Workflows to Determine Sources of Potential Sample Mismatches Throughout a Biorepository: A Case Study (MHSRS-24-12666)

Presentation Author: Dr. Stella Somiari

#1811 | Cardiogenetics Care – What Is It and Why Is It Vital to Health and Readiness? (MHSRS-24-12696)

Presentation Author: Mrs. Austin Pagani

#1812 | Treatment Resistance and Survival Prediction Using a Machine Learning Gene Expression Signature in Pancreatic Adenocarcinoma (MHSRS-24-12698)

Presentation Author: Mr. Jianfang Liu

#1813 | Identification of Blood Protein Biomarkers Associated with Breast Cancer Recurrence (MHSRS-24-12724)

Presentation Author: Mrs. Anupama Praveen Kumar

#1814 | Targeted Metabolomics of Salivary Biomarkers for Soldier Physiological Monitoring During a Training Exercise (MHSRS-24-13031)

Presentation Author: Ms. Laurel Doherty

#1815 | Characterization of Peptide Ancestry Informative Markers in Lung Adenocarcinomas from Individuals of European and East Asian Ancestry (MHSRS-24-13070)

Presentation Author: Ms. Tamara Abulez

#1816 | Evaluating the Performance of ProteoMixture, a Proteomics-Based Cell Deconvolution Tool in Pan-Cancer Data for > 1000 Patient Tumors (MHSRS-24-13091)

Presentation Author: Mr. Joshua Schaaf

#1817 | Multiplexed Multi-Omics Biomarker Panel from Minimally Invasive Biomatrix (MHSRS-24-13156)

Presentation Author: Dr. David Gaddes

#1818 | Rapid and Reprogrammable Assay for Multiplexed Gene Detection (MHSRS-24-13209)

Presentation Author: Dr. Muhit Rana

#1819 | A Prospective Look at the Role of the Compu-Cognome for Explaining Warfighter Stress Resilience in Retrospective Cognitive Performance Data (MHSRS-24-13543)

Presentation Author: Dr. Edward Cranford

MANAGING FATIGUE IN THE DOD: METHODOLOGIES FOR SLEEP AND CIRCADIAN MEASUREMENT

#1820 | Wearable Sleep Devices and Single Contact CBTi for Sleep Behaviors in a Training Environment (MHSRS-24-10967)

Presentation Author: Dr. Rena Nicholas

#1821 | Performance During Total Sleep Deprivation vs. 7 Nights of Mild Sleep Restriction (MHSRS-24-11303)

Presentation Author: Dr. Samantha Riedy

#1822 | Assessing Sleep Circadian Rhythm Disrupting Chemicals: Merging Biological and New Approach Methodologies for Operational Exposure Research (MHSRS-24-11554)

Presentation Author: Dr. Laura Olsen

#1823 | Imaging the Human Glymphatic System with Hourly Intravenous Contrast-Based MRI Collected for 24 Hours (MHSRS-24-11715)

Presentation Author: Dr. Briana Meyer

#1824 | Endogenous Temporal Regulation of Glucose and Insulin Is Altered Following a Simulated Night Shift Schedule (MHSRS-24-11727)

Presentation Author: Dr. Briann Satterfield

#1825 | Occupational Risk of Sleep Impacting Performance Among U.S. Marine Corps Personnel (MHSRS-24-11791)

Presentation Author: Dr. Andrew MacGregor

#1900 | The Sleep Health Questionnaire: A New Frequency-Based Instrument for Assessing Insomnia Severity (MHSRS-24-11820)

Presentation Author: Dr. Juliana Ee

#1901 | Factors Affecting Sleep Among Active-Duty Soldiers: Making Sleep Interventions Effective in Primary Care (MHSRS-24-11822)

Presentation Author: Dr. Juliana Ee

#1902 | Predicting Circadian Phase Through Actigraphy in a Military Operational Context (MHSRS-24-11873)

Presentation Author: Dr. Evan Chinoy

#1903 | Nocturnal CO2 Screening for Obesity Hypoventilation Syndrome in a Military Sleep Center (MHSRS-24-11926)

Presentation Author: CAPT Monika Kc

#1904 | Integrated Fatigue Analysis and Prediction Using Breath Analysis and Wearable Sensors Referenced to Neurophysiological Fatigue Indices (MHSRS-24-12173)

Presentation Author: Dr. Roozbeh Jafari

#1905 | Strengths and Limitations of the SAFTEr R-Package: A Comparison of Freeware vs. Commercial Software for Fatigue Research (MHSRS-24-12231)

Presentation Author: Mr. Jake Choynowski

#1906 | Effects of the Timing of Physical Training on Sleep, Fatigue, and Performance in Soldiers (MHSRS-24-12353)

Presentation Author: MAJ Rachell L. Jones

#1907 | Home Sleep Testing and Characterization Using a Sleep Mask with Nanostructured Capacitive Sensors (MHSRS-24-12563)

Presentation Author: Dr. Jae-Hyun Chung

#1908 | Development and Evaluation of Nanostructured Capacitive Eyeglasses for Real-Time Fatigue Monitoring (MHSRS-24-13215)

Presentation Author: Dr. Jae-Hyun Chung

#1909 | Tracking Irregular and Daytime Sleep with Multiple Commercial Wearable Devices (MHSRS-24-12625)

Presentation Author: Dr. Evan Chinoy

#1910 | Wrist-Worn Neural Biosensor Distinguishes Between REM and Non-REM Sleep Stages (MHSRS-24-12644)

Presentation Author: Dr. Megan Blackwell

#1911 | Shift Work, Occupational Stress, Sleep, and Sleepiness Among Submariners: An 8-Day Prospective Longitudinal Investigation (MHSRS-24-12652)

Presentation Author: Lt Col Ting-Ti Lin

#1912 | Changes in Regional Brain Activation for Insomnia and Sleep Health in Servicemembers (MHSRS-24-12911)

Presentation Author: Ms. Gabriela Franca

#1913 | Trends in Insomnia Diagnosis and Sleep Prescriptions in the COVID-19 Peri-Pandemic Period Among the U.S. Active Duty Service Members (MHSRS-24-13210)

Presentation Author: Col Cade Nylund

#1914 | Wrist-Wearable Neuromodulation Device for Slow Wave Sleep Improvement (MHSRS-24-13342)

Presentation Author: Dr. Roman Maev

#1915 | FitBit-Measured Sleep Patterns Among Military-Aged Adults Following mild Traumatic Brain Injury: A T-MD Clinical Trial Study (MHSRS-24-13384)

Presentation Author: Dr. Alicia Trbovich

#1916 | Investigation of Intra-Parenchymal Fluid Flow in the Ultra-High Performance MAGNUS 3T MRI During Sleep: Phase-Sensitive Diffusion MRI and Silent Functional MRI Results (MHSRS-24-13413)

Presentation Author: CDR J Kent Werner

#1917 | Applying Non-Invasive Technology to Measure and Modulate Sleep in U.S. Warfighters (MHSRS-24-13471)

Presentation Author: Ms. Elizabeth Metzger

#1918 | Insights into the Circadian Rhythm Utilizing Wearable Sleep Tracking Devices (MHSRS-24-13518)

Presentation Author: Dr. Angeliki Pollatou

EXERTIONAL HEAT STROKE: WHAT'S NEW IN PREVENTION, MANAGEMENT AND RETURN TO DUTY

#1919 | A Nanomedicine Platform for Dynamics of Macrophages' Immune Responses and Therapeutic Intervention Following Heat Stroke (MHSRS-24-11118)

Presentation Author: Dr. Wensheng Zhang

#1920 | : Multidisciplinary Case Review Committee: Initial Analysis of Holistic Referral Source for Evaluation and Treatment of Exertional Heat Injuries (MHSRS-24-11351)

Presentation Author: Dr. Francesca Cariello

#1921 | A Comparison of Oral Rehydration Solutions on Hydration Biomarkers in Military Personnel (MHSRS-24-11451)

Presentation Author: Dr. Reginald O'Hara

#1922 | Genomic Study Reveals Role of Cardiomyopathy Gene Variants in Exertional Heat Illness (MHSRS-24-11947)

Presentation Author: Dr. Nyamkhishig Sambuughin

#1923 | A Single Bout of Heat+Exercise Preconditioning Delays Onset and Mitigates Severity of Exertional Heat Stroke in Mice (MHSRS-24-12017)

Presentation Author: SSG Irma Blanco

#1924 | Warrior Heat and Exertion-Related Events Collaborative Framework (WHEC) (MHSRS-24-12155)

Presentation Author: Mrs. Kierra Parent

#1925 | Thermally Responsive Materials Enable Core Body Temperature Monitoring by Low-SWaP Wearable Patches (MHSRS-24-13449)

Presentation Author: Dr. Dmitriy Zhukov

HUMAN PERFORMANCE OPTIMIZATION IN POLAR ENVIRONMENTS

#2000 | Biological Heat Source for Extreme Cold Missions
(MHSRS-24-11014)

Presentation Author: Mrs. Veronica Williams

#2001 | Critical Care Flight Paramedic Medical Evacuation in the Arctic (MHSRS-24-11329)

Presentation Author: LTC Sarah Snyder

#2002 | Radiological Decontamination Methodologies on Litter-Bound Patients in Arctic Environments, and the Associated Airborne Risks Posed to First Responders (MHSRS-24-11338)

Presentation Author: Capt Sebastian Alb

#2003 | The Effect of Pemmican Supplementation During Cold-Weather, High-Altitude Training in Marines (MHSRS-24-11562)

Presentation Author: Dr. Lynn Kam

#2004 | Simulating Load Carriage in Extreme Cold Temperatures: An Integrated Musculoskeletal and Physiological Modeling Approach (MHSRS-24-11797)

Presentation Author: Mr. Rahul Hingorani

#2005 | Enhanced Modeling of Military Helmet Liners for Cold Climate Operations (MHSRS-24-12057)

Presentation Author: Mr. Andrew Furst

#2006 | Materiel Performance of Blood Product Administration in an En Route Care Arctic Environment (MHSRS-24-12221)

Presentation Author: Dr. Todd Getz

#2007 | The Summit on Combat Casualty Care Research in Cold Weather Operations 2024 Report (MHSRS-24-12395)

Presentation Author: LTC Sachiyo Kawaguchi Chambers

#2008 | Measuring the Impact of Extreme Cold on Medical Operations Performance at the Cryosphere Austere Medicine Platform (CAMP) (MHSRS-24-12545)

Presentation Author: Mr. Martin Musi

#2009 | Evaluation of the Performance of Tactical Combat Casualty Care Procedures in Simulated Arctic Conditions (MHSRS-24-12565)

Presentation Author: Mr. Martin Musi

GLOBAL HEALTH ENGAGEMENT RESEARCH IN COMBATANT COMMANDS

#2010 | Development of a Patient Encounter and KSA Checklist for Emergency Medicine Military Physicians in Austere Environments (MHSRS-24-11324)

Presentation Author: Ms. Jessica Jackson

#2011 | Assessing Health System Strengths and Security Imperatives in the Pacific: An Exploratory Evaluation of the Republic of Marshall Islands and the Federated States of Micronesia (MHSRS-24-11536)

Presentation Author: Dr. Katherine Robsky

#2012 | Research and Surveillance in a Country in Active Combat: Establishing Work in the Ukraine (MHSRS-24-11629)

Presentation Author: MAJ Thomas Musich

#2013 | Strategies to Counter Health Misinformation and Disinformation for GHE Practitioners: A Rapid Review (MHSRS-24-12307)

Presentation Author: Mrs. Yara Francis

#2014 | The Global Health Engagement Research Initiative (GHERI): An Intra- and Extra-Mural Approach to Funding Global Health Engagement (GHE) Research in Support of the Unified Combatant Commands (MHSRS-24-12511)

Presentation Author: Mr. Francis Lantry

#2015 | Enhancing Military Health Systems and Capacity Building Through the Use of Virtual Communities of Practice (VCoP) in Sub-Saharan Africa (MHSRS-24-12683)

Presentation Author: Ms. Elizabeth Elliott

#2016 | Sand Fly Surveillance in Leishmaniasis Endemic Areas in Honduras for Identification of Vector Species (MHSRS-24-12794)

Presentation Author: Dr. Gissella Vasquez

#2017 | A Network Approach to Health System Strengthening for Infectious Disease Diagnosis within African Military Health Systems (MHSRS-24-12804)

Presentation Author: Mrs. Michele Merkel

#2018 | 1st Area Medical Laboratory Support to Geographic Combatant Commands (MHSRS-24-12932)

Presentation Author: MAJ Joshua Carmen

#2019 | Global Health Engagement and Capacity Building via the African Cohort Study (AFRICOS): HIV-1 Sequencing and Drug Resistance Testing in Sub-Saharan Africa (MHSRS-24-12943)

Presentation Author: Mr. Ajay Parikh

#2020 | Invisible Threats: Civilians Sufferings of Russian Drone Attacks in Ukraine (MHSRS-24-13111)

Presentation Author: Ms. Safiyeh Tayebi

#2022 | Preparing for War: Global Health Research Interoperability Program Highlighting Approaches Needed for Defense Support (GHRIP-HANDS) (MHSRS-24-13131)

Presentation Author: Dr. Ramey Wilson

#2024 | Considerations of Justice, Culture and Beneficence for DoD Global Health Engagement (MHSRS-24-13154)

Presentation Author: Mr. Derek Englis

MEETING THE CHANGING THREAT
THROUGH MILITARY MEDICAL RESEARCH



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Exhibitors



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EXHIBITORS BY CATEGORY

Blood and Coagulation Systems

Belmont Medical Technologies.....	600
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Rafa Laboratories.....	1121
Sciperio.....	315
USU Center for Biotechnology – 4D Bio3.....	1001

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Stryker Emergency Care	1109
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Moderna	1108
Office of Medical Technology Transfer (MTT)	718
Parsons.....	1007
SomaLogic Operating Co.....	509
USU Center for Biotechnology – 4D Bio3.....	1001

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Samsung.....	415
SOAR Technology	1018
TICRO Bioservices at Trudeau Institute	1209
Wake Forest Institute for Regenerative Medicine.....	1102

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Infectious Disease Diagnostics

Henry Jackson Foundation for the Advancement of Military Medicine	512
Immuron	908
Lactea Therapeutics	1114
Medical Technology Enterprise Consortium (MTEC)	801
Moderna	1108
National Strategic Research Institute at University of Nebraska	907
ORA - Office of Regulated Activities, USAMRDC	619
Parsons	1007
U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)	621
Walter Reed Army Institute of Research	625

Information Technology – Health

ARMI / BioFabUSA	308
Battelle	614
BlueHalo	407
CFD Research Corp.	825
Deloitte	920
DLH Corporation	818
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Goldbelt Frontier	924
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PPD	1103
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Consortium for Health and Military Performance	1221
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Advanced Materials and Devices	1006
Aptar CSP Technologies	914
Avita Medical	209
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DTS - Diversified Technical Systems	403
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West Virginia University Vaccine Development Center	1208

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BLUEWAVE Technologies	1107
BWtek Medical	1215
Electromedical Products	219
Masimo	906
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Patient Transport/EnRoute Care

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Belmont Medical Technologies	600
Bloodstone Division	320
Bravida	306
CFD Research Corp.	825
Integrated Medcraft	1014
Lifeware Labs	324
Marketing Assessment/BMK Ventures	1003
Masimo	906
Military Health Research Foundation	824
MIT Lincoln Laboratory	321
National Strategic Research Institute at University of Nebraska	907
Neurowave Systems	413
Panakeia	501
Solventum	819
Stryker Emergency Care	1109
Thornhill Medical	719
U.S. Army Aeromedical Research Laboratory (USAARL)	418

Post Traumatic Stress Disorder

MIT Lincoln Laboratory	321
NightWare	1112
PPD	1103
SomaLogic Operating Co	509
Spark Biomedical	1025
Strong Star	1201
TDA Research	401

Prosthetics

Adaptive Neural Systems Group	1200
BLUEWAVE Technologies	1107
Panakeia	501

Psychological Health

BlueHalo	407
Deloitte	920
DLH Corporation	818
Electromedical Products	219
Emmes Company	215
KBR	813
Leidos	615
Naval Health Research Center	515
PPD	1103
SomaLogic Operating Co	509
Spark Biomedical	1025
Strong Star	1201
Walter Reed Army Institute of Research	625

Radiation Health

Air Force Institute of Technology	100
Bravida	306
National Strategic Research Institute at University of Nebraska	907
Partner Therapeutics	606
PPD	1103

Rehabilitation - Craniomaxillofacial, Limb, Neuromusculoskeletal

BlueHalo	407
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Simulations - Medical Training

ADS	212
Bloodstone Division	320
BlueHalo	407
Chinook Medical Gear	1224
DLH Corporation	818
Facet Analytical Services and Technology	1119
Goldbelt Frontier	924
Kitware	313
Marketing Assessment/BMK Ventures	1003
North American Rescue	713
Operative Experience	1009
Phokus Research	406
Rescue Essentials	1115
Safeguard Medical	707
Simwex	203
SOAR Technology	1018
TrueClot - Luna Labs	1214

Trauma Care - Point of Injury/Prehospital/ Prolonged Field Care/Forward Surgical Care

ACRO Biomedical	1218
ADS	212
Aptar CSP Technologies	914
ARMII / BioFabUSA	308
Athena GTX	206
Battelle	614
Belmont Medical Technologies	600
Borden Institute	1220
Bravida	306
Celox Medical	307
CFD Research Corp.	825
Chinook Medical Gear	1224
Coalition for National Trauma Research	207
Delta Development Team	602
FiteBac Technologies	1207
FreMon Scientific	202
Humacyte Global	1120

Continued

EXHIBITORS BY CATEGORY

Hybrid Plastics	1118
Integrated Medcraft.....	1014
Kiffik Biomedical	1013
Kitware	313
Lactea Therapeutics	1114
Lifeware Labs	324
LITES Linking Investigations in Trauma and Emergency Services	918
Marketing Assessment/BMK Ventures	1003
Masimo	906
MAUI Imaging	201
Medical Technology Enterprise Consortium (MTEC)	801
Military Health Research Foundation	824
MiTech, Montana State University	1125
MIT Lincoln Laboratory.....	321
MitoSense.....	213
Neurowave Systems.....	413
North American Rescue	713
NuShores Biosciences	508
Operative Experience	1009
Panakeia	501
Partner Therapeutics.....	606
Perfusion Medical	1106
Phokus Research	406
Prytime Medical Devices.....	302
Rafa Laboratories.....	1121
Simwerx.....	203
Smith+Nephew	500
Solventum.....	819
Spark Biomedical.....	1025
SteriO3.....	1101
Stoney Lonesome	412
TDA Research.....	401
Thornhill Medical.....	719
TraumaGel.....	503
Tricol Biomedical.....	1021
U.S. Army Institute of Surgical Research.....	518
University of Pittsburgh - Center for Military Medicine Research and McGowan Institute for Regen Med	913

Traumatic Brain Injury

Advanced Materials and Devices	1006
Alaka'ina Foundation	225
Battelle.....	614
BIRCO	725
BlueHalo	407
BrainScope	1202
BWtek Medical.....	1215
CFD Research Corp.....	825
Defense Intrepid Network - National Intrepid Center of Excellence	1203
DTS - Diversified Technical Systems	403
Elemance.....	912

Federal Interagency Traumatic Brain Injury Research (FITBIR)	424
Integrated Medcraft.....	1014
Kitware	313
LITES Linking Investigations in Trauma and Emergency Services	918
MAUI Imaging	201
Military Health Research Foundation	824
MIT Lincoln Laboratory.....	321
MitoSense.....	213
Office of Medical Technology Transfer (MTT)	718
PPD.....	1103
SomaLogic Operating Co.....	509
TopSpin Technologies	102
TraumaGel.....	503
Walter Reed Army Institute of Research	625

Wound Management

ACRO Biomedical.....	1218
Altrazeal	1020
Avita Medical	209
Battelle.....	614
Bloodstone Division	320
BLUEWAVE Technologies	1107
Bravida.....	306
CFD Research Corp.....	825
FiteBac Technologies.....	1207
Hybrid Plastics	1118
Integrated Medcraft.....	1014
Lactea Therapeutics	1114
McCord Research.....	114
Metis Foundation, The	925
MicroGenDx	1314
Military Health Research Foundation	824
Panakeia	501
Partner Therapeutics.....	606
Phokus Research	406
Pretika MedTech Corp.	300
Rescue Essentials	1115
Smith+Nephew	500
Solventum.....	819
SomaLogic Operating Co.....	509
TraumaGel.....	503
Tricol Biomedical.....	1021
U.S. Army Institute of Surgical Research.....	518
University of Pittsburgh - Center for Military Medicine Research and McGowan Institute for Regen Med	913
Wake Forest Institute for Regenerative Medicine.....	1102
Walter Reed Army Institute of Research	625

EXHIBITORS

Exhibitors as of 26 July

- ACRO Biomedical** Booth #1218
www.acrobiomedical.com
 2F, No. 57, Luke 2nd Rd., Luzhu Dist.
 Kaohsiung City, 821011 Taiwan R.O.C.
- Adaptive Neural Systems Group** Booth #1200
i3r.uark.edu
 1 University of Arkansas
 Fayetteville, AR 72701
- ADS** Booth #212
www.adsinc.com
 621 Lynnhaven Pkwy
 Virginia Beach, VA 23452
- Advanced Materials and Devices** Booth #1006
www.amadinc.com
 4750 Longley Lane, Suite 104
 Reno, NV 89502
- AFRL/711HPW Airman
 Biosciences Division** Booth #601
www.AFRResearchlab.com
 2729 R St., Area B, Bldg. 837
 Wright-Patterson Air Force Base, OH 45433
- Air Force Institute of Technology** Booth #100
www.afit.edu
 2950 Hobson Way
 Wright Patterson AFB, OH 45433
- Alaka'ina Foundation** Booth #225
www.alakainafoundation.com
 5301 Buckeystown Pike, Suite 460
 Frederick, MD 21704
- Altec** Booth #224
www.altecresearch.com
 23 Strathmore Rd., Suite 2
 Natick, MA 01760
- Altrazeal** Booth #1020
www.altrazeal.com
 4410 Beltway Dr.
 Addison, TX 75001
- Aptar CSP Technologies** Booth #914
www.csptechnologies.com
 960 W. Veterans Blvd.
 Auburn, AL 36830
- ARMI / BioFabUSA** Booth #308
www.armiusa.org
 400 Commercial St.
 Manchester, NH 03101
- Aseptico** Booth #612
www.aseptico.com
 8333 216th St. SE
 Woodinville, WA 98072
- Athena GTX** Booth #206
www.athenagtx.com
 5900 NW 86th St., Suite 300
 Johnston, IA 50131
- Avita Medical** Booth #209
www.avitamedical.com
 28159 Avenue Stanford, Suite 220
 Valencia, CA 91355
- Battelle** Booth #614
www.battelle.org
 505 King Ave.
 Columbus, OH 43201
- Belmont Medical Technologies** Booth #600
www.belmontmedtech.com
 780 Boston Rd.
 Billerica, MA 01821
- BIRCO** Booth #725
blastinjuryresearch.health.mil
 504 Scott St.
 Ft. Detrick, MD 21702
- Bloodstone Division** Booth #320
www.BloodstoneDivision.com
 5410 Tyson Ave.
 Tampa, FL 33611
- BlueHalo** Booth #407
www.bluehalo.com/healthcare
 4601 N Fairfax Dr., Suite 900
 Arlington, VA 22203

EXHIBITORS

- BLUEWAVE Technologies** Booth #1107
www.clinic.mybluewave.com
 1060 E Industrial Dr., Unit V
 Orange City, FL 32763
- Borden Institute** Booth #1220
medcoe.army.mil/borden
 3630 Stanley Rd., Bldg. 2841
 San Antonio, TX 78234
- BrainScope** Booth #1202
www.brainscope.com
 7648 Standish Pl.
 Rockville, MD 20855
- Bravida** Booth #306
www.argentummedical.com
 2571 Kaneville Ct.
 Geneva, IL 60134
- Breakaway Media** Booth #108
www.breakawaymedia.org
 520 Oakwood Blvd.
 Oldsmar, FL 34677
- BWtek Medical** Booth #1215
www.bwtekmed.com
 18 Shea Way, Suite 103
 Newark, DE 19713
- Capital Edge Consulting** Booth #1100
www.capitaledgeconsulting.com/home-b
 8200 Greensboro Dr., Suite No. 1400
 McLean, VA 22102
- Celox Medical** Booth #307
www.celoxmedical.com
 Medtrade Products Ltd., Electra House, Electra Way
 Crewe, CW1 6GL United Kingdom
- Cera Products** Booth #506
www.ceraproductsinc.com
 3075 Tower Rd., Suite D
 Columbus, GA 31909
- CFD Research Corp.** Booth #825
www.cfd-research.com
 6820 Moquin Dr NW
 Huntsville, AL 35806
- Chinook Medical Gear** Booth #1224
www.chinookmed.com
 12505 E 55th St., Unit B
 Tulsa, OK 74146
- Coalition for National Trauma Research** Booth #207
www.nattrauma.org
 7970 Fredricksburg Rd., Suite 101-60
 San Antonio, TX 78229
- Consortium for Health and Military Performance** Booth #1221
champ.usuhs.edu
 6720A Rockledge Dr., Suite 600
 Bethesda, MD 20817
- Culmen** Booth #1019
www.culmen.com
 99 Canal Center Plaza, Suite 125
 Alexandria, VA 22314
- Defense Health Agency, Research & Engineering Directorate** Booth #712
www.health.mil/Military-Health-Topics/Research-and-Innovation/DHA-Research-and-Engineering-Directorate
 7700 Arlington Blvd., Suite 5101
 Falls Church, VA 22042
- Defense Healthcare Management Systems** Booth #608
www.health.mil/Military-Health-Topics/Technology/PEO-DHMS
 1700 North Moore St.
 Arlington, VA 22209
- Defense Intrepid Network - National Intrepid Center of Excellence** Booth #1203
www.health.mil/Military-Health-Topics/Centers-of-Excellence/NICOE
 4860 South Palmer Rd., Bldg. 51
 Bethesda, MD 20889-5649
- Deloitte** Booth #920
www.deloitte.com
 1919 North Lynn St.
 Arlington, VA 22209
- Delta Development Team** Booth #602
www.deltadevteam.com
 1635 S Research Loop
 Tucson, AZ 85710

EXHIBITORS

- DLH Corporation** Booth #818
www.dlhcorp.com
 3565 Piedmont Rd., Bldg 3, Suite 700
 Atlanta, GA 30305
- DTS - Diversified Technical Systems**..... Booth #403
www.dtsweb.com
 1720 Apollo Ct.
 Seal Beach, CA 90740
- Electromedical Products** Booth #219
www.Alpha-Stim.com
 2201 Garrett Morris Pkwy
 Mineral Wells, TX 76540
- Elemance** Booth #912
www.elemance.com
 450 N Patterson Ave., Suite 310
 Winston Salem, NC 27101
- Emmes Company** Booth #215
www.emmes.com
 401 N Washington St., Suite 700
 Rockville, MD 20850
- Exo** Booth #221
www.exo.inc
 4201 Burton Dr.
 Santa Clara, CA 95054
- Facet Analytical Services and Technology**...Booth #1119
www.facetllc.com
 8261 Burnt Store Rd.
 Punta Gorda, FL 33950
- Federal Interagency Traumatic Brain Injury Research (FITBIR)** Booth #424
fitbir.nih.gov
 12 South Dr.
 Bethesda, MD 20892
- FiteBac Technologies**Booth #1207
www.fitebac.com
 3698 Largent Way
 Marietta, GA 30101
- Fluxergy**..... Booth #200
www.fluxergy.com
 30 Fairbanks Ave., Suite 110
 Irvine, CA 92618
- FreMon Scientific**..... Booth #202
www.fremonscientific.com
 5726 La Jolla Blvd., Unit 304
 La Jolla, CA 92307
- G2G Consulting**..... Booth #319
www.G2Gconsulting.com
 19985 Detroit Rd., PMB 131
 Rocky River, OH 44116
- GE Healthcare**..... Booth #309
www.gehealthcare.com
 500 W. Monroe St.
 Chicago, IL 60661
- Geneva Foundation**Booth #1002
www.genevausa.org
 950 Broadway, Suite 307
 Tacoma, WA 98402
- Goldbelt Frontier**..... Booth #924
www.goldbeltfrontier.com
 5500 Cherokee Ave., #100
 Alexandria, VA 22312
- Government Scientific Source**..... Booth #921
www.govsci.com
 12355 Sunrise Valley Dr., Suite 400
 Reston, VA 20191
- Hamilton Medical**..... Booth #807
www.hamilton-medical.com
 4655 Aircenter Circle
 Reno, NV 89502
- Henry Jackson Foundation for the Advancement of Military Medicine** Booth #512
www.hjf.org
 6720A Rockledge Dr., Suite 100
 Bethesda, MD 20817
- Homeland Defense & Security Information Analysis Center (HDIAC)** Booth #419
www.hdiac.org
 4695 Millennium Dr.
 Beclamp, MD 21017

EXHIBITORS

- Humacyte Global** Booth #1120
www.humacyte.com
 2525 E. Highway NC 54
 Durham, NC 27713
- Hybrid Plastics** Booth #1118
www.hybridplastics.com
 55 WL Runnels Dr.
 Hattiesburg, MS 39401
- Immuron** Booth #908
www.immuron.com.au
 25-37 Chapman St., Unit 10
 Blackburn North, VIC 3130 Australia
- Integrated Medcraft** Booth #1014
www.integratedmc.com
 201 W High St., Unit A4
 East Hampton, CT 06424
- KBR** Booth #813
www.kbr.com
 601 Jefferson
 Houston, TX 77002
- Kiffik Biomedical** Booth #1013
www.kiffik.com
 128 Dorrance Street
 Providence, RI 02903
- Kitware** Booth #313
www.kitware.com
 1712 Route 9, Suite 300
 Clifton Park, NY 12065
- Lactea Therapeutics** Booth #1114
www.lacteatherapeutics.com
 4539 Metropolitan Ct.
 Frederick, MD 21704
- Leidos** Booth #615
www.leidos.com
 1750 Presidents St.
 Reston, VA 20190
- Lifeware Labs** Booth #324
www.lifewarelabs.com
 201 N Braddock Ave., Suite 303
 Pittsburgh, PA 15208
- LITES Linking Investigations in Trauma and Emergency Services** Booth #918
www.litesnetwork.org
 3550 Terrace St., University of Pittsburgh,
 Scaife Hall, 10th Floor
 Pittsburgh, PA 15261
- Marketing Assessment/BMK Ventures** Booth #1003
www.bmkventures.com
 22831 Silverbrook Center Dr., Unit 145
 Sterling, VA 20166
- Masimo** Booth #906
www.masimo.com
 52 Discovery
 Irvine, CA 92618
- MAUI Imaging** Booth #201
www.mauiimaging.com
 7400 N. Oracle Rd., Suite 150-115
 Tucson, AZ 85704
- Maximus** Booth #106
www.maximus.com
 1600 Tysons Blvd.
 McLean, VA 22102
- McCord Research** Booth #114
www.mccordresearch.com
 580 Madison Ave., #4
 North Liberty, IA 52317
- Medical CBRN Defense Consortium (MCDC)** Booth #613
www.medcbrn.org
 315 Sigma Dr.
 Summerville, SC 29486
- Medical Technology Enterprise Consortium (MTEC)** Booth #801
www.mtec-sc.org
 315 Sigma Dr.
 Summerville, SC 29486
- Metis Foundation, The** Booth #925
www.metisfoundationusa.org
 84 NE Interstate Loop 410, Suite 325
 San Antonio, TX 78216

EXHIBITORS

- MicroGenDx**.....Booth #1314
www.microgen dx.com
 5776 Hoffner Ave., #203
 Orlando, FL 32822
- MICRO-X**.....Booth #110
www.micro-x.com
 855 S 192nd St., Suite 600
 SeaTac, WA 98148
- Military Health Research Foundation**.....Booth #824
www.militaryhealthresearch.org
 8105 Crest Rd.
 Laurel, MD 20723
- MilTech, Montana State University**.....Booth #1125
www.miltechcenter.org
 2829 Technology Blvd.
 Bozeman, MT 59817
- MIT Lincoln Laboratory**.....Booth #321
www.ll.mit.edu
 244 Wood St.
 Lexington, MA 02421
- MitoSense**.....Booth #213
www.mitosenseinc.com
 18 Main St. Ext., Suite 202
 Plymouth, MA 02360
- Moderna**.....Booth #1108
www.modernatx.com
 200 Technology Square
 Cambridge, MA 02139
- Musculoskeletal Injury Rehabilitation Research for Operational Readiness (MIRROR)**.....Booth #1000
www.mirrorusuhs.org
 Uniformed Services University, 4301 Jones Bridge Rd.
 Bethesda, MD 20814
- National Strategic Research Institute at University of Nebraska**.....Booth #907
nsri.nebraska.edu/connect
 6825 Pine St.
 Omaha, NE 68106
- Naval Health Research Center**.....Booth #515
www.med.navy.mil/Naval-Medical-Research-Command/R-D-Commands/Naval-Health-Research-Center
 1750 Presidents St.
 Reston, VA 20190
- Naval Medical Research Command**.....Booth #519
www.med.navy.mil/Naval-Medical-Research-Command
 503 Robert Grant Ave.
 Silver Spring, MD 20910
- Neurowave Systems**.....Booth #413
www.neurowavesystems.com
 25825 Science Park Dr., Suite 250
 Beachwood, OH 44122
- NightWare**.....Booth #1112
www.Nightware.com
 8900 Excelsior Blvd.
 Hopkins, MN 55343
- North American Rescue**.....Booth #713
www.narescue.com
 35 Tedwall Ct.
 Greer, SC 29650
- NuShores Biosciences**.....Booth #508
www.nushores.com
 1523 S. Bowman Rd., Suite 3H
 Little Rock, AR 72211
- Office of Human and Animal Research Oversight (OHARO)**.....Booth #513
mrdc.health.mil/index.cfm/collaborate/research_protections
 810 Schreider St.
 Ft. Detrick, MD 21702
- Office of Medical Technology Transfer (MTT)**.....Booth #718
technologytransfer.health.mil
 1520 Freedman Dr., Room 227
 Frederick, MD 20172
- Operative Experience**.....Booth #1009
www.operativeexperience.com
 1007 Old Philadelphia Rd., Suite 300
 Aberdeen, MD 21001

EXHIBITORS

- ORA - Office of Regulated Activities, USAMRDC** Booth #619
mrdc.health.mil
 1430 Veterans Dr.
 Ft. Detrick, MD 21702
- OXOS Medical** Booth #1012
www.oxos.com
 1100 Peachtree St., Suite 700
 Atlanta, GA 30309
- Pacific Consolidated Industries** Booth #318
www.pcigases.com
 12201 Magnolia Ave.
 Riverside, CA 92503
- Panakeia** Booth #501
www.panakeiausa.com
 3050 Horseshoe Dr. North, Suite 164
 Naples, FL 34104
- Parsons** Booth #1007
www.parsons.com
 14291 Park Meadow Dr., Suite 100
 Chantilly, VA 20151
- Partner Therapeutics** Booth #606
www.partnertx.com
 19 Muzzey St.
 Lexington, MA 02421
- Perfusion Medical** Booth #1106
www.perfusionmedical.com
 12110 Sunset Hills Rd., Suite 600
 Reston, VA 20190
- Philips** Booth #919
www.usa.philips.com/a-w/government/homepage.html
 901 15th St. NW, Suite 900
 Washington, DC 20005
- Phokus Research** Booth #406
www.phokusresearch.com
 12225 World Trade Dr., Suite D
 San Diego, CA 92128
- PPD** Booth #1103
www.ppd.com
 929 N. Front St.
 Wilmington, NC 28401
- Pretika MedTech Corp.** Booth #300
www.pretikamedtech.com
 5270 California Ave., Suite 300
 Irvine, CA 92617
- Prytime Medical Devices** Booth #302
prytime.com
 12 Upper Balcones Rd., Suite 300
 Boerne, TX 78006
- Rafa Laboratories** Booth #1121
www.rafa.co.il/en
 Har Hotzvim, P.O. 405
 Jerusalem, 9777019 Israel
- Repurposed Therapeutics** Booth #507
www.defenderpharma.com
 12935 N. Outer Forty Dr., Suite 212
 St. Louis, MO 63141
- Rescue Essentials** Booth #1115
www.rescue-essentials.com
 3811 International Blvd. NE, Suite 100
 Leland, NC 28451
- Safeguard Medical** Booth #707
www.safeguardmedical.com
 5555 Harrisburg Industrial Park Dr.
 Harrisburg, NC 28075
- Samsung** Booth #415
www.bostonimaging.com
 14 Electronics Ave.
 Middleton, MA 01949
- Sciperio** Booth #315
www.sciperio.com
 12151 Research Pkwy, #150
 Orlando, FL 32826
- Serimmune** Booth #218
www.serimmune.com
 150 Castilian Dr., Suite 100
 Goleta, CA 93117
- Shoreland** Booth #618
www.travax.com
 933 N Mayfair Rd., Suite 208
 Milwaukee, WI 53226

EXHIBITORS

- Simwerx** Booth #203
www.simwerx.com
 2218 S Kalamath Rd., Unit A
 Denver, CO 80223
- Smith+Nephew** Booth #500
www.smith-nephew.com
 5600 Clearfork Main St., Suite 600
 Fort Worth, TX 76109
- SOAR Technology**..... Booth #1018
www.soartech.com
 3600 Green Ct., Suite 600
 Ann Arbor, MI 48105
- Solventum**..... Booth #819
www.3m.com/medical
 12930 IH 10 West
 San Antonio, TX 78249
- SomaLogic Operating Co.** Booth #509
www.somallogic.com
 2945 Wilderness Place
 Boulder, CO 80301
- Southwest Research Institute** Booth #312
www.swri.org
 6220 Culebra Rd.
 San Antonio, TX 78238
- Spark Biomedical**..... Booth #1025
www.sparkbiomedical.com
 18208 Preston Rd., Ste D9-531
 Dallas, TX 75252
- SteriO3** Booth #1101
www.sterio3.com
 20 Black Bear Ln.
 Littleton, CO 80127
- Stoney Lonesome** Booth #412
www.stonylonesomergroupplc.com
 5001 Bridge St., Suite 1413
 Tampa, FL 33611
- Strong Star**..... Booth #1201
www.strongstar.org
 2500 Lou Hollow Pl.
 Cedar Park, TX 78613
- Stryker Emergency Care** Booth #1109
www.stryker.com/us/en/portfolios/medical-surgical-equipment.html
 3800 E. Centre Ave.
 Portage, MI 49002
- Sword Health**..... Booth #220
www.swordhealth.com
 13937 Sprague Lane, Suite 100
 Draper, UT 84020
- TacMed Solutions** Booth #1008
www.tacmedsolutions.com
 1250 Harris Bridge Rd.
 Anderson, SC 29621
- Talpera**..... Booth #112
www.talpera.com
 1850 Gateway Dr., Suite 175
 San Mateo, CA 94404
- TDA Research** Booth #401
www.tda.com
 12345 W. 52nd Ave.
 Wheat Ridge, CO 80033
- Thornhill Medical** Booth #719
www.thornhillmedical.com/military
 60 Wingold Ave.
 Toronto, ON M6B 1P5 Canada
- TICRO Bioservices at Trudeau Institute**..... Booth #1209
www.ticrobioservices.com
 154 Algonquin Ave.
 Saranac Lake, NY 12983
- Timewell Medical Co.** Booth #1206
www.fabp.jp/eng
 Mass Bldg. 2F, 2-16-10 Yushima, Bunkyo-ku City
 Tokyo, 1130034 Japan
- TopSpin Technologies** Booth #102
www.topspin360.com
 854 Wellington St.
 London, ON N6A3S7 Canada
- TraumaGel**..... Booth #503
www.cresilon.com
 122 18th St.
 Brooklyn, NY 11215

EXHIBITORS

*Exhibitors as of 26 July***Tricol BiomedicalBooth #1021**

www.tricolbiomedical.com
720 SW Washington St., Suite 200
Portland, OR 97205

TrueClot - Luna LabsBooth #1214

www.trueclot.com
706 Forest St., Suite A
Charlottesville, VA 22903

U.S. Army Aeromedical Research Laboratory (USAARL)Booth #418

usaarl.health.mil
6901 Farrel Rd.
Fort Novosel, AL 36362

U.S. Army Institute of Surgical ResearchBooth #518

usaistr.health.mil
3698 Chambers Pass, Suite B
JBSA Ft. Sam Houston, TX 78234

U.S. Army Medical Materiel Development Activity (USAMMDA)Booth #421, 425

usammda.health.mil
1430 Veterans Dr.
Ft. Detrick, MD 21702

U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)Booth #621

usamriid.health.mil
1425 Porter St.
Ft. Detrick, MD 21702

U.S. Army Medical Test and Evaluation Activity (MTEAC).....Booth #1024

medcoe.army.mil/usamteac-test-and-evaluation
2377 Greely Rd., Bldg. 4011
JBSA Fort Sam Houston, TX 78234

University of Pittsburgh - Center for Military Medicine Research and McGowan Institute for Regen Med.....Booth #913

www.cmmr.pitt.edu
450 Technology Dr., Room 410
Pittsburgh, PA 15219

University of Texas Medical BranchBooth #1124

www.utmb.edu
301 University Blvd.
Galveston, TX 77555

USU Center for Biotechnology – 4D Bio3Booth #1001

www.usuhs.edu/4D-Bio3
9410 Key West Ave., Suite 200
Rockville, MD 20850

UT Health San Antonio - Trauma Research and Combat Casualty Care Collaborative (TRC4)Booth #325

www.trc4.org
7703 Floyd Curl Dr.
San Antonio, TX 78229

Wake Forest Institute for Regenerative MedicineBooth #1102

www.wfirm.org
391 Technology Way
Winston Salem, NC 27101

Walter Reed Army Institute of ResearchBooth #625

wrair.health.mil
503 Robert Grant Ave.
Silver Spring, MD 20910

West Virginia University Vaccine Development CenterBooth #1208

medicine.wvu.edu/vaccine-development-center
64 Medical Center Dr.
Morgantown, WV 26505

ZOLL Medical CorporationBooth #607

www.zoll.com
269 Mill Rd.
Chelmsford, MA 08124

GIVEAWAYS & GIFTS

Federal government employees may not directly or indirectly solicit, or accept a gift from a prohibited source, with certain limited exceptions. Before deciding if a gift meets an exception, employees should consider declining otherwise permissible gifts if they believe that a reasonable person with knowledge of the relevant facts would question the employee's integrity or impartiality as a result of accepting the gift.

A federal government employee may accept unsolicited gifts having an aggregate market value of \$20 or less per source per occasion, provided that the aggregate market value of individual gifts received from any one person does not exceed \$50 in a calendar year. (Modest items of food and non-alcoholic refreshments, such as soft drinks, coffee, and donuts, offered other than as part of a meal, and items with little intrinsic value, which are intended primarily for presentation are excluded as gifts under the rule). Even though acceptance of a gift may be permitted by one of the exceptions, it is never inappropriate, and frequently prudent, for an employee to decline a gift. Federal employees should contact their Agency's Ethics Counsel for further guidance.

OVERVIEW MAP

REGISTRATION

City Hall Lobby – Ballroom/Level 2

POSTER SESSIONS

Osceola Ballroom – Ballroom/Level 2

MEALS

Florida Exhibit Hall A-C – Exhibit Hall/Level 1

PLENARY SESSION

Osceola Ballroom – Ballroom/Level 2

EXHIBIT HALL

Florida Exhibit Hall D-F – Exhibit Hall/Level 1

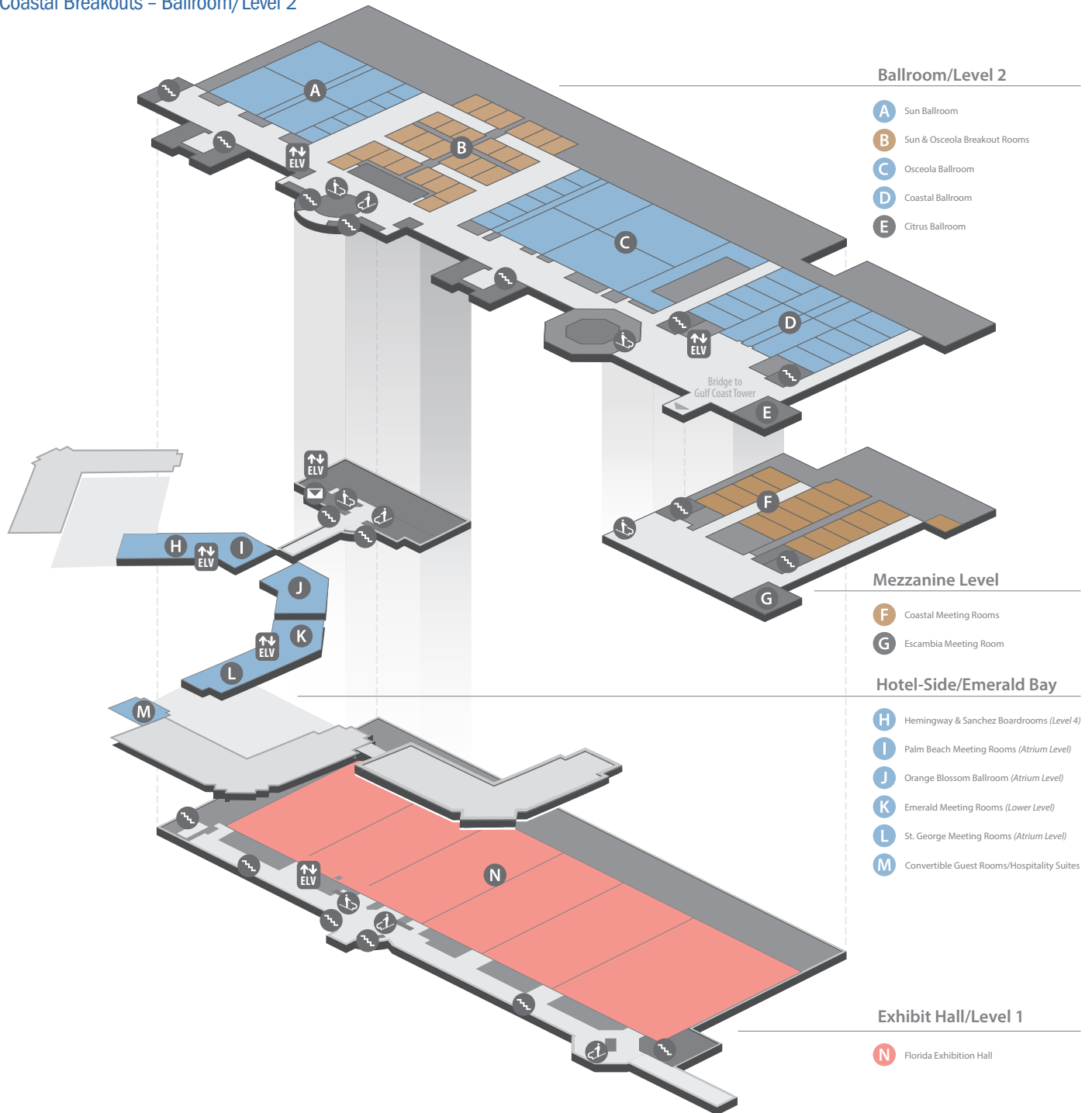
SHUTTLES

Gaylord Palms Convention Center
Transportation Loop – Exhibit Hall/Level 1

BREAKOUTS

Sun Breakouts – Ballroom/Level 2

Coastal Breakouts – Ballroom/Level 2





MHS Military Health System
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