MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

POSTER SESSION 1
TUESDAY, 21 AUGUST 2018

TELEHEALTH/VIRTUAL HEALTH/REMOTE MONITORING IN THE MHS

MHSRS-18-0434 POSTER SESSION 1 - #001
Remote Home Monitoring of the Diabetic Patient: Lessons Learned at the Half-Way Point of a 12 Month Randomized Control Trail (RCT)
Presentation Author: Mrs. Amanda Schmeltz
Amanda Schmeltz, MEd\(^1\), Mabel Cooper, RN, BSN, CCRC\(^1\), Jeanette Little, MS\(^1\), Ron Yeaw, BS\(^2\), Matt Goff, AD\(^2\), Karen Edwards, MEd\(^2\), Kristy Crawford, BSN, RN\(^4\), Marie Hing, MS\(^6\), Jennie Moss, RN, BSN\(^4\)
\(^1\)US Army Telemedicine & Advanced Technology Research Center, Augusta, GA, \(^2\)US Army Telemedicine & Advanced Technology Research Center, Fort Detrick, MD, \(^3\)Clemson University, Clemson, SC, \(^4\)Mike O’Callaghan Federal Medical Center, Las Vegas, NV, \(^6\)Madigan Army Medical Center, Tacoma, WA

MHSRS-18-0437 POSTER SESSION 1 - #002
The Progression to Data Analysis of the mCare Return on Investment Study: A Two Phased Approach to a Retrospective Analysis of a Mobile Health Case Management Intervention
Presentation Author: Mrs. Mabel Cooper
Mabel Cooper, BSN, CCRC\(^1\), Jeanette Little, MS\(^2\), Amanda Schmeltz, MEd\(^2\), Aditya Chebolu\(^3\)
\(^1\)The Geneva Foundation, Assigned to the Telemedicine & Advanced Technology Research Center, Mobile Health Innovation Center, Fort Gordon, GA, \(^2\)Telemedicine & Advanced Technology Research Center, Mobile Health Innovation Center, Fort Gordon, GA, \(^3\)IQVIA, Fairfax, VA

MHSRS-18-0509 POSTER SESSION 1 - #003
Interactive Telementoring for Prehospital Trauma Care
Presentation Author: Dr. Ronald Xu
Ronald X. Xu, PhD\(^1\), Alper Yilmaz, PhD\(^1\), Ian L. Valerio, USNR, MD, CDR, MC\(^1,2\), Edward Martin, MD\(^1\)
\(^1\)Ohio State University, Columbus, OH, \(^2\)Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0665 POSTER SESSION 1 - #004
Developing Tobacco Control Interventions Across the Lifespan of Military Personnel: Active Duty & Retirees
Presentation Author: Col Gerald Talcott
Col Gerald Wayne Talcott, PhD\(^1\), Col (Ret) Melissa A. Little, USAF, PhD\(^1\), Robert C. Klesges, PhD\(^1\), Xin Qun Wang, MS\(^1\), Timothy McMurry, PhD\(^1\), Lt Col Ann Hryshko-Mullen, PhD\(^2\)
\(^1\)University of Virginia, Charlottesville, VA, \(^2\)Wilford Hall Ambulatory Surgical Clinic, JBSA, Lackland Air Force Base, TX

MHSRS-18-0889 Poster Session 1 - #005
New Adaptive Scaling Strategies Lowers the Barrier to Telerobotic Surgery in Communication-Delayed, Far-Forward Environments
Presentation Author: Dr. Michael Yip
Florian Richter, BSc\(^1\), Zachary Ye\(^1\), Weizhe Xu\(^1\), Alison Bamford\(^1\), Eric Wirtz, MD\(^2\), Ryan Orosco, MD\(^3\), Steven Hong, MD\(^3\), Michael Yip, PhD\(^1\)
\(^1\)University of California San Diego, La Jolla, CA, \(^2\)Tripler Army Medical Center, HI, \(^3\)Stanford University, Stanford, CA

MHSRS-18-1711 POSTER SESSION 1 - #006
The Next Generation 911 Telemedicine Project
Presentation Author: Dr. Billy Philips
Billy U. Philips, Jr, PhD, MPH
Texas Tech University Health Sciences Center, Lubbock, TX
MHSRS-18-1937  POSTER SESSION 1 - #007
Implementing a Cybersecurity Framework for Connected Medical Devices
Presentation Author: Ms. Tracy Rausch
Tracy Rausch, MSME, CCE¹, Tim Rudolph, PhD², Chip Block² ¹DocBox, Newton, MA, ²Evolver, Reston, VA

HEALTHCARE INFORMATICS FOR AGILITY/MEDICAL ARTIFICIAL INTELLIGENCE

MHSRS-18-0171  POSTER SESSION 1 - #008
Chronic Kidney Disease in the Military Health System: Data from the Military Health System Data Repository
Presentation Author: COL James Oliver
COL James Oliver, MD, PhD¹, Robert Nee, MD¹, Lindsay Grunwald, MS², Amanda Banaag, MPH², Meda Pavkov, MD, PhD², Nilka Rios Burrows, MPH³, Tracey Koehlmoos, PhD³, Eric Marks, MD⁴
¹Walter Reed National Military Medical Center, Bethesda, MD, ²Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, ³Centers for Disease Control & Prevention, Atlanta, GA, ⁴Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0298  POSTER SESSION 1 - #009
Using Compulsory Relocation to Understand Drivers of Geographic Variation of Healthcare Utilization in the US Military
Presentation Author: Dr. William Patrick Luan
William Patrick Luan, DrPH(c)¹, LT Todd Leroux, PhD¹, Cara Olsen, DrPH¹, Lt Gen (Ret) Douglas Robb, DO, MPH¹, Jonathan Skinner, PhD², Patrick Richard, PhD²
¹Uniformed Services University of the Health Sciences, Bethesda, MD, ²Dartmouth College, Hanover, NH

MHSRS-18-0326  POSTER SESSION 1 - #010
An Evaluation of the Effect of Data-Guided Treatment on Number Needed to Treat & Number Needed to Harm Results to Inform Behavioral Health Treatment Policy
Presentation Author: Mr. George Carpenter
Mark Schiller, MD¹, George Carpenter²
¹Mind Therapy Clinic, San Francisco, CA, ²MYnd Analytics Inc, Mission Viejo, CA

MHSRS-18-0367  POSTER SESSION 1 - #011
Consolidating Diagnosis & Treatment Data from Multiple Big Data Sources for Use in Cancer Research: An Example Using the Department of Defense’s Central Cancer Registry & Military Health System Data Repository
Presentation Author: Mr. Matthew Georg
Matthew Georg, MPH¹, Yvonne L. Eaglehouse, PhD, MPH¹, Jie Lin, PhD¹, Kangmin Zhu, MD, PhD¹
¹Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center, Bethesda, MD, ²USUHS, Bethesda, MD

MHSRS-18-0426  POSTER SESSION 1 - #012
Comorbidity & Stage at Diagnosis Among Lung Cancer Patients in the US Military Health System
Presentation Author: Dr. Jie Lin
Jie Lin, PhD, MPH¹, Katherine A. McGlynn, PhD², Craig D. Shriver, MD¹, Kangmin Zhu, MD, PhD¹
¹Uniformed Service University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda, MD, ²National Cancer Institute, Bethesda, MD
Poster Session I

MHSRS-18-0690  POSTER SESSION 1 - #013
Use of Electronic Health Record (EHR) Data to Prevent Combat Casualties
Presentation Author: CAPT Zsolt Stockinger
CAPT Zsolt Stockinger, USN, MC\(^1\), Mary Ann Spott, PhD\(^1\), Col Edward Mazuchowski, USAF, MC\(^2\), Caryl Turner, MPH\(^1\)
\(^1\)Joint Trauma System, JBSA, TX, \(^2\)Armed Forces Medical Examiner System, Joint Base San Antonio, TX

MHSRS-18-0858  POSTER SESSION 1 - #014
Automated Decision Support System for Stenosis Detection in Coronary Angiograms
Presentation Author: Mr. Reza Soroushmehr
Reza Soroushmehr, PhD\(^1\), Nick Curzen, PhD\(^2\), Alexander Wood\(^1\), Jonathan Gryak, PhD\(^1\), Brahmanee Nallamothu, MD\(^1\), Kayvan Najarian, PhD\(^2\)
\(^1\)University of Michigan, Ann Arbor, MI, \(^2\)University Hospital Southampton, Southampton, UK

MHSRS-18-1302  POSTER SESSION 1 - #015
ALT/AST Ratio as a Predictor of Abnormal Insulin Sensitivity & T2DM in a Nationally Representative Sample (Aged 19 – 25)
Presentation Author: Dr. John Klaric
John S. Klaric, PhD, Thomas Beltran, Y. Sammy Choi, MD Womack Army Medical Center, Fort Bragg, NC

MHSRS-18-1735  POSTER SESSION 1 - #016
A Data Tracking System for the John P. Murtha Cancer Center (DTS-MCC)
Presentation Author: Mr. Leonid Kvecher
Leonid Kvecher, MS\(^1\), LTC Justin M. Wells, MC, MD\(^2\), Kimberly N. Murtha\(^1\), Bradley J. Mostoller, MS\(^3\), Brenda Deyarmin\(^2\), Renata Greenspan, MD\(^2\), Frank J. Cammarata\(^1\), John E. Campos, MS\(^1\), Nicole Wolf, MS\(^2\), Diane Papay\(^2\), COL Craig D. Shriver, MC, MD\(^2\), Hai Hu, PhD\(^2\)
\(^1\)Chan Soon-Shiong Institute of Molecular Medicine at Windber, Windber, PA, \(^2\)Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1967  POSTER SESSION 1 - #017
Evaluating the Effectiveness of Semi-Supervised Clustering to Integrate Laboratory Results within the Military Health System
Presentation Author: Dr. Emily Workman
Emily Workman, PhD\(^1\), LeeAnn Zarzabal, MS\(^1\), Alex Rittet, MS\(^1\), Jacob Dunham, MS\(^1\), Emily Stone, PhD\(^1\), Adi Gundlapalli, MD, PhD, MS\(^2\), Alan Sim, PhD\(^1\)
\(^1\)Defense Health Agency, San Antonio, TX, \(^2\)Veterans Affairs Salt Lake City Health Care System, Salt Lake City, UT

MHSRS-18-2112  POSTER SESSION 1 - #018
Challenges in Automating the Characterization of Burn Injuries for Pre-Hospital Care
Presentation Author: Mr. Gregory Rule
Gregory Rule, MS, PE\(^1\), Christopher Argents, PhD\(^2\), Jeremy C. Pampolin, MD, FCCM, FACP\(^3\), Maria Serio-Melvin, MSN\(^4\), Sena R. Veazey, MS\(^4\), Craig A. Fenrich\(^5\)
\(^1\)Applied Research Associates, Inc, San Antonio, TX, \(^2\)Applied Research Associates, Inc, Raleigh, NC, \(^3\)Madigan Army Medical Center, Tacoma, WA, \(^4\)US Army Institute of Surgical Research, San Antonio, TX

MOBILE HEALTH APPLICATIONS IN THE MEDICAL THEATER OF OPERATION

OPEN  POSTER SESSION 1 - #019
MHSRS-18-0160  POSTER SESSION 1 - #020
Smartphone-Enabled Point of Care Testing for Antibiotic-Resistant Infectious Disease
Presentation Author: Dr. Akilan Palanisami
Akilan Palanisami, PhD, Yanfang Feng, PhD, Tayyaba Hasan, PhD
Massachusetts General Hospital, Boston, MA

MHSRS-18-1472  POSTER SESSION 1 - #021
Best Practices for Mobile Health in the Military Health System: Results & Lessons Learned After Three Years of Provider Training
Presentation Author: Dr. Christina Armstrong
Christina Armstrong, PhD, Robert P. Ciulla, PhD
Defense Health Agency, US Department of Defense

MHSRS-18-1643  POSTER SESSION 1 - #022
An Integrated Care Management Platform Incorporating Remotely Collected Patient Data Through an Intuitive Mobile App
Presentation Author: Mr. Eric Lee Escobedo-Wu
Eric Lee Escobedo-Wu, MS, Waleed Mohsen Salusive, Inc, Emeryville, CA

MHSRS-18-1911  POSTER SESSION 1 - #023
iTREAT Phase Two
Presentation Author: CPT Aaron Matthews
CPT Aaron Matthews, RN, BSN, Haydon Pitchford, EMT-I99, Marcus Divers, BS, CHES, Brian Gunnell, BS, Andrew Southerland, MD, MS
University of Virginia Health System, Charlottesville, VA

MHSRS-18-1991  POSTER SESSION 1 - #024
Multimodal Computerized Assessment of Concussion: Differential Contributions of Neurocognitive & Postural Stability Measures of Symptom Resolution
Presentation Author: Mr. Ian Coffman
Ian Coffman1, Richard Uhlig2, Andrew Brindle2, Corinna E. Lathan1
1AnthroTronix, Inc, Silver Spring, MD 2Quandrant Biosciences, Inc, Syracuse, NY

THE FUTURE OF SIMULATION IN THE CONTINUUM OF CARE

MHSRS-18-0070  POSTER SESSION 1 - #025
Shoulder Arthroscopy Simulator Training Improves Surgical Procedure Performance
Presentation Author: COL Christopher Roach
COL Christopher Roach, MD, Jessica Rivera, MD, Travis Burns, MD, Anthony Johnson, MD
Brooke Army Medical Center, Joint Base San Antonio Fort Sam, Houston, TX

MHSRS-18-0123  POSTER SESSION 1 - #026
Evaluation of a Low-Fidelity ECMO Simulation Versus Animal Model Training
Presentation Author: Mrs. Tricia Garcia-Choudary
Heather Delaney, MD1, Tricia L. Garcia, MPH, RN2, Amanda Staudt, PhD2, Thornton Mu, MD1, Matthew A. Borgman, MD1, Cheryl A. Collicott, BSN, RNC-NIC1, Anabelle M. Martinez, RN1, Krystal Valdez-Delgado, RN2, Nicole W. Caldwell, RN2, Elizabeth A. Mann-Salinas, PhD, RN2
1Brooke Army Medical Center, Fort Sam Houston, TX, 2US Army for Surgical Research, Fort Sam Houston, TX
MHSRS-18-0128  POSTER SESSION 1 - #027
Augmented Reality Forward Damage Control Procedures for Non-Surgeons: A Feasibility Demonstration
Presentation Author: LTC Tyler Harris
LTC Tyler Harris, MD, Stephen DeLellis MPAS, PA-C, Harvey Magee, MD, Geoffrey Miller, MS, EMT-P, Kenneth Nelson, MD, Shawn Kane, MD, Young Sammy Choi, MD
1Womack Army Medical Center, Fort Bragg, NC, 2US Army Special Operations Command, Fort Bragg, NC, 3Telemedicine & Advanced Technology Research Center, US Army Medical Research & Materiel Command, Fort Detrick, MD, 4Joint Special Operations Medical Training Center, Fort Bragg, NC

MHSRS-18-0443  POSTER SESSION 1 - #029
Using Machine Learning to Evaluate Surgical Skills for Future Use in Military
Presentation Author: Dr. Ka-Chun Siu
Ka-Chun Siu, PhD, Mohsen Zahir, PhD, Ryan Booton, MS, Carl A. Nelson, PhD
1University of Nebraska Medical Center, Omaha, NE, 2Baylor College of Medicine, Houston, TX, 3University of Nebraska-Lincoln, Lincoln, NE

MHSRS-18-0502  POSTER SESSION 1 - #030
Unique Materials Solutions for Advanced Medical Simulation Training
Presentation Author: Dr. Christopher Tison
Matthew Patterson, Mallory Gasbarre, Bradford Day, Matthew DeWitt, Michael Danilich, David Remer, Matthew Panzer, Christopher Tison, PhD
1Luna Innovations, Charlottesville, VA, 2University of Virginia, Charlottesville, VA

MHSRS-18-0525  POSTER SESSION 1 - #031
Hyper Realistic Training: Influence on Team Dynamics
Presentation Author: Dr. Gabriel De La Rosa
Gabriel M. De La Rosa, PhD, CAPT Tuan N. Hoang, USN, MC, CAPT (Ret) John D. Malone, USN, MC, COL (Ret)
Anthony J. LaPorta, USA, MC, Marcus K. Taylor, PhD, Roland M. Champagne, RN, MPH, Lisa M. Hernandez, PhD, Kit Lavell, BA, Lawrence Gaul, MD, Jennifer A. Webb-Murphy, PhD, CAPT (Ret) Mitchell Dukovich, USN, MSC, PhD
2Naval Center for Combat & Operational Stress Control, San Diego, CA, 2Naval Surface Forces, USPACFLT, San Diego, CA, 3Naval Medical Center San Diego, San Diego, CA, 4Rocky Vista University School of Medicine, Parker, CO, 5Naval Health Research Center, San Diego, CA, 6Strategic Operations Inc, San Diego, CA, 7Vail Health, San Diego, CA

MHSRS-18-0624  POSTER SESSION 1 - #032
Advancing Mechanical Ventilation Management Through Simulation
Presentation Author: Mr. Dario Rodriquez
Dario Rodriquez, Jr, MSc, Athena Sotak, BS, Dina Gomaa, BS, Thomas Blakeman, MSc, Michael Bails, MS, Stefan Frembgen, PhD, Richard Branson, MSc
2USAF School of Aerospace Medicine, Wright Patterson Air Force Base, OH, 2University of Cincinnati, Cincinnati, OH, 3IngMar Medical, Pittsburgh, PA

MHSRS-18-0921  POSTER SESSION 1 - #033
Development of an Integrated Team Training Design Architecture to Support Adaptability in Healthcare Teams
Presentation Author: Dr. Rosemarie Fernandez
Rosemarie Fernandez, MD, Elizabeth Rosenman, MD, Benjamin Levine, MS, Jessica Webb, MA, Georgia Chao, PhD, Steve W. J. Kozlowski, PhD, James A. Grand, PhD
2University of Florida, Jacksonville, FL, 2University of Washington, Seattle, WA, 3University of Maryland, College Park, MD, 4Michigan State University, Lansing, MI

MHSRS-18-0938  POSTER SESSION 1 - #034
Developing the Medical Simulation Training Architecture (MSTA)
Presentation Author: Mr. Harald Scheirich
Harald Scheirich, Timothy Kelliher, Ryan Beasley, PhD, Ryan Kornheisli BS
SimQuest Solutions, Annapolis, MD
MHSRS-18-1035  POSTER SESSION 1 - #035
Development of a Generalizable Method for Assessing, Predicting, & Improving Team Adaptability
Presentation Author: Mr. Benjamin Levine
Benjamin Levine, MS1, Rosemarie Fernandez, MD2, Elizabeth Rosenman, MD3, James A. Grand, MD4
1University of Maryland, College Park, MD, 2University of Florida, Jacksonville, FL, 3University of Washington, Seattle, WA

MHSRS-18-1067  POSTER SESSION 1 - #036
AMSA - Advanced Modular Simulation Architecture for the Medical Field
Presentation Author: Dr. Gianluca De Novi
Gianluca De Novi, PhD, Mark Peter Ottensmeyer
Massachusetts General Hospital, Harvard Medical School, Boston, MA

MHSRS-18-1180  POSTER SESSION 1 - #037
Assessing Surgical Task Load: A Comparison of the Effect of Simulation Versus Maritime Operation
Presentation Author: 2LT Holly Spitzer
2LT Holly Spitzer, MS2, Cameron Lindemann, MS3, Tuan Hoang, MD, FACS4, Anthony J. LaPorta, MD, FACS5, Hayden Springer, MS2, Eric Pierce, MS3, Reginald Franciose, MD, FACS4, Matthew Pena, MD, FASA5, Nita Shattuck, PhD6, Cameron Bass, PhD7, Michael Juliano, MD8
1Rocky Vista University School of Medicine, Parker, CO, 2Medical Readiness Division, San Diego, CA, 3Naval Surface Warfare Center, Panama City, FL, 4Denver Health Medical Center, Denver, CO, 5Naval Hospital Pensacola, Pensacola, FL, 6Naval Postgraduate School, Monterey, CA, 7Duke University, Durham, NC, 8Fleet Health Services, Norfolk, VA

MHSRS-18-1181  POSTER SESSION 1 - #038
Efficacy of Medical Operations & Layout Planning Aboard Non-Traditional US Navy Vessels at High Seas
Presentation Author: ENS Cameron Lindemann
ENS Cameron Lindemann, MS2, Tuan Hoang, MD, FACS3, Anthony J. LaPorta, MD, FACS3, Tina Wilson, MS2, Eric Pierce, MS3, Reginald Franciose, MD, FACS4, Mathew Pena, MD, FASA5, Nita Shattuck, PhD6, Cameron Bass, PhD7, Michael Juliano, MD8
1Rocky Vista University School of Medicine, Parker, CO, 2Medical Readiness Division, Sand Diego, CA, 3Naval Surface Warfare Center, Panama City, FL, 4Denver Health Medical Center, Denver, CO, 5Naval Hospital Pensacola, Pensacola, FL, 6Naval Postgraduate School, Monterey, CA, 7Duke University, Durham, NC, 8Fleet Health Services, Norfolk, VA

MHSRS-18-1510  POSTER SESSION 1 - #039
Speech Recognition Technology for Combat Casualty Handoff Training
Presentation Author: Dr. Alyssa Tanaka
Alyssa Tanaka, PhD1, Brian Stensrud2, Denise Nicholson, PhD1, Gregory Welch, PhD2, Gerd Bruder, PhD2, Francisco Guido-Sanz, PhD, ARNP ANP-BC2, LCDR Lee Sciarini3, 4CDR Hank Phillips4
1Soar Technology, Inc, Orlando, FL, 2The University of Central Florida, Orlando, FL, 3NavalSurvival Training Institute, Pensacola, FL, 4Naval Air Warfare Center Training System Division, Orlando, FL

MHSRS-18-1587  POSTER SESSION 1 - #040
Repeated Measures Logistic Regression: A Unique Opportunity to Evaluate Training Modality Performance in the Combat Medic
Presentation Author: Dr. Rindi Uhlich
RM Uhlich, MD1, A Bukoski2, L Thomsbs2, JD Kerby3, JH Armstrong4, SL Barnes2, MU CCTC Investigators2
1University of Alabama-Birmingham, Birmingham, AL, 2University of Missouri, Columbia, MO, 3University of South Florida, Tampa, FL

MHSRS-18-1652  POSTER SESSION 1 - #041
Ongoing Assessment of a Self-Study, Self-Debriefing Simulator for Central Venous Access: Preliminary Results
Presentation Author: Mr. Samsun Lampotang
Samsun Lampotang, Edward McGough, MD, FCCP, Joshua Sappenfield, MD, Nikolaus Gravenstein, MD, Lou Ann Cooper, PhD, Dave Lizzas, BSME, Anthony Destephens, MSME, Andrew Gifford, BS, Desmond Zeng, MS
University of Florida, Gainesville, FL
**POINT OF INJURY & TRAUMA SIMULATION (POINTS)**

**MHSRS-18-0078 POSTER SESSION I - #042**

**Impact of an Introductory eFAST Training Intervention Among Ultrasound-Naive US Military Medics**

Presentation Author: Dr. Jonathan Monti
Jonathan D. Monti, DSc, PA-C, Matthew Nilan, DO, LTC Michael Perreault, MD
1Madigan Army Medical Center, Tacoma, WA, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Madigan Army Medical Center, Tacoma, WA

**MHSRS-18-0953 POSTER SESSION I - #043**

**A Comparative Analysis of the Usability of Low to Moderate Cost Commercially Available Task-Trainers to Teach Cricothyroidotomy**

Presentation Author: Ms. Rachael Dampman
Rachael Dampman, BS, Joseph Lopreiato, MD, MPH, Mark Bowyer, MD
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-0973 POSTER SESSION I - #044**

**A Novel Training Platform for Life-Saving Interventions During Prolonged Field Care**

Presentation Author: Mr. Daniel Wendorff
Daniel Wendorff, BS, Brendan Beely, RRT, Teryn Roberts MS, George Harea, BS, Kyle Sieck, BS, Jae Hyek Choi, PhD, DVSc, Alexander Dixon, BS, James Lantry, III, MD, Leopoldo Cancio, MD, Jeremy Cannon, MD, Philip Mason, MD, Valerie Sams, MD, Andriy Batchinsky, MD
1Geneva Foundation, Tacoma, WA, 2Morsani College of Medicine, University of South Florida, Tampa, FL, 3Baltimore Shock Trauma Hospital, Baltimore, MD, 4US Army Institute of Surgical Research, Joint Base San Antonio Fort Sam Houston, TX, 5University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, 659th Medical Wing, Joint Base San Antonio, TX

**MHSRS-18-1218 POSTER SESSION I - #045**

**Better Teaching & Training Pneumothorax**

Presentation Author: Mr. Zeth Holbert
DNP Student, Pottstown, PA

**MHSRS-18-1795 POSTER SESSION I - #046**

**Design Challenges for a Point of Injury Training System to Address Higher Mortality Rates Among Female Soldiers**

Presentation Author: Mr. Mark Mazzeo
Mark Mazzeo, Teresita Sotomayor, PhD, Angela M. Alban, Edward Stadler, Jordan Coulter, Thomas Seland
1US Army Research Lab, Orlando, FL, 2SIMETRI, Inc, Winter Park, FL

**MHSRS-18-2077 POSTER SESSION I - #047**

**Evaluating the Juxtopia® CAMMRAD Medic Augmented Reality System for Improving Point of Care Trauma Skills Training**

Presentation Author: Dr. Jayfus Doswell
Jayfus Doswell, PhD, Peter Kazanzides, PhD, Joan Tilghman, PhD, Ehsan Azimi, PhD, Deshawn Collington, Justin Johnson, Saboor Salaam
1Juxtopia, Baltimore, MD, 2Johns Hopkins University, Baltimore, MD, 3Coppin State University, Baltimore, MD
MANAGEMENT OF SLEEP & FATIGUE FOR MAXIMIZATION OF SOLIDER OPERATIONAL READINESS

**MHSRS-18-0038**  **POSTER SESSION 1 - #048**
CPAP Compliance Surveillance in Soldiers with Obstructive Sleep Apnea in the US Army
Presentation Author: CPT Brandon Carius
CPT Brandon M. Carius, MPAS, PA-C¹, LTC Amelia M. Duran-Stanton, PhD, DSc, MPAS, PA-C²
¹Brooke Army Medical Center, Fort Sam Houston, TX, ²US Army Research Institute of Environmental Medicine, Natick, MA

**MHSRS-18-0203**  **POSTER SESSION 1 - #049**
Exploring the Effects of Multiple Days of Diving on Sleep
Presentation Author: Ms. Sara Bessman
Sara Bessman, MS¹, Jason Jameson, PhD², Kirbie Huwa, MS³, Michelle Snider, DC⁴, John Florian, PhD⁵, Rachel Markwald, PhD⁶
¹Eagle Applied Sciences, LLC, San Diego, CA, ²Leidos, Inc, San Diego, CA, ³Innovative Employee Solutions, San Diego, CA, ⁴Navy Experimental Diving Unit, Panama City, FL, ⁵Naval Health Research Center, San Diego, CA

**MHSRS-18-0239**  **POSTER SESSION 1 - #050**
Optimal Caffeine Doses to Maximize Warfighter Alertness
Presentation Author: Dr. Jaques Reifman
Francisco G. Vital-Lopez, PhD¹, Sridhar Ramakrishnan, PhD¹, Tracy J. Doty, PhD², Thomas J. Balkin, PhD², Jaques Reifman, PhD¹
¹US Army Medical Research & Materiel Command, Fort Detrick, MD, ²Walter Reed Army Institute of Research, Silver Spring, MD

**MHSRS-18-0381**  **POSTER SESSION 1 - #051**
Incidence & Predictors of Sleep Apnea Treatment Compliance Among Veterans & Military Service Members with Acquired Brain Injury
Presentation Author: Dr. Dayana Calvo
Dayana Calvo, PhD¹, Danielle L. Cool, PsyD², Marc A. Silva, PhD²-³, M. Brad Rechkemmer, MPH³, Leah Drasher-Phillips, MPH², Dan J. Schwartz, MD¹-², Karel Calero, MD¹-², William McDowell Anderson, MD¹-², Risa Nakase-Richardson, PhD²-³
¹James A. Haley Veterans Hospital, Tampa, FL, ²University of South Florida, Tampa, FL, ³Defense & Veterans Brain Injury Center, Tampa, FL

**MHSRS-18-0487**  **POSTER SESSION 1 - #052**
Changes in State Anxiety Over 62 hours of Sleep Deprivation & Subsequent Recovery
Presentation Author: Dr. Tracy Jill Doty
Tracy Jill Doty, PhD, Alexxa Bessey, Nora Prindle, Meghan Powers Armstrong, Tina Burke, Thomas J. Balkin, Vincent F. Capaldi
Walter Reed Army Institute of Research, Silver Spring, MD

**MHSRS-18-0592**  **POSTER SESSION 1 - #053**
Fatal Monotony: Increased Daytime Sleepiness in the Deployed Setting. This Study is Part of a Special Military Medical Research Project
Presentation Author: Lt Col Reinhard Dr. Stark
Lt Col Reinhard Stark, MD¹, Roland Girgensohn, MD², Antje Büttner-Teleag, MD³-⁴
¹German Armed Forces Hospital, Hamburg, Germany, ²Sanitätssakademie der Bundeswehr, Ingolstädter München, ³Woosuk Universität, Jeonbuk, Südkorea, ⁴University Witten-Herdecke, Witten, Germany

**MHSRS-18-0613**  **POSTER SESSION 1 - #054**
A Workplace Intervention to Improve Sleep & Performance of Military Hospital Staff: Participant Satisfaction & Lessons Learned
Presentation Author: Dr. Emily Schmied
Emily A. Schmied, PhD¹, Elizabeth M. Harrison, PhD², Alexandra Powell³, CDR Abigail M. Yablonsky⁴, Gena L. Glickman, PhD²
¹Leidos, San Diego, CA, ²University of California, San Diego, San Diego, CA, ³Naval Medical Center, San Diego, CA, ⁴Naval Health Research Center, San Diego, CA
MHSRS-18-0633  POSTER SESSION 1 - #055
A Preliminary Examination of Neurocognitive Functioning & Alertness Following a Night of Sleep Fragmentation
Presentation Author: LT Dale Hirsch
LT Dale A. Hirsch, PhD1, Michelle N. Snider, DC2, Evan D. Chinoy, PhD3, Rachel R. Markwald, PhD4
1Naval Health Research Center, San Diego, CA, 2Innovative Employee Solutions, San Diego, CA, 3Leidos, Inc, San Diego, CA

MHSRS-18-0667  POSTER SESSION 1 - #056
A Preliminary Examination of Wearable & Non-Wearable Sleep Assessment Devices Versus Polysomnography
Presentation Author: Dr. Evan Chinoy
Evan D. Chinoy, PhD1, Kirkie E. Huwa, MS2, Michelle N. Snider, DC2, Sara C. Bessman, MS2, Paula Y.S. Poh, PhD3, CPT Adam D. Cooper, PhD4, Patrick J. Nardulli2, Jason T. Jameson, PhD3, Sean PA. Drummond, PhD2, Rachel R. Markwald, PhD4
2Naval Health Research Center, San Diego, CA, 3Innovative Employee Solutions, San Diego, CA, 4Leidos, Inc, San Diego, CA

MHSRS-18-0677  POSTER SESSION 1 - #057
Sensor Systems for Longitudinal Monitoring of Sleep & Behavior in Acute to Chronic Traumatic Brain Injury
Presentation Author: Dr. Samuel Clanton
Samuel Clanton, MD, PhD1, Ou Bai, PhD2, Ding-Yu Fei, PhD3
1Hunter Holmes Veterans Administration Medical Center, Virginia Commonwealth University, Richmond, VA, 2Florida International University, Miami, FL, 3Virginia Commonwealth University, Richmond, VA

MHSRS-18-0720  POSTER SESSION 1 - #058
Genetic Polymorphisms of Sleep Resiliency & Caffeine Sensitivity are not Associated with Neurobehavioral Deficits Under Repeated Cycles of Total Sleep Deprivation
Presentation Author: CPT Allison Brager
CPT Allison Brager1, Devon Grant1, Brieann Satterfield1, Ruthie Ratcliffe1, Thomas Balkin1, Vincent F. Capaldi II1, Martha Petrovic4
1Walter Reed Army Institute of Research, Silver Spring, MD, 2Washington State University, Spokane, WA, 3University of Arizona, Tuscon, AZ, 4MIT-Lincoln Laboratories, Lexington, MA

MHSRS-18-0751  POSTER SESSION 1 - #059
Self-Reported Insomnia Symptoms Prior to a Simulated Deployment Training Operation Robustly Predicts Post-Training Posttraumatic Stress Symptoms in the Warfighter
Presentation Author: Dr. Ashlee McKeon
Ashlee McKeon, PhD1, Maria St. Pierre, MS1, Lilly Skeiky, MS2, Jake Choynowski, BS, Julie Merril, PhD, MAJ Walter Sowden, PhD2
1Walter Reed Army Institute of Research, Silver Spring, MD, 2US Army Medical Research Directorate-West, Tacoma, WA

MHSRS-18-0759  POSTER SESSION 1 - #060
Rest & Activity Patterns of US Army Aviators in a Routine Garrison Environment
Presentation Author: Ms. Amanda Hayes
Amanda Hayes, MS1,2, Kyle Bernhardt, BS1,2, Amanda Kelley, PhD1, Jim Chiaramonte, BS1, Melody King, BS1
1US Army Aeromedical Research Laboratory, Fort Rucker, AL, 2Oak Ridge Institute for Science & Education, Oak Ridge, TN

OPEN  POSTER SESSION 1 - #061

MHSRS-18-1038  POSTER SESSION 1 - #062
Effects of Sleep Extension on Performance Using a Cognitively Demanding Emotional Task
Presentation Author: Dr. Sara Alger
Sara E. Alger, PhD1, Nora E. Prindle, MPS1, Allison J. Brager, PhD1, Tracy Jill Doty, PhD1, Ruthie H. Ratcliffe1, Angela M. Yarnell, PhD1, Thomas J. Balkin, PhD1, Vincent F. Capaldi, MD1, Guido Simonelli, MD2
1Walter Reed Army Institute of Research, Silver Spring, MD, 2US Military Academy, West Point, NY

MHSRS-18-1140  POSTER SESSION 1 - #063
Effect of Fluticasone Propionate on Tongue Muscles Physiology
Presentation Author: Dr. Mihaela Teodorescu
Christopher Setzke, BS\textsuperscript{1}, Oleg Broytman, PhD\textsuperscript{1}, John A. Russell, PhD\textsuperscript{1}, Nadine Connor, PhD\textsuperscript{1}, Mihaela Teodorescu, MD, MS\textsuperscript{1,2}
\textsuperscript{1}University of Wisconsin, Madison, WI, \textsuperscript{2}William S. Middleton Memorial Veterans Hospital, Madison, WI

MHSRS-18-1164 \hspace{1cm} POSTER SESSION 1 - #064
Efficacy of a Behavioral Sleep Improvement Class in the Primary Care Setting
Presentation Author: Dr. Juliana Ee
Juliana Ee, PhD, Elizabeth Harpster, MD, David Shaha, MD, Melissa Roberts, MD
Womack Army Medical Center, Fort Bragg, NC

MHSRS-18-1280 \hspace{1cm} POSTER SESSION 1 - #065
Slow Wave Sleep Parameters Predict Better Executive Performance
Presentation Author: Dr. Anne Germain
Fabio Ferrarelli, MD, PhD\textsuperscript{1}, Rachel Reifman, PhD\textsuperscript{3}, Srinivas Laxminarayan, PhD\textsuperscript{1}, Sridhar Ramakrishnan, PhD\textsuperscript{3}, Anne German, PhD\textsuperscript{1}
\textsuperscript{1}University of Pittsburgh, Pittsburgh, PA, \textsuperscript{2}University of Pittsburgh Medical Center, Pittsburgh, PA, \textsuperscript{3}US Army Medical Research & Material Command, Fort Detrick, MD

MHSRS-18-1291 \hspace{1cm} POSTER SESSION 1 - #066
A Multicenter Study Examining Two Scoring Algorithms for Diagnosis of Obstructive Sleep Apnea (OSA) in an Acute Neurorehabilitation Population with Traumatic Brain Injury (TBI)
Presentation Author: Ms. Leah Drasher-Phillips
Peter Ricketti, MD\textsuperscript{1}, Daniel J. Schwartz, MD\textsuperscript{1,2}, Karel Calero, MD\textsuperscript{1,2}, William Anderson, MD\textsuperscript{1}, Carlos Diaz-Sien, RSPGT\textsuperscript{2}, Leah M. Drasher-Phillips, MPH\textsuperscript{2}, Danielle O’Connor, MA, MPH\textsuperscript{2}, Mathew B. Rechkemmer, MPH\textsuperscript{2}, Kathleen R. Bell, MD\textsuperscript{1,4}, Marie Dahdah, PhD\textsuperscript{1,5,6}, Risa Nakase-Richardson, PhD\textsuperscript{1,2}
\textsuperscript{1}University of South Florida, Morsani College of Medicine, Tampa, FL, \textsuperscript{2}James A. Haley Veterans Hospital, Tampa, FL, \textsuperscript{3}North Texas Traumatic Brain Injury Model System, Dallas, TX, \textsuperscript{4}University of Texas Southwestern Medical Center, Dallas, TX, \textsuperscript{5}Baylor Institute for Rehabilitation Institute, Dallas, TX, \textsuperscript{6}Baylor Scott & White Medical Center Plano, Dallas, TX

MHSRS-18-1388 \hspace{1cm} POSTER SESSION 1 - #067
Subjective Sleep & Chronobiology Survey Characteristics of Football Collegiate Athletes as a Model for Military Populations
Presentation Author: Dr. Tina Burke
Tina Burke, PhD\textsuperscript{1}, Kevin Maguire, BS\textsuperscript{1}, Christina Mayhew, BS\textsuperscript{1}, MAJ Angela Yarnell, PhD\textsuperscript{1,2}, LTC Vincent Capaldi, MD\textsuperscript{1}, Joshua Wilder, MS\textsuperscript{2}, Peter Lisman, PhD\textsuperscript{2}, Devon Dobrosielski, PhD\textsuperscript{2}, CPT Allison Brager, PhD\textsuperscript{1}
\textsuperscript{1}Walter Reed Army Institute of Research, Silver Spring, MD, \textsuperscript{2}Towson University, Towson, MD, \textsuperscript{3}West Point Military Academy, West Point, NY

MHSRS-18-1398 \hspace{1cm} POSTER SESSION 1 - #068
The Comparison of Subjective Versus Objective Sleep Measures in the Football Collegiate Athlete as a Model for Military Populations
Presentation Author: Dr. Tina Burke
Tina Burke, PhD\textsuperscript{1}, Kevin Maguire, BS\textsuperscript{1}, Lillian Skeiky, BS\textsuperscript{1}, John Choynowski, BS\textsuperscript{1}, MAJ Angela Yarnell, PhD\textsuperscript{1,2}, LTC Vincent Capaldi, MD\textsuperscript{1}, Joshua Wilder, MS\textsuperscript{2}, Peter Lisman, PhD\textsuperscript{2}, Devon Dobrosielski, PhD\textsuperscript{2}, CPT Allison Brager, PhD\textsuperscript{1}
\textsuperscript{1}Walter Reed Army Institute of Research, Silver Spring, MD, \textsuperscript{2}Towson University, Towson, MD, \textsuperscript{3}West Point Military Academy, West Point, NY
MHSRS-18-1410  POSTER SESSION 1 - #069
The Use of Skin Sympathetic Nerve Activity as a Non-Invasive Marker of Altered Autonomic Tone in Patients with Sleep Disordered Breathing. A Biomarker for the Use in the Management of the Sleep Deprived Soldier
Presentation Author: Dr. Shalini Manchanda
Danning Wang, MD, Yuzhu Tang, MD, Awaneeash Kumar, MD, Johnon Wong, BS, Keith C. Wright, MS, Gloria A Mitscher, RN, Lorenzo Nava, RPSGT, David Adams, BS, Thomas H. Everett, IV, PhD, Peng-Sheng Chen, MD, Shalini Manchanda, MD
1Indiana University School of Medicine, Indianapolis, IN, 2Indiana University Health – Sleep Disorders Center, Indianapolis, IN

MHSRS-18-1442  POSTER SESSION 1 - #070
An Optimal Strength & Conditioning Program that Considers Sex Differences in Capabilities as a Model for the Army Occupational Physical Assessment Test
Presentation Author: CPT Allison Brager
Kevin Maguire, BS, Peter Lisman, PhD, Devon Dobrosielski, PhD, MAJ Angela Yarnell, PhD, LTC Vincent Capaldi, MD, Tina Burke, PhD, CPT Allison Brager, PhD
1Walter Reed Army Institute of Research, Silver Spring, MD, 2Towson University, Towson, MD, 3West Point Military Academy, West Point, NY

MHSRS-18-1527  POSTER SESSION 1 - #072
Randomized, Double-Blind, Placebo-Controlled, Cross-Over Study of Multi-Dose Caffeine Pharmacodynamics During 48 Hours of Total Sleep Deprivation
Presentation Author: Dr. Devon Grant
Devan A. Grant, PhD, LMHC, Sridhar Ramakrishnan, PhD, Brieann C. Satterfield, PhD, Nancy J. Wesensten, PhD, Matthew E. Layton, MD, PhD, Jaques Reifman, PhD, Hans P. A. Van Dongen, PhD
1Washington State University, Spokane, WA, 2US Army Medical Research & Materiel Command, Fort Detrick, MD, 3University of Arizona, Tucson, AZ, 4Federal Aviation Administration, Washington, DC

MHSRS-18-1585  POSTER SESSION 1 - #073
Blue Light Therapy Improves Self-Reported Sleep Quality in Individuals with a Recent Mild Traumatic Brain Injury
Presentation Author: Dr. Adam Raikes
Adam C. Raikes, PhD, Brieann C. Satterfield, PhD, Anna Alkozei, PhD, William D.S. Killgore, PhD
1University of Arizona, Tucson, AZ, 2McLean Hospital, Harvard Medical School, Boston, MA

MHSRS-18-1693  POSTER SESSION 1 - #074
Sleep Deprivation Induces Cognitive Flexibility Impairment in Addition to & Independent of Vigilant Attention Deficits
Presentation Author: Dr. Kimberly Honn
Kimberly A. Honn, PhD, John M. Hinson, PhD, Paul Whitney, PhD, Hans P. A. Van Dongen, PhD
1Washington State University, Spokane, WA, 2Washington State University, Pullman, WA

MHSRS-18-1765  POSTER SESSION 1 - #075
Developing a Novel Variable for Quantifying Objective Sleep in a Unique Military Environment
Presentation Author: Mr. Jake Choynowski
Jake Choynowski, BS, Lillian Skeiky, BS, Jaime K. Devine, PhD, MAJ Walter Sowden, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1847  POSTER SESSION 1 - #076
Physiological Monitoring for Determining Cognitive Readiness
Presentation Author: Dr. Jeffrey Bolkhovsky
Jeffrey Bolkhovsky, PhD, Ethan Hada, PhD, David Gever, MS, Brandon Casper, PhD
Naval Submarine Medical Research Laboratory, Groton, CT
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

Poster Session I

MHSRS-18-1958  POSTER SESSION 1 - #077
Sleep Disorders in Military Women: Identifying Causal Factors & the Impact of Treatment on Psychological Health & Resilience
Presentation Author: Dr. Alan Peterson
COL Vincent Mysliwiec, MD, Maj Matthew Brock, MD, Kristi Pruiksma, PhD, Jessica Gill, RN, PhD, MAJ Shannon Foster, DO, Lt Col Shana Hansen, MD, Maj Daniel Cassidy, PhD, Lt Col Robert Vanecek, PhD, Panagiotis Matsangas, PhD, Jim Mintz, PhD, Stacey Young-McCaughan, RN, PhD, Allison Hancock, PhD, Cassandra Pattison, PhD, Sharon Hasslen, PhD, Daniel Taylor, PhD, Alan Peterson, PhD
1San Antonio Military Healthcare System, San Antonio, TX, 2University of Texas Health Science Center at San Antonio, San Antonio, TX, 3National Institute of Nursing Research, National Institutes of Health, Bethesda, MD, 4Naval Postgraduate School, Monterey, CA, 5University of North Texas, Denton, TX, 6South Texas Veterans Health Care System, San Antonio, TX, 7University of Texas at San Antonio, San Antonio, TX

MHSRS-18-2070  POSTER SESSION 1 - #078
Sleep Satisfaction Mediates the Relationship Between Discrepancies in Subjective Versus Objective Sleep & Individual Morale During Military Training
Presentation Author: Lillian Skeily
Lillian Skeily, BS, Nora Prindle, MPS, Jake Choynowski, BS, Jaime Devine, PhD, MAJ Walter Sowden, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

NUTRITIONAL OPTIMIZATION OF RESET & RECOVERY

MHSRS-18-0044  POSTER SESSION 1 - #079
Role of Drill Sergeants in Influencing Nutrition Behaviors of US Army Basic Trainees
Presentation Author: MAJ Barbara Bujak
MAJ Barbara K. Bujak, PT, DPT, Julianna M. Jayne, MS, RD, Christine E. Blake, PhD, RD, Toni M. Torres-McGehee, PhD, SCAT, ATC, Edward A. Frongillo, PhD, LTC Sonya Cable, Saundra H. Glover, PhD
1University of South Carolina, Columbia, SC, 2Army Initial Military Training Center of Excellence, Fort Eustis, VA

MHSRS-18-0183  POSTER SESSION 1 - #080
Abdominal Circumference Measurements in a US Navy Active Duty Population
Presentation Author: Ms. Katherine Wilson
Katherine M. Wilson, Douglas M. Jones, Rebecca S. Weller, Melissa D. Laird, Jay H. Heaney
Leidos, San Diego, CA, Naval Health Research Center, San Diego, CA

MHSRS-18-0628  POSTER SESSION 1 - #081
Dietary Interventions Protect Against Blast-Induced Neurotrauma in an Animal Model
Presentation Author: Dr. Tonia Rex
Tonia S. Rex, Alexandra Bernardo-Colon, Victoria Vest, Adrienne Clark, John Clifton, Ryan Dahl, Bohan Kim, Fiona Harrison
1Vanderbilt Eye Institute, Nashville, TN, Vanderbilt University Medical Center, Nashville, TN

MHSRS-18-0846  POSTER SESSION 1 - #082
Development & Validation of a Nutrition Knowledge Questionnaire for Junior Enlisted Military Personnel
Presentation Author: 1LT Jessie Richards
1LT Jessie Richards, MS, RDN, Brenda D. Bustillos, DrPH, MS, RDN, LD
William Beaumont Army Medical Center, Nutrition Care Division, Fort Bliss, TX, Department of Nutritional Medicine, Brooke Army Medical Center, Joint Base San Antonio, TX, US Army Medical Department Center & School, Fort Sam Houston, TX

MHSRS-18-0851  POSTER SESSION 1 - #083
Process Evaluation of Go for Green, a Department of Defense Dining Facility Nutrition Initiative
Presentation Author: 1LT Jennifer West
1LT Jennifer West, MS, RDN, LD, Brenda D. Bustillos, DrPH, MS, RDN, LD
Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA, Brooke Army Medical Center, Joint Base San Antonio, TX, US Army Medical Department Center & School, Fort Sam Houston, TX
**Poster Session I**

MHSRS-18-1064 | POSTER SESSION 1 - #084
---

*A Nutrition Knowledge Comparison of Army Culinary Staff & the Soldiers They Feed*

Presentation Author: Susan McGraw

Erik E. Serrano¹, Nicholas J. Armstrong, MS¹, Catherine M. Champagne, PhD², Adrienne Hatch, MS¹, Susan McGraw¹, LTC Renee E. Cole, PhD²

¹US Army Research Institute of Environmental Medicine, Natick, MA, ²Louisiana State University, Baton Rouge, LA

MHSRS-18-1649 | POSTER SESSION 1 - #085
---

*Soldier Body Satisfaction is Associated with Undesirable Weight Management Behaviors & Stress in Meeting Body Composition Standards*

Presentation Author: LTC Renee Cole

LTC Renee E. Cole, PhD², Susan M. McGraw¹, Kristie L. O’Connor, MS¹, J. Philip Karl, PhD¹, Adam J. DiChiara²

¹US Army Research Institute of Environmental Medicine, Natick, MA, ²Natick Soldier Research, Development & Engineering Center, Natick, MA

MHSRS-18-1108 | POSTER SESSION 1 - #086
---

*Predictive Equation for Urinary Nitrogen Loss in Burn Patients*

Presentation Author: 1LT Erica Jarmer

1LT Erica Jarmer, Brenda Bustillos, DrPH, Beth Shields, MS

Brooke Army Medical Center, Joint Base San Antonio, TX

MHSRS-18-1188 | POSTER SESSION 1 - #087
---

*Evaluation of a Single Nucleotide Polymorphism Related to Choline as a Potential Biomarker for Exertional Rhabdomyolysis in Service Members*

Presentation Author: Dr. Young Choi

Y. Sammy Choi, MD¹, V. Saroja Voruganti, PhD², Tonia Hermon, PhD¹, Adriel G. Dizon, MD¹, Cris Berry-Caban, PhD¹, Steve H. Zeisel, MD, PhD²

¹Womack Army Medical Center, Fort Bragg, NC, ²University of North Carolina, Chapel Hill, NC

MHSRS-18-1279 | POSTER SESSION 1 - #088
---

*Too Fat to Fight: Addressing Readiness & Overweight by Building Practical Skills in the Teaching Kitchen*

Presentation Author: Elizabeth Moylan

Elizabeth Moylan, MPH, Patricia Deuster, PhD, Katie Kirkpatrick, MS

Uniformed Services University, Bethesda, MD

MHSRS-18-1309 | POSTER SESSION 1 - #089
---

*Sensing & Feedback Systems for Affecting Behavioral Change in Individuals & Groups*

Presentation Author: Dr. Jason O. Hallstrom

Jason O. Hallstrom, PhD, Shiree Hughes, PhD, John W. Newcomer, PhD, Jiannan Zhai, PhD

Florida Atlantic University, Boca Raton, FL

MHSRS-18-1649 | POSTER SESSION 1 - #090
---

*Soldier Body Satisfaction is Associated with Undesirable Weight Management Behaviors & Stress in Meeting Body Composition Standards*

Presentation Author: LTC Renee Cole

LTC Renee E. Cole, PhD², Susan M. McGraw¹, Kristie L. O’Connor, MS¹, J. Philip Karl, PhD¹, Adam J. DiChiara²

¹US Army Research Institute of Environmental Medicine, Natick, MA, ²Natick Soldier Research, Development & Engineering Center, Natick, MA

MHSRS-18-2102 | POSTER SESSION 1 - #091
---

*Preventive Aspirin Use Among US Adults with Military Service: Data from the National Health & Nutrition Examination Survey, 2011-2014*

Presentation Author: CPT Erin Tompkins

CPT Erin L. Tompkins, Thomas A. Beltran Womack Army Medical Center, Fort Bragg, NC
ENHANCING HUMAN PERFORMANCE & SURVIVABILITY IN EXTREME ENVIRONMENTS

**MHSRS-18-0105**  **POSTER SESSION 1 - #092**

Feasibility of a Novel Hyperbaric Neurocognitive Assessment System (HNAS) to Evaluate Neurocognitive Performance in Underwater Testing Environments

Presentation Author: LCDR FJ Haran

LCDR FJ Haran, PhD¹, LT Chris Rodeheffer, PhD¹, Justin Handy, PhD², Sarah Chabal, PhD³, Bridget Wilson, BS²

¹Naval Submarine Medical Research Laboratory, Groton, CT, ²Leidos, New London, CT

**MHSRS-18-0186**  **POSTER SESSION 1 - #093**

Substrate Preference During Cold Water Submersion Training

Presentation Author: Dr. Karen Kelly

Karen Kelly, PhD¹, Laura Arrington, MS², Jessica Watson, MS³, Andrew Hargus, MA³

¹Naval Health Research Center, San Diego, CA, ²Leidos, San Diego, CA, ³Naval Special Warfare Group 3, Pearl City, HI

**MHSRS-18-0320**  **POSTER SESSION 1 - #094**

Harnessing Synthetic Biology to Engineer a Smart Probiotic that Modulates Stress Levels of Cortisol

Presentation Author: Dr. Roland Saldanha

Roland Saldanha¹, David Metzger², Vaughn Litteral¹, Craig McPherson¹, Nancy Kelly-Loughnane¹, Heather A. Pangburn¹

¹USAF School of Aerospace Medicine, Wright-Patterson AFB, OH, ²Airman System Directorate, US Air Force Research Laboratory, Wright-Patterson AFB, OH

**MHSRS-18-0508**  **POSTER SESSION 1 - #095**

Evaluation of the US Navy's Physiological Heat Exposure Limits During Deployment in the Persian Gulf

Presentation Author: Mr. Douglas Jones

Douglas Jones, MS¹, Katherine Wilson, MA², Eric Duckworth², LT Magnus Perkins², LT Melissa Laird², Jay Heaney, MA³

¹Leidos, Inc, San Diego, CA, ²USS Nimitz, Bremerton, WA, ³Naval Health Research Center, San Diego, CA

**MHSRS-18-0606**  **POSTER SESSION 1 - #096**

Exploring the Effect of Light Hue on a Medically Related Task

Presentation Author: 2LT Danyelle Beltz

2LT Danyelle Beltz, BS¹, 2LT Jared McLaughlin, BS², 2LT Jeffrey Wake, BS², ENS Preston Van Buren, BS¹, BG (Ret) Robert Enzenauer, MD, MPH, MSS, MBA², COL (Ret) Anthony LaPorta, MD, FACS¹, Maj Christopher Calvano, MD, PhD³, David Ross, DO²

¹Rocky Vista University, Parker, CO, ²University of Colorado, Aurora, CO, ³San Antonio Military Medical Center, San Antonio, TX

**MHSRS-18-0668**  **POSTER SESSION 1 - #097**

Use of Modern Technology to Evaluate Metabolic Rate Aboard a US Navy Aircraft Carrier

Presentation Author: Mr. Jay Heaney

Jay H. Heaney, MA¹, Douglas M. Jones, MS², Katherine M. Wilson, MS², Eric Duckworth², LT Melissa D. Laird, PhD¹, LT Magnus Perkins²

¹Naval Health Research Center, San Diego, CA, ²Leidos, Inc, San Diego, CA, ³USS Nimitz, Bremerton, WA

**MHSRS-18-0960**  **POSTER SESSION 1 - #098**

Ability of 5-Hydroxymethyl-2-Furfural (5-HMF) to Inhibit Cellular Hypoxia During Acute Exposure to Low Environmental Oxygen in Swine

Presentation Author: Dr. Brian Williams

Brian T. Williams¹,², Richard Mahon¹,², Joshua Swift¹

¹Naval Medical Research Center, Silver Spring, MD, ²Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD
Poster Session I

MHSRS-18-1487 POSTER SESSION 1 - #099
Assessments of Physiology & Cognition in Hybrid-Reality Environments (APACHE)
Presentation Author: Dr. Andrew Abercromby
Andrew F.J. Abercromby, PhD1, Matthew Miller, PhD2, Alejandro Garbino, MD, PhD3, Trevor Graff2, Meghan Downs, PhD4, Jason Norcross4, Francisco Delgado4
1NASA Johnson Space Center, Houston, TX, 2Jacobs, Houston, TX, 3GeoControl Systems, Inc, Houston, TX, 4KBRwyle, Houston, TX

MHSRS-18-1497 POSTER SESSION 1 - #100
An Objective Classifier of Expertise in United States Marine Corps Combat Aviators
Presentation Author: Ms. Adriana Nozima
Adriana M.M. Nozima1, Jaime I. Castro1, Leandro L. Di Stasi, PhD2, Robert G. Alexander, PhD4, Susana Martinez-Conde, PhD3, Michael B. McCamy, PhD3, Ellis Gayles, MD4, Alexander Cole3, Michael Foster3, Brad Hoare5, Francesco Tenore, PhD6, M. Sage Jessee, PhD6, Eric Pohlmeier, PhD6, Mark Chevillet, PhD6, Andrés Catena, PhD6, Wânia C. de Souza, PhD7, Gerson A. Janczura, PhD7, Stephen L. Macknik, PhD7
1State University of New York Downstate Medical Center, Brooklyn, NY, 2University of Granada, Granada, Spain, 3Barrow Neurological Institute, Phoenix, AZ, 4Third Marine Aircraft Wing Marine Corps Air Station Miramar, Camp Pendleton, CA, 5Marine Aviation Training, 3D Marine Air Wing, Camp Pendleton, CA, 6Johns Hopkins University, Baltimore, MD, 7University of Brasilia, Brasilia, Brazil

MHSRS-18-1747 POSTER SESSION 1 - #101
Exhaled Volatile Organic Compounds to Detect Pulmonary Oxygen Toxicity Onset in Experimental Acute Respiratory Distress Syndrome in Swine
Presentation Author: LCDR William Cronin
William Cronin, MD1,2, Aaron Hall, PhD2, Angela Forbes, DO1,2, William Johnson, MD2, Chelsea Willoughby, MS2, Richard Mahon, MD2
1Walter Reed National Military Medical Center, Bethesda, MD, 2Naval Medical Research Center, Silver Spring, MD

MHSRS-18-2014 POSTER SESSION 1 - #102
The Impact of Short-Term Heat Stress on the Calpain & Proteasome Systems in Skeletal Muscle from a Large Animal Model
Presentation Author: Dr. Joshua Selsby
Joshua T. Selsby, PhD1, Shanthi Ganesan, PhD1, Sarah C. Pearce, PhD1, Nicholas K. Gabler, PhD1, Matthew B. Hudson, PhD2, Robert P. Rhoads, PhD2, Lance H. Baumgard, PhD1
1Iowa State University, Ames, IA, 2University of Delaware, Newark, DE, 3Virginia Tech, Blacksburg, VA

MHSRS-18-2117 POSTER SESSION 1 - #103
The Relationship Between Female Soldier Trainees’ Anthropometric Measures & Performance on Common Soldiering Tasks
Presentation Author: Dr. Jan Redmond
Jan E. Redmond, PhD1, Bruce S. Cohen, PhD1, Caitlin C. Dillon, MS1, Joseph R. Pierce, PhD2, Stephen A. Foulis, PhD1, Maria C. Canino, MS1, Marilyn A. Sharp, MS1
1US Army Research Institute of Environmental Medicine, Natick, MA, 2US Army Public Health Center, Aberdeen Proving Ground, MD

MHSRS-18-2125 POSTER SESSION 1 - #104
The Impact of Resistive-Loaded Breathing on Attentional Focus
Presentation Author: Dr. Troy Cross
Troy Cross, PhD1, Eli Kelley1, Rob Wentz1, Jennifer Isautier, MND2, Bradley Cierzan1, Alex Carlson1, Briana Ziegler1, Lawrence Steinkraus, MD1, Bruce D Johnson, PhD2, Ryan Mayes, PhD2
1Mayo Clinic, Rochester, MN, 2Air Force School of Aerospace Medicine, Wright-Patterson, OH
MANAGING PHYSIOLOGICAL EPISODES IN MILITARY AVIATION

**MHSRS-18-0555** POSTER SESSION 1 - #105

**Anthropometric Measurements of the NBDL HRV Cohort Compared to the ANSUR II Aviator Cohort**

Presentation Author: Ms. Andrea Dargie
Andrea Dargie1,2, Allison Moczynski1,3, Alicia Abrazinskas1,2, Christine Beltran1,2, Ardyn Olszko, MS1,3, James S. McGhee, MD, MPH1, Valeta Carol Chancey, PhD1
1US Army Aeromedical Research Laboratory, Fort Rucker, AL, 2Laulima Government Solutions, LLC, Orlando, FL, 3Oak Ridge Institute for Science & Education, Oak Ridge, TN

**MHSRS-18-0847** POSTER SESSION 1 - #106

**Impact of Hypoxia on Brain Activity & Flight Simulation Performance**

Presentation Author: Ms. Sabrina Drollinger
Sabrina Drollinger, MS1, CAPT G. Merrill Rice, DO, MPH2, Dallas Snider, PhD2, LT Christopher Greil, PhD2, LCDR Frank Bogni, MD3, Jeffrey Phillips, PhD4, Steven Linnville, PhD2, Katherine Marco1, Anil Raj, MD4, Margaret Freyaldenhoven4
1Naval Medical Operational Training Center, Pensacola, FL, 2Naval Aviation Schools Command, Pensacola, FL, 3University of West Florida, Pensacola, FL, 4Florida Institute for Human & Machine Cognition, Pensacola, FL

**MHSRS-18-1017** POSTER SESSION 1 - #107

**Nutrition Behaviors in US Navy & Marine Corps F/A-18 & T-45 Aircrew: Associations with Prior Experience of Physiological Episodes**

Presentation Author: LCDR Brennan Cox
Rebecca Fosha, MA, Elizabeth Combs, MS, Christine Fletcher, MS, LCDR Brennan D. Cox, PhD, Panagiotis Matsangas, PhD, Andrew Anglemyer, PhD, Nita Shattuck, PhD, Lawrence Shattuck, PhD
Naval Postgraduate School, Monterey, CA

**MHSRS-18-1261** POSTER SESSION 1 - #108

**Pulse-Oximetry as an In-Flight Monitoring Tool: A Comparison of Response Times to Changes in the Fraction of Inspired Oxygen & Symptom Onset**

Presentation Author: Dr. Jeffrey Phillips
Jeffrey B. Phillips, PhD1, G. Merrill Rice, DO, MPH2, Dallas H. Snider, PhD3, Sabrina M. Drollinger, MS4, Anil K. Raj1
1Florida Institute for Human & Machine Cognition, Pensacola, FL, 2Naval Aviation Schools Command, Pensacola, FL, 3University of West Florida, Pensacola, FL, 4Naval Aviation Medical Institute, Pensacola, FL

**MHSRS-18-1326** POSTER SESSION 1 - #109

**Cone Contrast Thresholds: A More Sensitive Measure to Understanding Visual Decline in Hypoxic Conditions**

Presentation Author: LCDR Micah Kinney
LCMD Micah J. Kinney1, Matthew E. Funke, PhD1, LCDR Dustin Huber1, Steven Hadley, MD2, Jeffery Phillips, PhD3
1Naval Medical Research Unit Dayton, Wright-Patterson AFB, OH, 2US Air Force School of Aerospace Medicine, Wright-Patterson AFB, OH, 3Florida Institute for Human & Machine Cognition, Pensacola, FL

**MHSRS-18-1548** POSTER SESSION 1 - #110

**Novel Approach for Detecting the Neurological or Behavioral Impact of Physiological Episodes (PEs) in Military Aircraft Crews**

Presentation Author: Dr. Mohamed Abou-Donia
Mohamed B. Abou-Donia, PhD, Mulugu V. Brahmajothi, PhD Duke University Medical Center, Durham, NC

**MHSRS-18-1928** POSTER SESSION 1 - #111

**Determination of Degraded Cognitive State During Moderate to Severe Hypoxic Hypoxia Using the Holistic Modular Aircrew Physiologic Status (HMAPS) Monitoring System**

Presentation Author: Dr. Barry Shender
Barry S. Shender, PhD1, Jessica Anderson2, Phillip Whitley, PhD3, Leon Hrebien, PhD4
1Naval Air Systems Command, Patuxent River, MD, 2Athena GTX, Johnston, IA, 3Criterion Analysis, Inc, Miami, FL, 4Drexel University, Philadelphia, PA
MHSRS-18-1989 POSTER SESSION 1 - #112
Acute Monitoring of Physiologic Episodes with a Portable Multi-Sensing Oximetry System
Presentation Author: Dr. Walter Holbein
Walter Holbein, PhD, Marcus Kramer, PhD, Wayne Wang, PhD, Aaron Lobbestael, MS, Gregory Rausch, MS Nonin Medical Inc

STATE OF THE SCIENCE FOR TRAINEE & DEPLOYMENT RELATED EVENTS TO INCLUDE WOUNDS, SKIN & SOFT TISSUE INFECTIONS

MHSRS-18-0119 POSTER SESSION 1 - #113
Optimizing Mission-Specific Medical Threat Readiness & Preventive Medicine for Service Members
Presentation Author: COL Caroline Toffoli

MHSRS-18-0185 POSTER SESSION 1 - #114
Carbon Monoxide as a Treatment for Trauma & Infection
Presentation Author: Dr. Leo Otterbein
Leo E. Otterbein1, Ghee R. Lee1, David Gallo1, Mahtab Faktari1, James Harbison2, Carl J. Hauser1, James A. Lederer2
1Beth Israel Deaconess Medical Center, Boston, MA, 2Brigham and Women's Hospital, Boston, MA

MHSRS-18-0209 POSTER SESSION 1 - #115
Bringing Pandemic Response to the Home: Early Identification of Influenza Infection Through the Development of Home-based & Wearable Diagnostics
Presentation Author: Mr. Justin Yang
Justin Yang, MS1, Jason Asher, PhD2, Julie Schafer, PhD1
1Biomedical Advanced Research & Development Authority, Washington, DC, 2Leidos Contractor, Biomedical Advanced Research & Development Authority

MHSRS-18-0219 POSTER SESSION 1 - #116
Neuraminidase Inhibitor Phenotypic Testing Against Circulating Strains of Influenza Isolates, 2011–2017
Presentation Author: Ms. Carrie Sitz
Carrie Sitz1,2, Anthony Hawksworth1, Paul Graf1, Christopher Myers2
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Naval Health Research Center, San Diego, CA

MHSRS-18-0351 POSTER SESSION 1 - #117
Enhanced Properties of Coated Paper Liquid-Infused Surfaces for Bacteria Handling & Detection
Presentation Author: Daniel Regan
Daniel P. Regan, Chloe Lilly, Abigail Weigang, Huseini S. Patanwala, PhD, Caitlin Howell, PhD
University of Maine, Orono, ME

MHSRS-18-0528 POSTER SESSION 1 - #118
Burden of Influenza-Like Illness Among Military Personnel Receiving Advanced Training at Fort Sam Houston, TX
Presentation Author: Dr. Wei-Ju Chen
Wei-Ju Chen, PhD1,2, Jackie O. Milzman, MS1,2, Col Patrick J. Danaher, MD3, CAPT Timothy H. Burgess, MD, MPH4, Christian L. Coles, PhD1,2
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 3San Antonio Military Medical Center, San Antonio, TX
MHSRS-18-0662  POSTER SESSION 1 - #119
Assessment of the Luminex NxTAG RPP Assay for Respiratory Surveillance
Presentation Author: Ms. Brieanne Koster
Brieanne L. Koster1, Chris Myers, PhD2, LCDR Paul C.F. Graf, PhD2
1The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Naval Health Research Center, San Diego, CA

MHSRS-18-0691  POSTER SESSION 1 - #120
Optimization & Structure-Activity Relationship Studies of Novel Piperidine-Based Antibacterials Targeting Multidrug-Resistant Acinetobacter Baumannii
Presentation Author: Dr. Schroeder Noble
Iswarduth Soojhawon1, Richard J. Sciotti1, Bingwen Jing1, Nagarajan Pattabiraman2, Schroeder M. Noble1
1Walter Reed Army Institute of Research, Silver Spring, MD, 2MolBox LLC, Silver Spring, MD

MHSRS-18-0786  POSTER SESSION 1 - #121
Evaluation of a Gelling Fiber Dressing with Silver to Eliminate Methicillin Resistant Staphylococcus aureus (MRSA) Biofilm Infections & Enhance the Healing in Deep Partial Thickness Porcine Wound Model
Presentation Author: SGT Alexander Higa
Alexander Higa, BS, Joel Gil, BS, Jose Valdes, AS, Michael Solis, MBA, Jie Li, PhD, Stephen C. Davis, BS
University of Miami Miller School of Medicine, Miami, FL

MHSRS-18-0929  POSTER SESSION 1 - #122
Enhanced Antimicrobial Live Biotherapeutics for Multidrug-Resistant Uropathogenic E. coli
Presentation Author: Dr. Yiannis Kaznessis
General Probiotics, St. Paul, MN

MHSRS-18-0980  POSTER SESSION 1 - #123
Transmission Dynamics of Respiratory Viruses in a Congregated Military Population: Prospective Cohort Study
Presentation Author: Dr. Joseph Lewnard
Joseph A. Lewnard, PhD1, Wei-Ju Chen, PhD2,3, Jackie O. Milzman, MS2,3, Elena Grigorenko, PhD4, Leslie Malone, MS, MB (ASCP) CM4, Scott Robinson, MD5, Carol A. Jones2,3, Nicole Moreno2,3, Daniel M. Weinberger, PhD6, Timothy H. Burgess, MD, MPH,2 Christian L. Coles, PhD, MPH2,3
1Harvard TH Chan School of Public Health, Boston, MA, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Rockville, MD, 4Diatherix Laboratories, LLC, Huntsville, AL, 5Martin Army Community Hospital, Fort Benning, GA, 6Yale School of Public Health, New Haven, CT

MHSRS-18-1037  POSTER SESSION 1 - #124
P. aeruginosa Phages in Combination with Antibiotics Target Biofilm-Mediated Infections
Presentation Author: Dr. Anna Jacobs
Anna C. Jacobs, PhD, Christopher N. Dennis, Jonathan P. Shearer, Yunxiu He, Kirill V. Sergueev, Andrey A. Filippov, Stuart D. Tyner, Mikeljon P. Nikolich, Samandra Demons
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1119  POSTER SESSION 1 - #125
Inhibitors of Nucleotidytransferase Superfamily Enzymes as a Novel Antibacterial Agent
Presentation Author: Dr. Feng Cao
F Cao, PhD, M(ASCP)1, MJ Donlin, PhD2, C Orth1, MJ Meyers3, RP Murelli2, PA Adegboyega1, JE Tavis2
1VA St. Louis Healthcare System, St. Louis, MO, 2St. Louis University, St. Louis, MO, 3The City University of New York, Brooklyn, NY
Poster Session I

MHSRS-18-1127  POSTER SESSION 1 - #126
Identification of Bacterial Pathogens with a Ratiometric Fluorescent Sensor Array
Presentation Author: Dr. Denis Svechkarev
Denis Svechkarev, PhD, Marat R. Sadykov, Kenneth W. Bayles, Aaron M. Mohs
University of Nebraska Medical Center, Omaha, NE

MHSRS-18-1368  POSTER SESSION 1 - #127
Influenza Vaccination & Illness Among the 2010 ROTC Warrior Forge Cadet Cohort
Presentation Author: COL John Barrett
COL Irene M. Rose, MC1, COL Louis R. Stout, AN2, CPT Stephanie E. Rosen, MC1
1Madigan Army Medical Center, Tacoma, WA, 2Landstuhl Regional Medical Center, APO-AE

MHSRS-18-1380  POSTER SESSION 1 - #128
Expression of Recombinant Adhesive Nanofibers from Engineered E. coli Biofilms
Presentation Author: LCDR Luis Estrella
LCMR Luis A. Estrella1, Daniel Barlow1, Kenan Fears1, Kathryn Wahl1, Christopher R. So1
1US Naval Research Laboratories, Washington, DC

MHSRS-18-1432  POSTER SESSION 1 - #129
Leveraging the Austere Environments Consortium for Enhanced Sepsis Outcomes (ACESO) Research Platform to Combat Antibiotic Resistance
Presentation Author: Dr. Josh Chenoweth
Josh Chenoweth, PhD1, Michelle Rozo, PhD1, Anissa Elayadi, PhD1, Alex Owuso-Ofori, PhD2, Daniel Ansong, MD2, George Oduro, MD2, Anne Fox, MD3, Andrew Letizia, MD3, Te Vantha, MD4, Amitha Fitkariwala, MS5, Dennis Faix, MD5, James Lawler, MD1, Kevin Schully, PhD1, Danielle Clark, PhD1
1Naval Medical Research Center-Frederick, Fort Detrick, MD, 2Komfo Anokye Teaching Hospital, Kumasi, Ghana, 3Naval Medical Research Center Unit-3, Ghana Detachment, Accra, Ghana, 4Takeo Provincial Referral Hospital, Takeo, Cambodia, 5Naval Medical Research Center Unit-2, Phnom Penh, Cambodia

MHSRS-18-1444  POSTER SESSION 1 - #130
Burden of Influenza Like Illness (ILI) Among Congregate Military Populations
Presentation Author: Dr. Chris Coles
Christian L. Coles, PhD1,2, Wei-Ju Chen, PhD1,2, Scott Robinson, MD3, Jackie O. Milzman, MS1,2, Carol A. Jones, BS, CCRP1,2, Nicole Moreno, BS1,2, Timothy H. Burgess, MD, MPH1
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 3Martin Army Community Hospital, Fort Benning, GA

MHSRS-18-1508  POSTER SESSION 1 - #131
Obstacles to Influenza Vaccination Among the 2010 ROTC Warrior Forge Cadet Cohort
Presentation Author: COL John Barrett
COL John Barrett, COL Irene M. Rose, MC1, COL Louis R. Stout, AN2, CPT Stephanie E. Rosen, MC1
1Madigan Army Medical Center, Tacoma, WA, 2Landstuhl Regional Medical Center, APO-AE

MHSRS-18-1631  POSTER SESSION 1 - #132
Active Surveillance for Respiratory Pathogens Among DoD Beneficiaries
Presentation Author: Mr. Cyril England
Cyril J. England, MSHS1, Christopher A. Myers, PhD2, Erin A. Hansen1, Melinda S. Balansay4, Christian J. Hansen4, LCDR Paul C.F. Graf2
1The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Operational Infectious Disease Naval Health Research Center, San Diego, CA
MHSRS-18-1938  POSTER SESSION 1 - #133
Bioaerosol Sampling in a Military Medical Environment: A Pilot Study
Presentation Author: COL Sheryl Bedno
COL Sheryl A. Bedno, MD¹, Benjamin Anderson, PhD²,³, Emily S. Bailey, PhD²,³, Gregory C. Gray, MD²,³
¹Womack Army Medical Center, Fort Bragg, NC, ²Duke University School of Medicine, Durham, NC, ³Duke University, Durham, NC

MHSRS-18-2156  POSTER SESSION 1 - #134
Rational Design of Durable Therapeutic Bacteriophage Cocktails
Presentation Author: Dr. Mikeljon Nikolich
Andrey Filippov, Kirill Sergueev, Akhil Reddy, Jenny He, Austin Puchany, Sarah Pierson & Mikeljon P Nikolich.
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-2165  POSTER SESSION 1 - #135
Approaches to Improve Bacteriophage Selection for Therapeutic Cocktails
Presentation Author: MAJ Sarah Pierson
MAJ Sarah Pierson, Helen Freyberger, Akhil Reddy, Jenny He, Austin Puchany, Kirill Sergueev, Andrey Filippov, Mikeljon P Nikolich Walter Reed Army Institute of Research, Silver Spring, MD

WHAT'S NEW IN INFECTIOUS DISEASE RESEARCH IN THE TROPICS

MHSRS-18-0028  POSTER SESSION 1 - #136
Optic Neuritis as Tertiary Syphilis Presentation & Challenges of STIs During Deployments in Military Population
Presentation Author: LCDR Manoj Mathew

MHSRS-18-0040  POSTER SESSION 1 - #137
Worsening Chronic Right Knee Pain Reveals Fungal Cause: A Case of Insidious Osteomyelitis from Coccidioides immitis
Presentation Author: CPT Brandon Carius
CPT Brandon M. Carius, MPAS, PA-C Brooke Army Medical Center, Fort Sam Houston, TX

MHSRS-18-0051  POSTER SESSION 1 - #138
Smallpox Autoinoculation via Tattoo in a Male Soldier
Presentation Author: CPT Brandon Carius
CPT Brandon M. Carius, MPAS, PA-C, CPT Joshua D. Randles, MPAS, PA-C
Brooke Army Medical Center, Fort Sam Houston, TX

MHSRS-18-0060  POSTER SESSION 1 - #139
Leptospirosis Seroconversion Surveillance Among US Army Infantry Forces Assigned to South Korea, 2011-2014
Presentation Author: Dr. Hua-Wei Chen
Hua-Wei Chen, PhD, Zhiwen Zhang, MS, Tatyana Belinskaya, MS, Wei-Mei Ching, PhD
Naval Medical Research Center, Silver Spring, MD & Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0069 - POSTER SESSION 1 - #140
Performance Characteristics of a Filter Paper Based Stool Collection Method & the TaqMan Array Card PCR Assay for Detection of Pathogens Associated with Travelers' Diarrhea
Presentation Author: Dr. Tahaniyat Lalani
Tahaniyat Lalani, MD¹,³, Michele Tisdale¹,³, Indrani Mitra¹,³, LCDR Andrea McCoy⁴, LCDR Mark Simons⁴, LT Nathanael D. Reynolds¹, MAJ Brett Swierczewski⁵, Jie Liu⁶, Eric Houpt⁷, Jamie Fraser¹,³, Mark S. Riddle¹, David Tribble¹
¹Uniformed Services University of the Health Sciences, Bethesda, MD, ²Naval Medical Center Portsmouth, Portsmouth, VA, ³Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, ⁴Naval Medical Research Unit-6, Lima, Peru, ⁵Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, ⁶University of Virginia, Charlottesville, VA
MHSRS-18-0182  POSTER SESSION 1 - #141
Malaria Prevention: Development of Implantable Malaria Chemoprophylaxis
Presentation Author: CPT Jangwoo Lee
CPT Jangwoo Lee, PhD1, Qigui Li, PhD1, Jason Sousa, PhD2, Joe McDonough, PhD2, Benjamin Furman, PhD2, Sandra Drabik, PhD2, Sunil Sreedharan, PhD3, Raj Patel, PhD4, Monica Martin, DVM4, Nathanial Copeland, MD4, Lisa Xie, PhD5, Diana Caridha, PhD5, Qiang Zeng5, Norma Roncal5, Jing Zhang5, Ping Zhang5, Hsiuling Lin5, Patricia Lee5, Chau Vuong5, Brian Sorrel5, Mary McGovern5, Mara Kreishman-Deitrick, PhD1, Chad Black, DVM, PhD1
1Walter Reed Army Institute of Research, Silver Spring, MD, 2Southwest Research Institute, San Antonio, TX, 3Titan Pharmaceuticals Inc, South San Francisco, CA

MHSRS-18-0304  POSTER SESSION 1 - #142
Distinctive miRNA Expression Profiles are Potential Biomarkers for Early Diagnosis of Infectious Diseases
Presentation Author: Dr. Chien-Chung Chao
Chien-Chung Chao, PhD1,2, Zhilwen Zhang, MS2, Yupin Suputtamongkol, MD3, Hideo Akiyama, PhD4, Wei-Mei Ching, PhD1,2
1Naval Medical Research Center, Silver Spring, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Siriraj Hospital, Mahidol University, Bangkok, Thailand, 4Toray Industries Inc, Tokyo, Japan

MHSRS-18-0308  POSTER SESSION 1 - #143
Clinical Evaluation of Latent Visceral Leishmaniasis in US Service Members Deployed to Operation Iraqi Freedom
Presentation Author: MAJ Nathaniel Copeland
MAJ Nathaniel K. Copeland, MD, MTM&H1, Jason M. Blaylock, MD2, Timothy J. Whitman, DO2, Ines Lakhal Naouar, PhD3, Naomi A. Aronson, MD1
1Walter Reed Army Institute of Research, Silver Spring, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0332  POSTER SESSION 1 - #144
Enhancement of Cutaneous Defenses Against Antibiotic Resistant Bacteria Through Activation of NOD2 Signaling by a Small Molecule Compound
Presentation Author: Dr. Christine McDonald
Christine McDonald, PhD1,2, Samreen Jatana, PhD3, Craig R. Homer, MS1, Maria Madajka, PhD1, András Ponti, MS1, Amrita Kabi, PhD1, Francis Papay, MD1
1Cleveland Clinic, Cleveland, OH, 2Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, Cleveland, OH

MHSRS-18-0348  POSTER SESSION 1 - #145
Biased Immune Responses Towards Either T or B Cell Memory Elicited by Various Types of Dengue Vaccines in Rhesus Macaques
Presentation Author: Ms. Vihasi Jani
Vihasi Jani1, Monika Simmons2, Gabriel Defang2, Nishith Nagabhushana1, Brian J. Morrison2, Peifang Sun1
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Naval Medical Research Center, Silver Spring, MD

MHSRS-18-0353  POSTER SESSION 1 - #146
Double Chimeric Peptide Vaccine Designed to Protect Against Human Disseminated Candidiasis
Presentation Author: Dr. Hong Xin
Hong Xin, MD, PhD, Abby Adam, MS, Karen Eberle LSU Health Sciences Center, New Orleans, LA

MHSRS-18-0373  POSTER SESSION 1 - #147
Development of Potent & Selective Kir Channel Inhibitors as Vector Management Strategy for Controlling the Primary Vector of Zika virus, Aedes aegypti
Presentation Author: Dr. Corey Hopkins
Corey R. Hopkins, PhD1, Melody J. Morwitzer1, Austin G. Sanford1, Alicia M. Hogan1, Madelene V. Portillo1, Meghan Kramer2, Jerod S. Denton2, Renata Rusconi Trigueros2, Peter M. Piemmarini3
1University of Nebraska Medical Center, Omaha, NE, 2Vanderbilt University Medical Center, Nashville, TN, 3Ohio State University, Wooster, OH
MHSRS-18-0396  POSTER SESSION 1 - #148
Identification of Highly Conserved & Broadly Protective Influenza A-Specific HLA-restricted T Cell Epitopes
Presentation Author: Dr. Daniel Hoft
Christopher S. Eickhoff 1, Frances E. Terry 2, Linda Peng 1, Isaac G. Sakala 1, Daniel Van Aartsen 1, Leonard Moise 2, William D. Martin 3, Jill Schreiber 1, R. Mark Buller 1, Anne S. De Groot 1, Daniel F. Hoft, MD, PhD 1
1 St. Louis University, St. Louis, MO, 2 EpiVax, Inc, Providence, RI

MHSRS-18-0409  POSTER SESSION 1 - #149
Sensitivity & Specificity of Dengue, Chikungunya, & Zika Disease Definitions to Support Improved Differential Diagnosis & Public Health Planning
Presentation Author: Dr. Margaret Rush
Margaret Rush, PhD, Mikaela Finnegan, Gautham Venugopalan, PhD, Laurel MacMillan, MS, Yaritbel Torres-Mendoza, Landy Sun, Andrew Taylor Gryphon Scientific LLC, Takoma Park, MD

MHSRS-18-0527  POSTER SESSION 1 - #150
NK Cell Degranulation Assay for Assessing Dengue Virus Specific Antibody-Dependent Cellular Cytotoxicity-eliciting Antibodies in Infected & Vaccinated Individuals
Presentation Author: LT Brian Morrison
LT Brian J. Morrison, PhD 1, Vihasi Jani 1, Nishith Nagabhushana 1, Maya Williams, PhD 1, Gabriel Defang, PhD 1, Heather Friberg, PhD 3, Richard Jarman, PhD 4, Peifang Sun, PhD 2, Jeffrey R. Currier, PhD 1
1 Naval Medical Research Center, Silver Spring, MD, 2 Henry Jackson Foundation for the Advancement of Military Medicine, Silver Spring, MD, 3 Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-0569  POSTER SESSION 1 - #151
Myocarditis/Pericarditis/Myopericarditis (MPC) & New Onset Cardiac Symptoms Following Immunization: A Partnership between the Immunization Healthcare Branch (IHB) (Defense Health Agency/DHA) & Vaccine Adverse Event Reporting System (VAERS)
Presentation Author: Dr. Renata Engler
Renata Engler, MD 1, Christina Spooner, MS 2, Limone Collins, MD 1, Jay Montgomery, MD 2, Connie Lohsl, RN 1, Clara Chu, PhD 1, Lorne McCoy 1, Marina Vernalis, DO 1, Brian Hemann, MD 1, The Immunization Healthcare Branch Vaccine Safety Hub Network 6
1 Immunization Healthcare Branch/Defense Health Agency, Falls Church, VA & Walter Reed National Military Medical Center (WRNMMC), Bethesda, MD, 2 DHA/IHB Regional Vaccine Safety Hub, National Capital Region, Bethesda, MD, 3 Henry M. Jackson Foundation, Walter Reed National Military Medical Center, Bethesda, MD, 4 WRNMMC, Bethesda, MD, 5 WRNMMC, Bethesda, MD, Naval Medical Center, Portsmouth, VA, Womack Army Medical Center, Fort Bragg, NC, Wilford Hall Ambulatory Surgical Center, San Antonio, TX, Naval Medical Center, San Diego, CA

MHSRS-18-0570  POSTER SESSION 1 - #152
The Submandibular Lymph Node, a Key Battleground for Host-Yersinia Pestis Interaction: A Transcriptomic Study using a Non-human Primate Model
Presentation Author: Mr. Nabarun Chakraborty
Nabarun Chakraborty, MS, MBA 1, Aarti Gautam, PhD 2, Seid Muhie, PhD 1, Stacy-Ann Miller, MS 1, Candace Moyler, BS 1, Marti Jett, PhD 2, Rasha Hammamieh, PhD 1
1 The Geneva Foundation, Fort Detrick, MD, 2 US Army Center for Environmental Health Research, Fort Detrick, MD

MHSRS-18-0577  POSTER SESSION 1 - #153
Prevalence of Respiratory Viruses Among Pneumonia Patients in Sarawak Malaysia
Presentation Author: LCDR Tupur Husain
Teck-Hock Toh 1, King-Ching Hii 1, Wei-Hon Lim 1, Jackie Ting 1, Siaw-Jing Ha 1, Jane Fieldhouse 1, Tham Nguyen 5, Tinh-Mee Wong 4, See-Chang Wong 1, Su Yadana 1, LCDR Tupur Husain 6, Gregory Gray 3, 5
1 Sibu Hospital, Sibu, Sarawak, Malaysia, 2 Kapit Hospital, Kapit, Sarawak, Malaysia, 3 Duke University, Durham, North Carolina, 4 Duke University School of Medicine, Durham, North Carolina, 5 Duke-NUS Medical School, Singapore, 6 Naval Medical Research Unit 2, Singapore
**MHSRS-18-0715**  **POSTER SESSION 1 - #154**

**Routine Infectious Disease Surveillance Support for Military Public Health**  
Presentation Author: Ms. Beth Poitras  
Beth Poitras, MPH1, Rachel Scagos, MPH2, Nicholas Seliga, MPH2, Gosia Nowak, MSc, MPH3  
1Defense Health Agency, Silver Spring, MD, 2Oak Ridge Institute for Science & Education, Oak Ridge, TN, 3Navy & Marine Corps Public Health Center, Portsmouth, VA

**MHSRS-18-0743**  **POSTER SESSION 1 - #155**

**Special Pathogens Laboratory & FIBWA, Resources for all DOD**  
Presentation Author: Ms. Samantha Tostenson  
Samantha Tostenson, William Dorman, Jason DeBoer, PhD, Katherine Gibson, PhD  
US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD

**MHSRS-18-0801**  **POSTER SESSION 1 - #156**

**Giardia Lamblia Infection Precipitates Changes in Bone Marrow Derived Dendritic Cell Inflammatory Cytokine Production**  
Presentation Author: Dr. Stacey Burgess  
Stacey L. Burgess, PhD  
University of Virginia, Charlottesville, VA

**MHSRS-18-0911**  **POSTER SESSION 1 - #158**

**Infectious Disease Diagnostic via a Novel Plasmonic Halo: TB-LAM**  
Presentation Author: Dr. Michael J. Naughton  
Michael J. Naughton, PhD, Thomas C. Chiles, PhD, Timothy Connolly, PhD, Michael J. Burns, PhD  
Boston College, Chestnut Hill, MA

**MHSRS-18-1026**  **POSTER SESSION 1 - #159**

**Aeromonas Hydrophila Secreted Proteases as a Potential Mechanism of Avian Influenza A Virus Persistence: A Contributing Factor to Human Adaptation?**  
Presentation Author: Ms. Casey Guardia  
Casey M. Guardia, Lauren M. Maine, Marcus D. King US Air Force Academy, USAFA, CO

**MHSRS-18-1165**  **POSTER SESSION 1 - #160**

**Zika Virus Infection in Humans & Macaques Enhances Dengue Infection**  
Presentation Author: Mr. William Valiant  
William G. Valiant1, Yan-Jang S. Huang2, Dana L. Vanlandingham2, Stephen Higgs2, Heather C. Yun3, Anajli Kunz4, Tahaniyat Lalani57, Mark G. Lewis8, Timothy Burgess5, Joseph J. Mattapallil1  
1F. Edward Hébert School of Medicine, Uniformed Services University, Bethesda, MD, 2College of Veterinary Medicine, Kansas State, KS, 3San Antonio Military Medical Center, San Antonio, TX, 4Madigan Army Medical Center, Tacoma, WA, 5Uniformed Services University of the Health Sciences, Rockville, MD, 6Henry M Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 7Naval Medical Center, Portsmouth, VA, 8Bioqual Inc, Rockville, MD

**MHSRS-18-1189**  **POSTER SESSION 1 - #161**

**Limit of Detection of Magneto-Optical Detection & RDTs on Patients Infected with P. vivax**  
Presentation Author: Dr. Brian Grimberg  
Brian T. Grimberg, PhD1, Austin Hise1, Tyler Witte2, Joanita Bora2, Priya Thota2, D’Arbra Blankenship1  
1The Center for Global Health & Diseases, Cleveland, OH, 2Hemex Health, Portland, OR
**MHSRS-18-1196  POSTER SESSION 1 - #162**

**In Vitro Sporozoite Culturing Systems Towards Manufacturing Malaria Vaccines**

Presentation Author: Dr. Leslie Itsara  
Leslie S. Itsara, PhD1, Yaxian Zhou, MS1, Julie Do, BS1, Samrita Dungel, MS1, Matthew Fishbaugher, BS2, Ashley M. Vaughan, PhD2, Stefan H. I. Kappe, PhD2,3, Anil K. Ghosh, PhD2

1MalarVx, Inc Seattle, WA, 2Center for Infectious Disease Research, Seattle, WA, 3University of Washington, Seattle, WA

**MHSRS-18-1220  POSTER SESSION 1 - #163**

**Containment & Elimination of Multi-Drug Resistant Malaria in Southeast Asia**

Presentation Author: LCDR Kristina St. Clair  
LCDR Kristina J. St. Clair1, Kimberly A. Edgel1, Sara E. Canavati2, Gerard Kelly2, Tran Thanh Duong3, Thang D. Ngo3, Nguyen Duc Manh4, Nguyen Ngoc San4, Nguyen Chinh Phong4, Nguyen Thi Hong Van4, Vu Sinh Nam5, Le Thi Hoi6, Trung Vu Nguyen6, Kinh Van Nguyen6, Marina Chavchich7, Michael Edstein7, Nicholas J. Martin1

1US Naval Medical Research Unit TWO, Singapore, 2Vysnova Partners, Inc, Bethesda, MD, 3The National Institute for Malariaology, Ha Noi, Viet Nam, 4Military Institute of Preventive Medicine, Vietnamese People’s Army, Ha Noi, Viet Nam, 5National Institute of Hygiene & Epidemiology, Ha Noi, Viet Nam, 6The National Hospital for Tropical Diseases, Ha Noi, Viet Nam, 7Australian Defence Force Malaria & Infectious Disease Institute, Brisbane, Australia

**MHSRS-18-1260  POSTER SESSION 1 - #164**

**Targeting Host-Cell Metabolism to Address Multiple Intracellular Pathogens**

Presentation Author: Dr. Lillian Chiang  
Lillian Chiang, PhD1, Eain Murphy, PhD1, Stacy Remiszewski, PhD1, Youngwok Kim, MS1, Thomas Shenk, PhD2

1FORGE Life Science, LLC, Doylestown, PA, 2Princeton University, Princeton, NJ

**MHSRS-18-1269  POSTER SESSION 1 - #165**

**An Ultra-Long-Acting Gastric Retentive Dosage Form for Oral Drug Delivery**

Presentation Author: Dr. Andrew Bellinger  
Andrew Bellinger, MD, PhD1, CPT Jangwoo Lee, PhD2, Tyler Grant, PhD2, Susan Low, PhD2, Rosemary Kanasty, PhD1, David Altreuter, PhD1, Stephen Zale, PhD1

1Lyndra, Inc, Watertown, MA, 2Walter Reed Army Institute of Research, Silver Spring, MD

**MHSRS-18-1276  POSTER SESSION 1 - #166**

**Coordination & Harmonization of DoD Laboratory Next Generation Sequencing & Bioinformatics Approaches for Human Pathogen Detection & Epidemic Surveillance: A Capability Assessment**

Presentation Author: Dr. Irina Maljkovic Berry  
Irina Maljkovic Berry, PhD1, Wiriya Rutvisutitununt1, Lindsay Morton2, Kimberly A. Bishop-Lilly3, Kenneth Frey3, Regina Z. Cer3,4, Michael Wiley5, Gustavo Palacios5, Melanie C. Melendez5,6, LCDR Theron Hamilton3, Brett Forshey2, LTC Richard G. Jarman1

1Walter Reed Army Institute of Research, Silver Spring, MD, 2Armed Force Health Surveillance Branch, Silver Spring, MD, 3Naval Medical Research Center, Frederick, MD, 4Leidos, Reston, VA, 5US Army Medical Research Institute of Infectious Diseases, Frederick, MD, 6St. Cloud State University, St. Cloud, MN

**MHSRS-18-1293  POSTER SESSION 1 - #167**

**Reducing Chronic & Persistent Infections: Targeting Intracellular Pathogens Using Innovative Therapeutic Approaches**

Presentation Author: Dr. Bingyun Li  
Bingyun Li, PhD, Jason Kang, MD, Shichao Zhang, PhD

School of Medicine, West Virginia University, Morgantown, WV
MHSRS-18-1306 POSTER SESSION 1 - #168
Rapid Potent Synthetic synDNA Vaccine Platform to Accelerate Protection from Infectious Diseases for the Warfighter
Presentation Author: Dr. David Weiner
David B. Weiner, PhD, Ami Patel, PhD, Emma Reuschel, PhD, Sagar Kudchodkar, PhD, Jean Boyer, PhD, Kate Broderick, PhD, Kar Muthumani, PhD, Mark Bagarazzi, MD, Scott White, MD, Joel Maslow, MD, Laurent Humeau, PhD, Pablo Tebas, MD
1Wistar Institute, Philadelphia, PA, 2Inovio Pharmaceuticals, Plymouth Meeting, PA, 3GeneOne Life Science, Plymouth Meeting, PA, 4The University of Pennsylvania, Philadelphia, PA

MHSRS-18-1316 POSTER SESSION 1 - #169
Novel Dengue Virus (DENV) VLP Vaccine
Presentation Author: Dr. Jose Galarza
Jose Galarza, DVM, PhD Technovax, Inc, Tarrytown, NY

MHSRS-18-1345 POSTER SESSION 1 - #170
Synthetic DNA-Encoded Monoclonal Antibodies (DMAbs) for Rapid Control of Anti-Microbial Resistant Organisms & Emerging Viral Pathogens in At-Risk Military Personnel
Presentation Author: Dr. David Weiner
David B. Weiner, PhD, Ami Patel, PhD, Sarah Elliott, PhD, Rianne Esquivel, PhD, Megan Wise, PhD, Daniel Park, BSc, Trevor Smith, PhD, Katherine Schultheis, PhD, Stephanie Ramos, PhD, Jian Yanm, PhD, Jing Chen, PhD, Ghiabe Guibinga, PhD, Kate Broderick, PhD, Kar Muthumani, PhD, Laurent Humeau, PhD
1The Wistar Institute, Philadelphia, PA, 2Inovio Pharmaceuticals, Plymouth Meeting, PA

MHSRS-18-1361 POSTER SESSION 1 - #171
An Envelope-Modified Tetravalent Dengue Virus-Like-Particle Vaccine has Implications for Flavivirus Vaccine Design
Presentation Author: Dr. Wataru Akahata
Wataru Akahata, PhD VLP Therapeutics, Gaithersburg, MD

MHSRS-18-1369 POSTER SESSION 1 - #172
Development of a Novel Virus-Like Particle Vaccine Platform That Mimics the Immature Form of Alphavirus
Presentation Author: Dr. Wataru Akahata
Wataru Akahata, PhD VLP Therapeutics, Gaithersburg, MD

MHSRS-18-1391 POSTER SESSION 1 - #173
Development of Elsulfavirine/VM1500A Long Acting Injectable & Once Weekly Oral Formulations for Treatment & Prevention of HIV-1 Infections
Presentation Author: Dr. Vadim Bichko
Vadim Bichko, PhD, Angela Koryakova, PhD, Ruben Karapetyan, PhD, Alexander Khvat, PhD, Boris Rogovoy, PhD, Igor Nikoulin, PhD, Saranya Sankar, PhD, Gerald Yakatan, PhD, Winai Ratanasuwan, MD, Peerawong Werarak, MD, Balba Berzins, MD, Robert Murphy, MD, Klaus Klumpp, PhD, Nikolay Savchuk, PhD
1Viriom, Inc, San Diego, CA, 2ChemDiv, Inc, San Diego, CA, 3IriSys, LLC, San Diego, CA, 4Siriraj Hospital, Bangkok, Thailand, 5Northwestern University, Chicago, IL, 6Riboscience, LLC, Sunnyvale, CA

MHSRS-18-1481 POSTER SESSION 1 - #174
Development of a Portable & Ultrasensitive Diagnostic Platform for Detecting Virus & Antibody Responses
Presentation Author: Dr. David Dandy
David S. Dandy, Charles S. Henry, Tom Chen, Brian J. Geiss
Colorado State University, Fort Collins, CO
**MHSRS-18-1511**  
**POSTER SESSION 1 - #175**

**Febrile Respiratory Illness Surveillance on US Navy Ships**

Presentation Author: LT Nathaniel Christy

LT Nathaniel C.V. Christy, PhD, Leith J. States, MD, MPH, Gary T. Brice, PhD, Peter E. Kammerer, MD, MPH, Paul C. Graf, PhD, Christopher A. Myers, PhD, 1Naval Environmental & Preventive Medicine Unit FIVE, San Diego, CA, 2The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 3Naval Health Research Center, San Diego, CA

**MHSRS-18-1543**  
**POSTER SESSION 1 - #176**

**Challenges of Conducting DoD-funded Infectious Disease Research in Endemic Areas of the World: Balancing Research Objectives, Human Research Protections, & Beneficence**

Presentation Author: Mr. Derek Englis

Derek Englis, MBA, EdS, CIP, 1 Armed Forces Services Corp., DON HRPP, Falls Church, VA, 2NMRC, Silver Spring, MD

**MHSRS-18-1544**  
**POSTER SESSION 1 - #177**

**Novel Population Model of Viral Persistence to Predict Zoonotic Infections**

Presentation Author: CPT Joshua Carmen

**MHSRS-18-1551**  
**POSTER SESSION 1 - #178**

**Structural Studies of Neutralizing & Protective Antibodies Elicited by ZIKV Infection & ZPIV Vaccination**

Presentation Author: Dr. Michael Joyce

M. Gordon Joyce1,2, Rajeshwer S. Sankhala1,2, Vincent Dussupt1,2, Gina Donofrio1,2, Rafael De La Barrera1, Gregory D. Gromowski1, Rafael Larocca3, Letzbeth Mendez-Rivera1,2, Misook Choe1,2, Hongjun Bai1,2, Anna Lee1,2, Weam Zaky1,2, Ursula Tran1,2, Kenneth Eckels3, Merlin L. Robb1,2, Morgane Rolland1,2, Dan H. Barouch3,4, Kayvon Modjarrad5, Richard G. Jarman1, Nelson L. Michael1, Shelly J. Krebs1,2

1Walter Reed Army Institute of Research, Silver Spring MD, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda MD, 3Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, 4MGH, MIT, & Harvard, Cambridge, MA

**MHSRS-18-1581**  
**POSTER SESSION 1 - #179**

**Next Generation of Malaria Diagnostics for Use at War Frontier: Looking into the Future**

Presentation Author: Dr. John Waitumbi

John Waitumbi, DVM, PhD Kenya Medical Research Institute, Nairobi, Kenya

**MHSRS-18-1677**  
**POSTER SESSION 1 - #180**

**Development of a Universal Cell-Based Immunotherapy Platform Secreting gp96, T Cell Costimulators, & Cross Protective Antigens for Emerging & Reemerging Infectious Disease Vaccinations**

Presentation Author: Dr. Natasa Strbo

Natasa Strbo, MD, Louis Gonzalez, PhD, Louise Giffin, PhD, Laura Romero, Jeff Hutchins, PhD

1University of Miami Miller School of Medicine, Miami, FL, 2Heat Biologics, Inc, Durham, NC

**MHSRS-18-1723**  
**POSTER SESSION 1 - #181**

**The Impact of Continuous Virologic Suppression on the Development of Non-AIDS Diagnoses**

Presentation Author: Lt Christie Joya

Lt Christie Joya, DO, Seung Hyun Won, PhD, Robert Deiss, MD, Jason Okulicz, MD, Thomas O’Bryan, MD, Ryan Maves, MD, Christina Schofield, MD, Tomas Ferguson, MD, Timothy Whitman, DO, Brian Agan, MD, Anuradha Ganesan, MD, MPH

1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda MD, 4Naval Medical Center San Diego, San Diego, California, 5San Antonio Military Medical Center, Fort Sam Houston, TX, 6Madigan Army Medical Center, Tacoma, WA, 7Tripler Army Medical Center, Honolulu, HI
MHSRS-18-1760 POSTER SESSION 1 - #182
Detecting Hemozoin Levels in Symptomatic Patients Using Magneto-Optical Detection, MOD
Presentation Author: Dr. Brian Grimberg
Brian T. Grimberg, PhD\textsuperscript{1}, Emmily Koech\textsuperscript{2}, Tyler Witte\textsuperscript{2}, Joanita Bora\textsuperscript{2}, Priya Thota\textsuperscript{2}, D’Arbra Blankenship\textsuperscript{1}
\textsuperscript{1}The Center for Global Health & Diseases, Cleveland, OH, \textsuperscript{2}Hemex Health, Portland, OR

MHSRS-18-1776 POSTER SESSION 1 - #183
High-Throughput Tri-color Flow Cytometry & Flow Cytometry for the Evaluation of Anti-plasmodial Activity of Drugs on Plasmodium Falciparum Gametocytes
Presentation Author: CPL Kelly Palmer
CPL Kelly Palmer, Elizabeth H. Duncan, Kathy J. Moch, Elke S. Bergmann-Leitner
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1836 POSTER SESSION 1 - #184
On-Cell mAb Screening (OCMS), a Target-Agnostic, Anti-Viral Therapeutic Human Monoclonal Antibody Discovery Platform to Enable Rapid Warfighter Protection from Epidemic Viral Illness
Presentation Author: Dr. Scott Dessain
Rama Devudu Puligedda, MS\textsuperscript{1}, Diana Kouiavksaia, PhD\textsuperscript{2}, Fetweh H. Al-Saleem, DVM\textsuperscript{1}, Rashmi Sharma, PhD\textsuperscript{1}, Konstantin Chumakov, PhD\textsuperscript{2}, Scott K. Dessain, MD, PhD\textsuperscript{1}
\textsuperscript{1}Lankenau Institute for Medical Research, Wynnewood, PA, \textsuperscript{2}Food & Drug Administration, Silver Spring, MD

MHSRS-18-1901 POSTER SESSION 1 - #185
The Emergence of “Superbug” Multi-Drug Resistant Malaria in Southeast Asia & Implications on Malaria Treatment
Presentation Author: MAJ Mariusz Wojnarski
MAJ Mariusz Wojnarski, MD\textsuperscript{1}, Jessica Lin, MD\textsuperscript{2}, Panita Gosi, PhD\textsuperscript{2}, Michele Spring, MD\textsuperscript{2}, Pattaraporn Vanachayangkul, PhD\textsuperscript{2}, Nonlawat Boonyalai, PhD\textsuperscript{2}, Worachet Kuntawungin\textsuperscript{2}, Chalyaporn Chaisatit\textsuperscript{2}, Kirakam Kirativanich\textsuperscript{2}, Piyaporn Saingam\textsuperscript{2}, Sorayut Chattrakam\textsuperscript{2}, Chatchadaom Thamnurak\textsuperscript{2}, Kin Soveasna\textsuperscript{2}, Nicholas Martin, PhD\textsuperscript{2}, Huy Rekol, MD\textsuperscript{2}, Krisada Jongsakul, MD\textsuperscript{1}, Andrew Vaughn, MD\textsuperscript{2}, Shannon Takala-Harrison, MD\textsuperscript{2}, Somethy Sok, MD\textsuperscript{1}, Prom Satharath, MD\textsuperscript{2}, Kong Saly, MD\textsuperscript{1}, Lek Dysoley, MD\textsuperscript{1}, David Saunders, MD\textsuperscript{1,2}, Mark Fukuda, MD\textsuperscript{2}, Philip Smith, PhD\textsuperscript{2}, Chanthap Lon, MD\textsuperscript{1}
\textsuperscript{1}US Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, \textsuperscript{2}University of North Carolina, Chapel Hill, NC, \textsuperscript{3}Department of Health, Phnom Penh, Cambodia, \textsuperscript{4}National Center for Parasitology, Entomology & Malaria Control, Phnom Penh, Cambodia, \textsuperscript{5}Naval Medical Research Unit 2, Phnom Penh, Cambodia, \textsuperscript{6}University of Maryland, Baltimore, MD, \textsuperscript{7}US Army Medical Materiel Development Activity, Fort Detrick, MD

MHSRS-18-1926 POSTER SESSION 1 - #186
Host Responses to Dengue Natural Infections Integrated with In Vitro Models of Antibody Enhancement Uncover Novel Targets for Severe Disease Intervention
Presentation Author: Dr. Jason Wendler
Jason P Wendler, PhD\textsuperscript{1}, Jessica A. Swansstrom\textsuperscript{2}, Jessica A. Plante\textsuperscript{2}, Joe Brown\textsuperscript{2}, Jason E. McDermott\textsuperscript{3}, Kristie L. Oxford\textsuperscript{1}, Ralph S. Baric\textsuperscript{2}, Joshua N. Adkins\textsuperscript{1}, Katrina M. Waters\textsuperscript{1}
\textsuperscript{1}Pacific Northwest National Laboratory, Richland, WA, \textsuperscript{2}University of North Carolina Chapel Hill, Chapel Hill, NC

OPEN POSTER SESSION 1 - #187

MHSRS-18-1965 POSTER SESSION 1 - #188
Creation of IgG & IgA Anti-Viral mAb Therapeutics Using On-Cell mAb Screening (OCMS)
Presentation Author: Mr. Rama Devudu Puligedda
Rama Devudu Puligedda\textsuperscript{1}, Diana Kouiavksaia, Fetweh H. Al-Saleem\textsuperscript{1}, Chandana Devi Kattala\textsuperscript{1}, Noah Sather\textsuperscript{3}, Konstantin Chumakov\textsuperscript{2}, Scott K. Dessain\textsuperscript{1}
\textsuperscript{1}Lankenau Institute for Medical Research, Wynnewood, PA, \textsuperscript{2}Food & Drug Administration, Silver Spring, MD, \textsuperscript{3}Center for Infectious Disease Research, Seattle, WA
MHSRS-18-2011 POSTER SESSION 1 - #189
Identifying Novel Antibiotics from Plants
Presentation Author: Dr. Michael Bachmann
Michael Bachmann, PhD, Jonathan Hardy, PhD Michigan State University, East Lansing MI

MHSRS-18-2089 POSTER SESSION 1 - #190
Bioderived Antimicrobial Fabric Coatings
Presentation Author: Dr. Avni Argun
Avni Argun, PhD, Castro Laicer, PhD, Mario Moreira, Cortney Mittelsteadt, PhD, Ryland Young, PhD, Jason Gill, Mei Liu, PhD
1Giner, Inc, Newton, MA, 2Texas A&M University, College Station, TX

MHSRS-18-2158 POSTER SESSION 1 - #191
Next Generation Diagnostics & a US Marine with Melioidosis
Presentation Author: Dr. Kevin Schully
Kevin L Schully, PhD, Derek Larson, MD, Mark Mayo, Charles C. Young, PhD, Vanessa Theobald, Ryan C. Maves, MD, Bart J Currie, MD, James V. Lawler, MD, Danielle V. Clark, MD
1Navy Medical Research Center Frederick, Frederick, MD, 2Naval Medical Center, San Diego, CA, US of America, 3Menzies School of Health Research, Darwin, Australia, 4Johns Hopkins University Applied Physics Laboratory, Baltimore, MD, 5Royal Darwin Hospital, Darwin, Australia.

OPEN POSTER SESSION 1 - #192

LEVERAGING VARIOUS SERUM REPOSITORIES FOR TRANSLATIONAL RESEARCH IN INDIVIDUAL & POPULATION PRECISION HEALTH

MHSRS-18-0623 POSTER SESSION 1 - #193
IL-8 as a Potential Biomarker of Asymptomatic Visceral Leishmaniasis in Subjects with Positive Cellular Immune Responses to Leishmania Infantum
Presentation Author: Dr. Naomi Aronson
Lakhal-Naouar Ines, PhD, Koles Nancy, MS, Mody Rupal, MD, Shaw Dutchabong, MS, Bigley Daniel, MD, Co Edgie, MD, Sherwood Jeffrey, MD, Jeronimo Salma, PhD, Aronson Naomi, MD
1Uniformed Services University of the Health Sciences, Bethesda MD, 2DiLorenzo Tricare Health Clinic, Arlington VA, 3William Beaumont Army Medical Center, El Paso, TX, 4Federal University of Rio Grande do Norte, Natal, RN, Brazil & National Institute of Science & Technology of Tropical Diseases, Salvador, BA, Brazil

MHSRS-18-0674 POSTER SESSION 1 - #194
Accelerating Military Medical Research via Project-Driven Human Biospecimen Collection & Analysis
Presentation Author: Dr. Thomas Bell
Thomas J. Bell, MS, PhD, Melissa VonDran, PhD, Saboor Shad, Alisa McDonald, Gene Kopen, PhD National Disease Research Interchange, Philadelphia, PA

MHSRS-18-1175 POSTER SESSION 1 - #195
Mining the DOD Serum Repository for Biomarkers of Cancer Risk, Early Detection, & Therapeutic Response
Presentation Author: Dr. Karin Rodland
Karin Rodland, PhD, Tujin Shih, Tao Liu, Wayne Cardoni, George Coppit, Joseph Goodman, Shiva Srivastava, Craig Shriver
1Pacific Northwest National Laboratory, Richland, WA, 2Oregon Health & Science University, Portland, OR, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Center for Prostate Disease Research, Bethesda, MD
MHSRS-18-1278 POSTER SESSION 1 - #196
Machine Learning Approaches to Predict Effects of Exposure on Health Outcome in Service Members
Presentation Author: Ms. Juilee Thakar
Juilee Thakar1, Atif Khan1, Thomas H. Thater1, Collynn F. Woeller2, Douglas Walker2, Dean Jones2, Philip K. Hopke1, Pamela Krahl2, Patricia J. Sime3, Richard P. Phipps1, Timothy M. Mallon2, Mark J. Utell1
1University of Rochester, Rochester, NY, 2Emory University, Atlanta, GA, 3Uniformed Services University, Bethesda, MD

MHSRS-18-1546 POSTER SESSION 1 - #197
Monitoring from Battlefield to Bedside: Serum Repositories Help Identify Biomarkers
Presentation Author: Dr. Mulugu Brahmajothi
Mulugu V. Brahmajothi, PhD1, Mohamed B. Abou-Donia, PhD2
1Duke University Medical Center, Durham, NC, 2Duke Institute for Brain Science, Durham, NC

MHSRS-18-1759 POSTER SESSION 1 - #198
Use of Serum Proteomics & the USA Military Serum Bank Repository to Determine Risk of Inflammatory Bowel Disease (IBD) Development Prior to Disease Diagnosis
Presentation Author: Dr. Bruce Yacyshyn
Bruce Yacyshyn, MD, Mary Beth Yacyshyn, PhD
University of Cincinnati, Cincinnati, Ohio

MHSRS-18-1779 POSTER SESSION 1 - #199
Serum IgG Antibody Response to the Protective Antigen (PA) of Bacillus Anthracis Induced by Anthrax Vaccine Adsorbed (AVA) Among US Military Personnel
Presentation Author: CAPT Darrell Singer
CAPT Darrell E. Singer1, Rachel Schneerson2, Christian T. Bautista3, Mark V. Rubertone4, John B. Robbins2, David N. Taylor5
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2National Institute of Child Health & Human Development, NIH, Bethesda, MD, 3Walter Reed Army Institute of Research & US Military HIV Research Program, Rockville, MD, 4USA Center for Health Promotion & Preventive Medicine, Washington, DC, 5VaxInnate Corporation, Cranbury, NJ

MINIMIZING THE IMPACT OF WOUND INFECTIONS FOLLOWING BLAST-RELATED INJURIES

MHSRS-18-0009 POSTER SESSION 1 - #200
Synergistic Effect of Antimicrobial Blue Light & Quinine Against Wound Isolates of Multidrug-Resistant Bacteria & Molds from Combat Casualties
Presentation Author: Dr. Leon Leanse
Leon G. Leanse, PhD3, Xueping S. Goh, BS1, Ying Wang, MD, PhD1,2, Clinton K. Murray, MD1, David C. Hooper, MD1, Tianhong Dai, PhD1
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2Chinese PLA General Hospital, Beijing, China, 31st Area Medical Laboratory, US Army, Aberdeen, MD

MHSRS-18-0011 POSTER SESSION 1 - #201
Antimicrobial Blue Light Inactivation of Monomicrobial & Polymicrobial Biofilms Formed by Clinical Isolates of Multidrug-Resistant Organisms
Presentation Author: Dr. Raquel Ferrer-Espada
Raquel Ferrer-Espada, PhD3, Yanyan Fang, PhD3, Clinton K. Murray, MD2, Tianhong Dai, PhD1
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 21st Area Medical Laboratory, US Army, Aberdeen, MD
MHSRS-18-0068  POSTER SESSION 1 - #202
Antimicrobial Blue Light: A Potential Drug-Free Solution for Multidrug-Resistant Combat-Related Wound Infections?
Presentation Author: Dr. Ying Wang
Ying Wang, MD, PhD¹, Ying Wang, MD, PhD¹,², Yucheng Wang, MD, PhD¹,³, Min Lu, PhD¹, Clinton K. Murray, MD⁴, Michael R. Hamblin, PhD¹, Tianhong Dai, PhD¹
¹Massachusetts General Hospital, Harvard Medical School, Boston, MA, ²Chinese PLA General Hospital, Beijing, China, ³Aviation General Hospital, Beijing, China, ⁴1st Area Medical Laboratory, US Army, Aberdeen, MD

MHSRS-18-0075  POSTER SESSION 1 - #203
Iontophoresis Delivery System (Ion VAC) for Infected Wounds
Presentation Author: Dr. Maria Madajka-Niemeyer
Maria Madajka-Niemeyer, PhD, Karolina Mlynek, MD, Edoardo Dalla Pozza, MD, Kihyun Cho, MD, Nadeera Dawlagala, MD, Hirsh Shah, BA, Vahe Fahradyan, MD, Grzegorz Kwiecien, MD, Christine McDonald, PhD, Craig R. Homer, MS, Bahar Bassiri Gharb, MD, PhD, Frank Papay, MD
Cleveland Clinic, Cleveland, OH

MHSRS-18-0127  POSTER SESSION 1 - #204
Pediatric Prehospital Wound Prophylaxis in Iraq & Afghanistan
Presentation Author: MAJ Jason Naylor
MAJ Jason F. Naylor, DSc, PA-C¹, MAJ Michael D. April, MD, PhD, MS², LTC Guyon J. Hill, MD¹,², MAJ Steven G. Schauer, DO, MS²,³,⁴,⁵ ¹Madigan Army Medical Center, Joint Base Lewis-McChord Fort Lewis, WA, ²San Antonio Military Medical Center, Joint Base San Antonio Fort Sam Houston, TX, ³Dell Children’s Medical Center, Austin, TX, ⁴US Army Institute of Surgical Research, Joint Base San Antonio Fort Sam Houston, TX, ⁵59th Medical Wing, Joint Base San Antonio Lackland Air Force Base, TX

MHSRS-18-0153  POSTER SESSION 1 - #205
Non-Contact Tissue Viability Assessment (NTVA)
Presentation Author: Dr. Michele Pierro
Michele Pierro, PhD¹, Gordon Hirschman, MS¹, Saukhyda Deshmukh, MS¹, Kyle Quinn, PhD² ¹Vivonics, Inc, Bedford, MA, ²University of Arkansas, Fayetteville, AR

MHSRS-18-0177  POSTER SESSION 1 - #206
Targeting Bacterial Quorum Sensing to Improve Intestinal Barrier Function Following Burn - Site Infection
Presentation Author: Dr. Marianna Almpani
Fatemeh Adiliahghadam, MD¹, Marianna Almpani, MD¹,², Mohammad Hadi Gharelaghi, MD¹, Mehran Najibi, MD¹, Richard A. Hodin, MD², Laurence G. Rahme, PhD¹,² ¹Massachusetts General Hospital, Harvard Medical School, Boston, MA, ²Shriners Hospitals for Children-Boston, Boston, MA, ³Harvard Medical School, Boston, MA

MHSRS-18-0284  POSTER SESSION 1 - #207
Antifungal Activity of Essential Oils in Invasive Molds of Combat Casualties
Presentation Author: Dr. Tianhong Dai
Min Lu, PhD¹, Tianhong Dai, PhD¹, Clinton K. Murray, MD², Mei X. Wu, PhD, MD¹
¹Massachusetts General Hospital, Harvard Medical School, Boston, MA, ²San Antonio Military Medical Center, Joint Base San Antonio Fort Sam Houston, TX

MHSRS-18-0342  POSTER SESSION 1 - #208
Microbiology of Blast-Related Traumatic Extremity Wounds in Combat Casualties: Trauma Infectious Disease Outcomes Study 2009-2012
Presentation Author: Dr. Katrin Mende
Katrin Mende, PhD¹,², Laveta Stewart, PhD¹,² Faraz Shaikh, MS,¹,³ William Bradley, MS,¹,³ Dan Lu, MS¹,³ Margot Krauss, MD,¹ Lauren Greenberg, MPH,¹,³ David R. Tribble, MD, DrPH¹
¹Uniformed Services University of the Health Sciences, Bethesda, MD, ²Brooke Army Medical Center, JBSA Fort Sam Houston, TX, ³The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, ⁴Westat, Rockville, MD
MHSRS-18-0357  POSTER SESSION 1 - #209
Electrochemical Bandage for Wound Healing
Presentation Author: Dr. Haluk Beyenal
Haluk Beyenal, PhD1, Mia Mae Kiamco1, Hannah Zmuda1, Abdelrhman Mohamed1, Douglas Call3, Yash S. Raval3, Robin Patel2
1Washington State University, Pullman, WA, 2Mayo Clinic, Rochester, MN

MHSRS-18-0361  POSTER SESSION 1 - #210
Advancing a New Class of Methionyl-tRNA Synthetase (MetRS) Antibiotics
Presentation Author: Dr. Mansour Bassiri
Mansour Bassiri, PhD2, Michael Goodson2, Richard Gless1 1Bioxiness Pharmaceuticals, Inc, Hercules, CA, 2University of California, Davis, CA

MHSRS-18-0383  POSTER SESSION 1 - #211
The Multidrug-Resistant & Other Virulent Organisms (MDR/VO) Trauma Infections Initiative: 2018 Update
Presentation Author: Dr. Katrin Mende
Katrin Mende, PhD1-3, Lee C. Mangum, PhD4, LTC Kevin S. Akers, MD4, MAJ Samandra T. Demons, PhD5, LTC Mary K. Hinkle, MD5, LT Chaselynn M. Watters, PhD6, LCDR Mark P. Simons, PhD6, Laveta Stewart, PhD6, LTC Stuart D. Tyner, PhD5, David R. Tribble, MD, DrPH1
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Brooke Army Medical Center, Joint Base San Antonio Fort Sam Houston, TX, 3The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 4US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX, 5Walter Reed Army Institute of Research, Silver Spring, MD, 6Naval Medical Research Center, Silver Spring, MD,

MHSRS-18-0428  POSTER SESSION 1 - #212
A Novel 3D Bioprinting Approach to Treat MRSA Craniotomy-Associated Biofilm Infections
Presentation Author: Dr. Tammy Kielian
Tammy Kielian, PhD, Amy Aldrich, MS, Mitchell Kuss, BS, Bin Duan, PhD University of Nebraska Medical Center, Omaha, NE

MHSRS-18-0439  POSTER SESSION 1 - #213
Clinical Impact of Biofilm Formation on Combat Wound Infections of Injured US Military Personnel
Presentation Author: Dr. Lee Mangum
Lee C. Mangum, PhD1, Gerardo R. Garcia, MS1, David R. Tribble, DrPH, MD2, Ping Li, MS2,3, Laveta Stewart, PhD2,3, Katrin Mende, PhD2-4, LTC Kevin S. Akers, MD1,4
1US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 4Brooke Army Medical Center, JBSA Fort Sam Houston, TX

MHSRS-18-0640  POSTER SESSION 1 - #214
Investigating Antimicrobial Properties of Nanotextured Surfaces for Wound Bandages Against Resistant Infections
Presentation Author: Ms. Rachel Rosenzweig
Rachel Rosenzweig, Van K. Ly, Michaela Marshal, Serena Abbondante, PhD, Kumar Perinbam, PhD, Eric Pearlman, PhD, Albert F. Siryaporn, PhD, Albert F. Yee, PhD University of California - Irvine, Irvine, CA

MHSRS-18-0683  POSTER SESSION 1 - #215
Development of Combined Blast & Soft Tissue Wound Infection Animal Model – Experience & Preliminary Results
Presentation Author: Dr. Vlado Antonic
Vlado Antonic, PhD, Sujith Sajja, PhD, Jason Sosa, PhD, Yonas Alamneh, MS, Stephen Van Albert, Chau Vuong, Brittney Potter, Brittany Garry, Maria Medina-Rojas, MAJ Jonathan Shearer, DVM, MAJ Samandra Demons, PhD, LTC Chad Black, DVM, PhD, Daniel Zuraawski, PhD, Joseph Long, PhD, LTC Stuart Tyner, PhD Walter Reed Army Institute of Research, Silver Spring, MD
**MHSRS-18-0749  POSTER SESSION 1 - #216**  
Antagonism of ESKAPE Pathogens by Enterococcus Isolates from the Multidrug-Resistant & Other Virulent  
Organisms (MDR/VO) Trauma Infections Initiative  
Presentation Author: LCDR Mark Simons  
Josh Stanbro\(^1\), Alexandra Reinhart, PhD\(^2\), Michelle Lipinski\(^3\), LT Chase Watters, PhD\(^1\), MAJ Samandra T. Demons, PhD\(^2\), LTC Stuart D. Tyner, PhD\(^2\), LCDR Mark P. Simons, PhD, MPH\(^1\), Katrin Mende, PhD\(^3\), David R. Tribble, MD, DrPH\(^3,4\)  
\(^1\)Naval Medical Research Center, Silver Spring, MD, \(^2\)Walter Reed Army Institute of Research, Silver Spring, MD, \(^3\)The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, \(^4\)Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-0755  POSTER SESSION 1 - #217**  
Preventing Infection by Surface Modification of Orthopaedic Fracture Fixation Implants for Improved Limb  
Salvage Outcomes  
Presentation Author: Dr. Liam O'Neill  
Liam O'Neill, PhD\(^1\), Sarah Helms, MS\(^1\), Denis O’Sullivan, BSc\(^1\), Tzeun-Rong Jeremy Tzeng, PhD\(^2\), Shayesteh Beladi-Behbahani, PhD\(^2\), Marian Kennedy, PhD\(^2\), Kyle Jeray, MD\(^3\), Andrew Cross, MD\(^3\), Stephanie Tanner, MS\(^3\), Joe Tartaglia, BEng\(^4\), John Desjardins, PhD\(^4\)  
\(^1\)TheraDep Inc, San Jose, CA, \(^2\)Clemson University, Clemson, SC, \(^3\)Greenville Hospital System, Greenville, SC

**MHSRS-18-0770  POSTER SESSION 1 - #218**  
Multi-Functional Hydrogels for Advanced Wound Contact Materials: Combating Drug Resistance in Traumatic  
Limb Injuries  
Presentation Author: Dr. Jeffrey Lundin  
Jeffrey G. Lundin\(^1\), Christopher L. McGann\(^1,3\), LCDR Luis A. Estrella\(^1\), Nickolaus Weise\(^1\), CDR Michael Stockelman\(^2\), James H. Wynne\(^1\)  
\(^1\)Naval Research Laboratory, Washington, DC, \(^2\)Naval Medical Research Center, Silver Spring, MD \(^3\)American Society for Engineering Education, Washington, DC

**MHSRS-18-0807  POSTER SESSION 1 - #219**  
Identification of Bacteria in Saliva by Surface Enhanced Raman Spectroscopy (SERS)  
Presentation Author: Dr. Luis Martinez  
Luis A. Martinez, PhD, John W. Simecek, DDS, MPH Naval Medical Research Unit San Antonio, San Antonio, TX

**MHSRS-18-0825  POSTER SESSION 1 - #220**  
Quantitative Visualization of Wound Progression Using an Oxygen-Sensing Liquid Bandage  
Presentation Author: Dr. Haley Marks  
Haley Marks, PhD\(^1\), Emmanuel Roussakis, PhD\(^1\), Alexander Bucknor, MBBS, MSc\(^2\), Adam Raff, MD, PhD\(^3\), Carina Thomas, BS\(^3\), Radhika Shah, PharmD\(^3\), Rodney Chan, MD\(^3\), Kroshinsky, Daniela, MD\(^3\), R. Rox Anderson, MD\(^3\), Samuel J. Lin, MD, MBA\(^2\), Conor L. Evans, PhD\(^1\)  
\(^1\)Massachusetts General Hospital, Boston, MA, \(^2\)Beth Israel Deaconess Medical Center, Boston, MA, \(^3\)US Army Institute of Surgical Research, Fort Sam Houston, TX

**MHSRS-18-0902  POSTER SESSION 1 - #221**  
Clinical Characteristics & Outcomes Associated with Pseudomonas aeruginosa Isolated from Operations  
Enduring Freedom & Iraqi Freedom Trauma Patients Suffering Blast Injuries  
Presentation Author: CPT Mary Ford  
CPT Mary Ford, MD\(^1\), Katrin Mende, PhD\(^1,3\), Susan J. Kaiser, BS\(^1,3\), Miriam L. Beckius, MPH\(^4\), Dan Lu, MS\(^2,3\), M. Leigh Carson, MS\(^2,3\), David R. Tribble, DrPH, MD\(^2\), Maj Dana M Blyth, MD\(^1\)  
\(^1\)Brooke Army Medical Center, JBSA Fort Sam Houston, TX, \(^2\)Uniformed Services University of the Health Sciences, Bethesda, MD, \(^3\)Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD
MHSRS-18-0912  POSTER SESSION 1 - #222
Tissue-Based Molecular Diagnostics Evaluation in Combat-Related Invasive Fungal Infections (IFI)
Presentation Author: Dr. Anuradha Ganesan
Anuradha Ganesan, MD1,2, Faraz Shaikh, MS1,2, LT Philip Peterson, MD3, William Bradley, MS1,2, Brian Johnson3, LTC Justin Wells, MD4, Ralf Bialek, MD4, Brian Wickes, PhD5, David R. Tribble, MD, DrPH1
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda MD, 3Walter Reed National Military Medical Center, Bethesda, MD, 4LADR GmbH Medizinisches Versorgungszenrum Dr. Kramer & Kollegen, Germany, 5University of Texas Health Sciences Center at San Antonio, San Antonio, TX

MHSRS-18-0939  POSTER SESSION 1 - #223
Bacteriophage Preparation to Control Infections & Promote Wound Healing
Presentation Author: Dr. David Trudil
David Trudil, PhD1, Vipin Rastogi, PhD2, Mzia Kutateladze, PhD3, Martha Clokie, PhD4
1Brimrose Biotechnology Division, Sparks, MD, 2US Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD, 3G. Eliava Institute of Bacteriophages, Microbiology & Virology, Tbilisi, Georgia, 4University of Leicester, Leicester, UK

MHSRS-18-0993  POSTER SESSION 1 - #225
An Agent to Speed Wound Healing & Boost Battlefield Survival
Presentation Author: Dr. Rinku Majumder
Rinku Majumder, PhD1, Arani Datta, MS1, Tilen Koklic, PhD2, Vijaya S. Pilli, PhD1
1LSU Health Science Center, New Orleans, LA, 2Jozef Stefan Institute, Ljubljana, Slovenia

MHSRS-18-1010  POSTER SESSION 1 - #226
Antibiotic Elution Efficacy of a Titanium Implant Polymer Coating
Presentation Author: Dr. John Simecek
Monica Johnson, BS, Amer Tiba, PhD, Luis Martinez, PhD, John Simecek, DDS
Naval Medical Research Unit San Antonio, Fort Sam Houston, TX

MHSRS-18-1379  POSTER SESSION 1 - #227
Biomimetic Recyclable Microgels for On Demand Generation of Hydrogen Peroxide & Antipathogenic Application
Presentation Author: Dr. Bruce Lee

MHSRS-18-1382  POSTER SESSION 1 - #228
Broad In Vitro & Ex Vivo Antimicrobial Efficacy of Nitric Oxide (NO)-Releasing Biocompatible Polymer
Presentation Author: Dr. Nina Bionda
Nina Bionda, PhD, Tenzin Dolkar, James Gras, Elizabeth J. Bevels, Aaron D. Strickland, PhD
iFyber LLC, Ithaca, NY

MHSRS-18-1401  POSTER SESSION 1 - #229
Topically Applied Drug Resistant Designed Antimicrobial Peptides Eradicate Polymicrobial Infections in a Porcine Combat Burn Wound Infection Model.
Presentation Author: Dr. Louis Clemens
Louis E. Clemens, PhD1, Jesse Jaynes, PhD1, Paul Attar, PhD2, Kathryn Woodburn PhD1
1Riptide Bioscience, Inc, Vallejo, CA, 2Bridge PTS, San Antonio, TX

MHSRS-18-1471  POSTER SESSION 1 - #230
Novel Synthetic Toll-like Receptor 4 Agonists Enhance Resistance to Infection with Common Bacterial Pathogens
Presentation Author: Liming Luan, PhD
Antonio Hernandez, MD, Julia K. Bohannon, PhD, Liming Luan, PhD, Benjamin Fensterheim, PhD, Jessica Fults, BS, Naeem Patil, MD, PhD, Edward Sherwood, MD, PhD
Vanderbilt University Medical Center
MHSRS-18-1476  POSTER SESSION 1 - #231
Prevention & Treatment of Post-burn Infections with the Toll-like Receptor 4 Ligand Monophosphoryl Lipid A
Presentation Author: Dr. Julia Bohannon
Julia K. Bohannon, PhD, Liming Luan, PhD, Antonio Hernandez, MD, MSc, Edward R. Shenwood, MD, PhD
Vanderbilt University Medical Center, Nashville, TN

MHSRS-18-1522  POSTER SESSION 1 - #232
A Novel Peptide Based Biodegradable Antimicrobial Treatment is Effective Against Antibiotic Resistant Wound Pathogens in an In-Vitro Biofilm Model
Presentation Author: Dr. Jennifer Neff
Jennifer Neff, PhD, Danir Bayramov, PhD, Esha Patel, MS, Jing Miao, MS
Allvivo Vascular, Inc

MHSRS-18-1559  POSTER SESSION 1 - #233
Active & Passive Immunization Using Planktonic & Biofilm Antigens Protects Against Infections due to Staphylococcus Aureus & Pseudomonas Aerugin in Multiple Animal Models
Presentation Author: Dr. Mark Shirtliff
Janette M. Harro, PhD, Mark E. Shirtliff, PhD
University of Maryland-Baltimore, Baltimore, MD

MHSRS-18-2026  POSTER SESSION 1 - #234
Antimicrobial Efficacy Testing of a Novel Natural Antimicrobial Product
Presentation Author: Dr. Mina Izadjoo
Hosan Kim, PhD1, Vanessa Marcel, MS1, Mina Izadjoo, PhD1,2
1Integrated Pharma Services, Frederick, MD, 2Millman Systems, Bowie, MD

MHSRS-18-1560  POSTER SESSION 1 - #235
Novel Diagnostic Tools for Diagnosing Chronic Biofilm Infections
Presentation Author: Dr. Mark Shirtliff
Janette M. Harro, PhD, Mark E. Shirtliff, PhD
University of Maryland-Baltimore, Baltimore, MD

MHSRS-18-2029  POSTER SESSION 1 - #236
Developing a Novel Chemotype for Wound Infections: New Peptide-Like Polymers to Prevent & Treat Fatal Fungal Diseases
Presentation Author: Dr. Christina Hull
Leslie A. Rank, Naomi M. Walsh, Fang Yun Lim, Samuel H. Gellman, Nancy P. Keller, Christina M. Hull, PhD
University of Wisconsin-Madison, Madison, WI

MHSRS-18-1565  POSTER SESSION 1 - #237
Responsive Antifungal Hydrogels for the Treatment of Flesh Wound Candida Albicans Infections
Presentation Author: Dr. Anita Shukla
Noel Vera-Gonzalez1, Felipe Ribeiro2, Jessica Diane2, Juliana Junqueira, PhD2, Anita Shukla, PhD1
1School of Engineering, Brown University, Providence, RI, 2Institute of Science & Technology, São Paulo State University, São José dos Campos, São Paulo, Brazil

MHSRS-18-2039 - POSTER SESSION 1 - #238
Omega3 Rich Fish Skin as Infection-Prevention Strategy After Blast Injuries: An In Vitro Bacterial Barrier Study
Presentation Author: Dr. Hilmar Kjartansson
Hilmar Kjartansson MD1,2, Baldur Tumi Baldursson, MD, PhD1,2, Skuli Magnusson, BSc2, G. Fertram Sigurjonsson, MEng2
1Landspitali - The National University Hospital of Iceland, Reykjavik, Iceland, 2Kerecis, Reykjavik, Iceland
MHSRS-18-1703  POSTER SESSION 1 - #239
The Role of Oral Progenitor Cells in Wound Repair & Regeneration
Presentation Author: Mrs. Lindsay Davies
Lindsay C Davies1, Katarina Le Blanc1,2,2
1Karolinska Institutet, 2Karolinska University Hospital, Stockholm, Sweden, 3Nova Southeastern University, Fort Lauderdale, Florida

MHSRS-18-2088  POSTER SESSION 1 - #240
Antimicrobial Efficacy Testing of a Biomodulator Technology
Presentation Author: Dr. Mina Izadjoo
Hosan Kim, PhD1, Jerry Tennant, MD2, Mina Izadjoo, PhD1
1Integrated Pharma Services, Frederick, MD, 2Senergy Medical Group, Dallas, TX

MHSRS-18-1721  POSTER SESSION 1 - #241
Point-of-Care Imaging of Bacterial Biofilms to Assess Wound Infection Risk & Status
Presentation Author: Dr. Petra Wilder-Smith
Petra Wilder-Smith, DDS, PhD, Afarin Anbarani, BS, Joann Phan, BS, Saba Ranjbar, BS, Allon Hochbaum, PhD, Katrine Whiteson, PhD
University of California, Irvine, CA

MHSRS-18-2097  POSTER SESSION 1 - #242
Pendant Functionalized Polyurethanes & Poly(ester urethane)s with Effective Antimicrobial & Antibiofilm Properties
Presentation Author: Dr. Abraham Joy
Abraham Joy, PhD, Chao Peng, MS, Apoorva Vishwakarma, MS, Steven Mankoci, PhD, Hazel A. Barton, PhD
University of Akron, Akron, OH

MHSRS-18-2017  POSTER SESSION 1 - #243
New Approach of Efficient Antimicrobial Drugs using Decacationic Chlorin & its Vancomycin Conjugates for Antimicrobial Photodynamic Inactivation of Multidrug-resistant Organisms
Presentation Author: Dr. Tianhong Dai
Ying Wang, MD, PhD1, Min Wang, PhD2, Xueping S. Goh, BS1, Long Chiang, PhD2, Michael R. Hamblin, PhD1, Clinton K. Murry, MD1, Tianhong Dai, PhD2
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2University of Massachusetts Lowell, Lowell, MA, 31st Area Medical Laboratory, US Army, Aberdeen, MD

MHSRS-18-2131  POSTER SESSION 1 - #244
Antimicrobial Application of an Immunomodulating Drug
Presentation Author: Dr. Mina Izadjoo
Mina Izadjoo, PhD1, Christina Rosette, BS, Hosan Kim, PhD1, Vanessa Marcel1, David Shallcross, MD2, Otto Ching, MD2
1Integrated Pharma Sciences, Frederick, MD, 2IBT Pharma, Greenville, SC

MHSRS-18-2139  POSTER SESSION 1 - #245
Characterization of a Novel Monoclonal Anti-Amyloid Antibody Therapy to Eradicate Bacterial Biofilms
Presentation Author: Dr. Cagla Tukel
Sarah Tursi1, Ramdev Puligedda2, Lauren Nicastro2, Amanda Miller1, Bettina Buttaro1, Scott Dessain2, Cagla Tukel1
1Temple University, Philadelphia, PA, 2Lankenau Institute for Medical Research, Wynnewood, PA

MHSRS-18-2139  POSTER SESSION 1 - #246
Characterization of the Antibiofilm, Osteoconductive & Biomechanical Properties of a PEEK-Silver Zeolite Composite Biomaterial for Tackling Trauma Related Wound Infections Following Blast Injuries
Presentation Author: Mr. Sriram Sankar
Sriram Sankar, MS, Joe Crudden, PhD, Derrick W. Johns
DiFusion Technologies Inc, Austin, TX
MHSRS-18-2142  POSTER SESSION 1 - #247
Isolation & Antimicrobial Efficacy Testing of Propionibacterium acnes & MRSA Specific Bacteriophages
Presentation Author: Dr. Mina Izadjoo
Hosan Kim, PhD1, Cameron Bolyard2, Sreyry Schaerdel2, Vanessa Marcel, MS3, Mina Izadjoo, PhD1
1Integrated Pharma Services, Frederick, MD, 2Frederick Community College, Frederick, MD

MHSRS-18-2162  POSTER SESSION 1 - #249
Immunotherapies to Prevent Wound Infections
Presentation Author: Dr. Daniel Zurawski
Daniel V. Zurawski, PhD1, Shweta Singh1, RyanM. Reddinger1, Michelle Palacios1, Yonas Alamneh1, Rania Abu-Taleb1, Jonathan P. Shearer1, Stuart D. Tyner1, Raphael Simon2, Samantha T. Demons1
1Walter Reed Army Institute of Research, Silver Spring, MD, 2University of Maryland School of Medicine, Baltimore, MD

BLAST-INDUCED TINNITUS

MHSRS-18-0519 - POSTER SESSION 1 - #250
The Development of a Tympanic Membrane Model & Probabilistic Dose-Response Risk Assessment of Rupture Due to Blast
Presentation Author: Dr. Anthony Iyoho
Anthony Iyoho, PhD, Kevin Ho, MS, Philemon Chan, PhD L-3 Applied Technologies, Inc

MHSRS-18-1111  POSTER SESSION 1 - #252
Tinnitus & Hyperacusis in Veterans & Active Service Members Related to Blast-Exposure
Presentation Author: Dr. Sarah Theodoroff
Sarah M. Theodoroff, PhD1,2, Kelly M. Reavis, MS, MPH1-4, Susan E. Griest, MPH1,2, Cody Blankenship, BS1-2, Emily J. Thielman, MS3, Tanisha L. Hammill, PhD3, Kathleen F. Carlson, PhD1,4, James A. Henry, PhD1-2
1Veterans Affairs Portland Health Care System, Portland, OR, 2Oregon Health & Science University, Portland, OR, 3University of Oklahoma Health Sciences Center, Oklahoma City, OK, 4Otologic Pharmaceuticals Inc, Oklahoma City, OK

OPEN  POSTER SESSION 1 - #253

MHSRS-18-1813 POSTER SESSION 1 - #254
Transcriptomic & Morphological Changes After Blast Exposure Reveals a Fundamental Response to Injury in the Ear & Brain Leading to Auditory Dysfunction
Presentation Author: Dr. Ying Wang
Ying Wang, MD, Wafae Driwech, BS, Rodrigo Urioste, BS, Yanling Wei, MD, Donna Wilder, BS, Sujith Sajja, PhD, Peethambaran Arun, PhD, Irene D. Gist, BS & Joseph Long, PhD
Walter Reed Army Institute of Research, Silver Spring, MD
Auditory Trauma from Blast: Measurements in Chinchillas & How They Compare to Humans
Presentation Author: Dr. Daniel Tollin
John Peacock, PhD, Nathaniel Greene, PhD, Daniel Tollin, PhD
University of Colorado School of Medicine, Aurora, CO

Blast Overpressure Induced Cellular Injury Changes: Relationship to Pain & Tinnitus
Presentation Author: Dr. Srinivasu Kallakuri
Srinivasu Kallakuri, PhD, John M Cavanaugh, Avril Genene Holt
Wayne State University, Detroit, MI

Characterization & Modulation of Shock Tube Generated Blast Pressure
Presentation Author: Dr. Srinivasu Kallakuri
Srinivasu Kallakuri, PhD, Ryan Lewis, BS2, Aaron Apawu, PhD1, Mirabela Hali, MS1, John M Cavanaugh1, Avril Genene Holt1
1Wayne State University, Detroit, MI, 2Bruel & Kjaer North America, Canton, MI

Noise & Blast-Induced Tinnitus: Models of Peripheral & Central Auditory Damage in Rodents
Presentation Author: Dr. Avril Genene Holt
AG Holt1,2, M Hali1, A. Apawu1, S. Kallakuri1, J. Cavanaugh1, E. Pace1, J. Zhang2, RA Altschuler3,4 1Wayne State University School of Medicine, Detroit, MI, 2John D. Dingell VA Medical Center, Detroit, MI, 3University of Michigan Kresge Hearing Research Institute, Ann Arbor, MI, 4VA Ann Arbor Health Care System, Ann Arbor, MI

Predicting Ocular Tissue Damage as a Function of Primary Blast Overpressure: A Computational Fluid Dynamics Model
Presentation Author: Mr. Steven Williams
ST Williams1,2, TH Harding1
1US Army Aeromedical Research Laboratory, Fort Rucker, AL, 2Laulima Government Solutions, Orlando, FL

Development of a New Scientifically Validated Test Device to Assess Survivability in Under-Body Blast Events
Presentation Author: Mr. Frederick Hughes
Frederick J. Hughes IV, Terry Holdren US Army Research Laboratory, Aberdeen, MD

Laboratory & On-Field Results of Athlete Head Impact Monitoring
Presentation Author: Dr. Adam Bartsch
Adam Bartsch1, Rajiv Dama1, Sergey Samorezov2, Jay Alberts2, Edward Benzel2, Vincent Miele3, Alok Shah4, John Humm5, Michael McCrea4, Brian Stemper4
1Prevent Biometrics, Minneapolis, MN, 2Cleveland Clinic, Cleveland, OH, 3University of Pittsburgh Medical Center, Pittsburgh, PA, 4Medical College of Wisconsin & Zablocki VA Medical Center, Milwaukee, WI
Poster Session I

MHSRS-18-1062  POSTER SESSION 1 - #264
Mechanisms of Concussion in Football Athletes at the Military Service Academies: Single Impact Versus Repetitive Head Impact Exposure
Presentation Author: Dr. Brian Stemper
Brian D. Stemper, PhD1,2, Alok S. Shah, MS2,3, Steven Rowson, PhD4, Stefan Duma, PhD4, Jaroslaw Harezlak, PhD5, Jason P. Mihalik, PhD, Larry D. Riggen, MS, Kenneth L. Cameron, PhD, MPH, ATC, Darren Campbell, MD, Jonathan Jackson, MD, LT COL Gerald McGinty, PT, DPT, COL Steven Svoboda, MD, Steven P. Broglio, PhD, ATC, Thomas W. McAllister, MD, Michael McCrea, PhD2,3
1Marquette University, Milwaukee, WI, 2Zablocki Veterans Affairs Medical Center, Milwaukee, WI, 3Medical College of Wisconsin, Milwaukee, WI, 4Virginia Tech University, Blacksburg, VA, 5Indiana University, Indianapolis, IN, 6University of North Carolina, Chapel Hill, NC, 7United States Military Academy, West Point, NY, 8United States Air Force Academy, Colorado Springs, CO

MHSRS-18-1102  POSTER SESSION 1 - #265
Targeted Quantitation of Serum Protein Biomarkers in Response to Blast Overpressure Exposure Among Military Breachers
Presentation Author: Dr. Angela Boutté
Angela M. Boutté, Bharani Thangavelu, Christina LaValle, Janice Gilsdorf, Deborah A. Shear, Gary Kamimori
Walter Reed Army Institute for Research, Silver Spring, MD

MHSRS-18-1144  POSTER SESSION 1 - #266
Anthropomorphic Blasting Testing Device for Primary Blast Injury Risk Assessment
Presentation Author: Dr. Yun Hsu
Yun Hsu, PhD, Kevin Ho, MS, Philemon Chan, PhD
L-3 Applied Technologies, San Diego, CA

MHSRS-18-1347  POSTER SESSION 1 - #267
Reporting Occupational Blastwave Exposure During Multiday .50 Caliber Rifle Course
Presentation Author: Mr. Anthony Misistia
Anthony Misistia, MS1, Christina LaValle, MS1, Gary Kamimori, PhD1, Alejandro Ramos, BS1, Maciej Skotak, PhD2
1Walter Reed Army Institute, Silver Spring, MD, 2New Jersey Institute of Technology, Newark, NJ

MHSRS-18-1370  POSTER SESSION 1 - #268
Characterization of Overpressure Exposure of Shoulder Mounted Assault Weapon (SMAW) During Training to Personnel & the Immediate Area
Presentation Author: Mr. Alejandro Ramos
Alejandro Ramos, Anthony Misistia, MS, Christina LaValle, MS, Gary Kamimori, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1403  POSTER SESSION 1 - #269
Integrating Acoustic Levels into a Comprehensive Assessment of Cumulative Low Level Blast Overpressure Effects on Warfighters
Presentation Author: Dr. Venkatasivasaisujith Sajja
Venkatasivasaisujith Sajja, PhD, Cristina LaValle, MS, Jonathan Salib, MS, Anthony Misistia, MS, Meron Ghebremedhin, MS, Michael Egnoto, PhD, Joseph Long, PhD, Gary Kamimori, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1406  POSTER SESSION 1 - #270
Simulation of Cumulative Exposure Statistics for Blast Pressure Transmission into the Brain Including Effects of Sulci & Gyri
Presentation Author: Dr. Peter Matic
X. Gary Tan, PhD, Peter Matic, PhD
Naval Research Laboratory, Washington, DC
**Poster Session I**

**MHSRS-18-1416**  
**POSTER SESSION 1 - #271**  
**Wearable Sensor for Rapid Assessment of Acute Mild TBI Based on Heart Rate Variability**  
Presentation Author: Jacques Arrieux  
Katie Russell, MS\(^1\), Kristin Gilchrist, PhD\(^4\), Jacques Arrieux, MA\(^1\), Wesley Cole, PhD\(^1\), Meghan Hegarty-Craver, PhD\(^4\), Y. Sammy Choi, MD\(^2\)

\(^1\)Defense & Veterans Brain Injury Center, Fort Bragg, NC, \(^2\)Womack Army Medical Center, Fort Bragg, NC, \(^3\)General Dynamics Health Solutions, Fairfax, VA, \(^4\)RTI International, Raleigh, NC

**MHSRS-18-1417**  
**POSTER SESSION 1 - #272**  
**Development of NRL Head-Brain Models & Their Application for Assessing Effects in Breacher Training Exercises**  
Presentation Author: Dr. Thomas O’Shaughnessy  
TJ O’Shaughnessy\(^1\), Y Chen\(^1\), GH Kamimori\(^2\), DM Horner\(^3\), MJ Doherty\(^4\), A Bagchi\(^5\) \(^1\)US Naval Research Laboratory, Washington, DC, \(^2\)Walter Reed Army Institute of Research, Silver Spring, MD, \(^3\)KBR/Wyle, Columbia, MD

**MHSRS-18-1423**  
**POSTER SESSION 1 - #273**  
**A Comparison of Female & Male PMHS Response to Blast-Induced Vertical Accelerative Loading**  
Presentation Author: Dr. Kerry Danelson  
Kerry A. Danelson, PhD\(^1\), Danielle M. Cristino, BS\(^2\), Hollie A. Pietsch, BS\(^3\), John H. Bolte IV, PhD\(^4\), Andrew R. Kemper, PhD\(^2\), Patricia Frounfolker, MS\(^4\), Warren N. Hardy, PhD\(^2\)

\(^1\)Wake Forest School of Medicine, Winston-Salem, NC, \(^2\)Virginia Polytechnic Institute & State University, Blacksburg, VA, \(^3\)US Army Tank Automotive Research, Detroit, MI, \(^4\)The Ohio State University, Columbus, OH

**OPEN**  
**POSTER SESSION 1 - #274**  
**Characteizing Internal & External Overpressure Exposure for Various Ballistic Helmets**  
Presentation Author: Mr. Jonathan Salib  
Jonathan Salib, MS, Anthony Misistia, MS, Gary Kamimori, PhD Walter Reed Army Institute of Research, Silver Spring, MD

**MHSRS-18-1767**  
**POSTER SESSION 1 - #276**  
**Investigation of Factors that Affect Reference Sensor Kinematic Measurements During Laboratory Blunt Impact Testing of the Advanced Combat Helmet (ACH)**  
Presentation Author: Dr. Mark Begonia  
Mark Begonia, PhD\(^1\), Tyler Rooks, MS\(^2\), John Humm, MS\(^3\), Klaus Driesslein, SCE\(^1\), Alok Shah, MS\(^1\), Frank A. Pintar, PhD\(^1\), Narayan Yoganandan, PhD\(^1\)

\(^1\)Medical College of Wisconsin, Milwaukee, WI, \(^2\)US Army Aeromedical Research Lab, Fort Rucker, AL

**MHSRS-18-1930**  
**POSTER SESSION 1 - #277**  
**Acquisition of Warrior Injury Assessment Manikin: Crossing the Valley of Death**  
Presentation Author: LTC Robert Carter  
Robert Carter, III, PhD, MPH, Jacques Eckles, MS, John Lavoie, MS, Thomas Haney, MS, Michael Landers, MS Program Executive Office Simulation, Orlando, FL

**MHSRS-18-1953**  
**POSTER SESSION 1 - #278**  
**Reduced Cerebrovascular Reactivity After Primary Blast Exposure Measured with Transcranial Doppler Ultrasound**  
Presentation Author: Dr. Seth Wilk  
Nicolas Canac, PhD\(^1\), Corey M. Thibeault, PhD\(^2\), Mateo Scheidt\(^1\), Samuel Thorpe, PhD\(^1\), Wallace Graves III\(^1\), Lisa Russeth\(^2\), Marianna Jolly\(^3\), James LeVangie\(^1\), Seth J. Wilk, PhD\(^1\), Robert Hamilton, PhD\(^2\), CDR Josh L. Duckworth, MD\(^1\) \(^1\)Neural Analytics Inc, Los Angeles, CA, \(^2\)The Henry Jackson Foundation, Bethesda, MD, \(^3\)Vanesco LLC, Chantilly, VA, \(^4\)Uniformed Services University of the Health Sciences, Bethesda, MD
MHSRS-18-2024  POSTER SESSION 1 - #279
Cognitive Performance & Speech-In-Noise Perception in Blast-Exposed Military Service Members with Clinically Normal Hearing
Presentation Author: Dr. Jennifer Myers
Jennifer Rae Myers, PhD, Kimberly A. Jenkins, AuD, Sandeep A. Phatak, PhD, Ken W. Grant, PhD Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-2092  POSTER SESSION 1 - #280
Investigating the Neurological Effects of Training Associated Blast: Preliminary Micro-RNA Variability in the I-TAB Study
Presentation Author: CDR Josh Duckworth
Stanley T. Motley1, Lisa S. Russeth2, Christy L. Ventura3, Fabio Leonessa3, Todd Michael4, Eric B. Schneider4,5, CDR Josh L. Duckworth3
1IBIS Biosciences, Carlsbad, CA, 2Marine Corps Base Camp Pendleton, Camp Pendleton, CA, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4University of Virginia School of Medicine, Charlottesville, VA, 5Johns Hopkins University School of Medicine, Baltimore, MD

MHSRS-18-2128  POSTER SESSION 1 - #281
Using High-Fidelity Computational Fluid Dynamics Simulations to Help Interpret Blast Overpressure Data Collected in Training Environments: Recoilless Rifles & Explosive Breaching
Presentation Author: Dr. Suthee Wiri
Suthee Wiri, PhD1, Andrea Gonzales, MS2, Gregory T. Rule, MS, PE2

DOES REPEATED BLAST-RELATED TRAUMA CONTRIBUTE TO THE DEVELOPMENT OF CHRONIC TRAUMATIC ENCEPHALOPATHY?

MHSRS-18-0095  POSTER SESSION 1 - #282
The Relationship Between PTSD Symptoms & Tau & Amyloid Levels in US Military Service Members with & Without Mild-Moderate Traumatic Brain Injury
Presentation Author: Dr. Rael Lange
Rael Lange, PhD1,3,5, Jessica Gill, PhD1,7, Sara Lippa, PhD1,3, Tracey Brickell, D.Psych1,4, Louis French, PsyD1,4
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, BC, Canada, 6National Institutes of Health, Bethesda, MD, 7National Institute of Nursing Research, Bethesda, MD

MHSRS-18-0099  POSTER SESSION 1 - #283
Blast-Related TBI's & Their Association with Neurological Symptoms
Presentation Author: Dr. Jennifer Belding
Jennifer Belding, PhD, LT Uade Olaghere da Silva, PhD, Shannon Fitzmaurice, Brad Kowitz, Cynthia Thomsen Naval Health Research Center, San Diego, CA

MHSRS-18-0254  POSTER SESSION 1 - #284
Long-Term Exposure to Military Occupational Blast is Associated with Elevated Plasma Myeloperoxidase
Presentation Author: Dr. Shawn Rhind
Shawn G. Rhind, PhD1, Oshin Vartanian, PhD1, Alex P. DiBattista, PhD1, Katherine A. Moes, MSc1, Kristen Blackler, MSc1, Maria Y. Shi, MSc1, Ingrid Smith, BSc1, Doug Saunders, BSc1, Ann Nakashima, MASc1, Catherine Tenn, PhD2, Rakesh Jetly, MD1
1Defence Research & Development Canada, Toronto Research Centre, Toronto, Canada, 2Defence Research & Development Canada, Suffield Research Centre, Medicine Hat, Canada, 3Canadian Forces Health Services, Ottawa, Canada
MHSRS-18-0278 - POSTER SESSION 1 - #285
An Explosive Driven Double-Blast Rat Model: 15 Days Post Exposure Increased Level of pTau, Gfapandiba-1a Cross Different Regions of the Brain
Presentation Author: Dr. Diego Iacono
Diego Iacono, MD<sup>1,3</sup>, Erin Murphy, MS<sup>1,3</sup>, Hongna Pan, MD<sup>2,3</sup>, Steve Parks, PhD<sup>4</sup>, Jamie Grimes, MD<sup>2</sup>, Daniel Perl, MD<sup>1,2</sup>, Fabio Leonessa, MD<sup>2,3</sup>
<sup>1</sup>Uniformed Services University, Bethesda, MD, <sup>2</sup>Edward Hébert School of Medicine, Uniformed Services University, Bethesda, MD, <sup>3</sup>The Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, <sup>4</sup>ORA, Inc, Fredericksburg, VA

MHSRS-18-0300 - POSTER SESSION 1 - #286
Postconcussion Symptoms are not Related to Plasma Tau & Amyloid-beta-42 Following Mild Traumatic Brain Injury
Presentation Author: Dr. Rael Lange
Rael Lange, PhD<sup>1,3,5</sup>, Jessica Gill, PhD<sup>6,7</sup>, Sara Lippa, PhD<sup>1,3</sup>, Tracey Brickell, D.Psych<sup>1,4</sup>, Louis French, PsyD<sup>1,4</sup>
<sup>1</sup>Defense & Veterans Brain Injury Center, Bethesda, MD, <sup>2</sup>Walter Reed National Military Medical Center, Bethesda, MD, <sup>3</sup>National Intrepid Center of Excellence, Bethesda, MD, <sup>4</sup>Uniformed Services University of the Health Sciences, Bethesda, MD, <sup>5</sup>University of British Columbia, Vancouver, BC, Canada, <sup>6</sup>National Institutes of Health, Bethesda, MD, <sup>7</sup>National Institute of Nursing Research, Bethesda, MD

MHSRS-18-0458 - POSTER SESSION 1 - #287
Repetitive Low-Level Blast Exposure Induces Chronic Hyperphosphorylation of Tau in Rat Brain
Presentation Author: Dr. Gregory Elder
Gregory A. Elder<sup>1</sup>, Georgina Perez-Garcia<sup>1</sup>, Rita De Gasperi<sup>1</sup>, Miguel A. Gama Sosa<sup>1</sup>, Anna E. Tschiffely<sup>2</sup>, Richard M. McCarron<sup>2</sup>, Patrick R. Hof<sup>3</sup>, Dara L. Dickstein<sup>4</sup>, Sam Gandy<sup>1</sup>, Stephen T. Ahlers<sup>2</sup>
<sup>1</sup>James J. Peters VA Medical Center, Bronx, NY, <sup>2</sup>Naval Medical Research Center, Silver Spring, MD, <sup>3</sup>Icahn School of Medicine at Mount Sinai, New York, NY, <sup>4</sup>Uniformed Services University of Health Sciences, Bethesda, MD

MHSRS-18-0571 - POSTER SESSION 1 - #288
The Protein Phosphatase-2A Regulatory Enzymes, PME-1 & LCMT-1, Control Sensitivity to Impairments Caused by Toxic Tau Produced During Mild to Moderate Shockwave Exposure
Presentation Author: Dr. Russell Nicholls
Russell E. Nicholls, PhD<sup>1</sup>, Sowmya Sundaresh<sup>1</sup>, Edward W. Vogel III, PhD<sup>1</sup>, Christopher D. Hue, PhD<sup>1</sup>, Agnes Staniszewski<sup>1</sup>, Hong Zhang<sup>1</sup>, Zafar Gill<sup>1</sup>, Francis PR. Orozco<sup>1</sup>, Siqi Liang<sup>1</sup>, Liwei Shen<sup>1</sup>, Mauro Fa, PhD<sup>2</sup>, Barclay Morrison III, PhD<sup>3</sup>, Ottavio Arancio, MD, PhD<sup>1</sup>
<sup>1</sup>Columbia University, New York, NY, <sup>2</sup>School of Medicine, New York Medical College, Valhalla, NY

MHSRS-18-0619 - POSTER SESSION 1 - #289
Hippocampal Complex Tau Pathology in Human Chronic Traumatic Encephalopathy: A Chronic Effects of Neurotrauma Consortium Study
Presentation Author: Dr. Christy Kelley

MHSRS-18-0907 - POSTER SESSION 1 - #290
Repetitive Exposure to Blast Results in Altered Locomotor Activity & Increased Expression of TDP-43 & Piezo2 in a Rat Model of Blast TBI
Presentation Author: Dr. Lanier Heyburn
Lanier Heyburn, PhD<sup>1</sup>, Donna M. Wilder, MS<sup>1</sup>, Stephen A. Van Albert, BS<sup>1</sup>, Stephen T. Ahlers, PhD<sup>2</sup>, Joseph B. Long, PhD<sup>1</sup>, Sujith Sajja, PhD<sup>1</sup>
<sup>1</sup>Walter Reed Army Institute of Research, Silver Spring, MD, <sup>2</sup>Naval Medical Research Center, Silver Spring, MD

MHSRS-18-0928 - POSTER SESSION 1 - #291
Relating Blast-Induced Brain Injury with Structural, Physiological & Electrochemical Damage in Neuron
Presentation Author: Dr. Ashfaq Adnan
Yuan-Ting Wu, PhD, Fuad Hasan, MS, Khandakar Abu Hasun Mahmud, MS, MD, Ishak Khan, BS
The University of Texas at Arlington, Arlington, TX
<table>
<thead>
<tr>
<th>Poster Session 1 - #292</th>
<th>MHSRS-18-0933</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Systemic Changes with Cumulative Effects of Repeated Blast at Operational Training Relevant Blast Exposures</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Dr. Sujith Sajja</td>
<td></td>
</tr>
<tr>
<td>Sujith Sajja, PhD</td>
<td></td>
</tr>
<tr>
<td>Walter Reed Army Institute of Research, Silver Spring, MD</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #293</th>
<th>MHSRS-18-1157</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Mouse Model of Repeat Mild Traumatic Brain Injury that Induces Permanent Motor &amp; Cognitive Deficits with Chronic Traumatic Encephalopathy-Like Brain Injury</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Dr. Galinos Barmparas</td>
<td></td>
</tr>
<tr>
<td>Galinos Barmparas, MD, Navpreet K Dhillon, MD, Noell Cho, Mor Alkaslasi, Patricia Haro-Lopez, Oksana Shelest, Gretchen M. Thomsen, PhD, Eric J. Ley, MD</td>
<td></td>
</tr>
<tr>
<td>Cedars-Sinai Medical Center, Los Angeles, CA</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #294</th>
<th>MHSRS-18-1190</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Association of Plasma CCL11 Increase from Subconcussive Head Impacts with Duration of Soccer Heading Experience</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Ms. Megan Huibregtse</td>
<td></td>
</tr>
<tr>
<td>Megan E. Huibregtse, BS, Zhongxue Chen, PhD, Zachary W. Bevilacqua, MS, Timothy D. Mickleborough, PhD, Keisuke Kawata, PhD</td>
<td></td>
</tr>
<tr>
<td>Indiana University, Bloomington, IN</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #295</th>
<th>MHSRS-18-1200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Increases in Plasma Neurofilament Light After Repetitive Subconcussive Head Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Mr. Zachary Bevilacqua</td>
<td></td>
</tr>
<tr>
<td>Zachary W. Bevilacqua, MS, Megan E. Huibregtse, BS, Angela Wirsching, MS, Zhongxue Chen, PhD, Keisuke Kawata, PhD</td>
<td></td>
</tr>
<tr>
<td>School of Public Health, Indiana University, Bloomington, IN</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #296</th>
<th>MHSRS-18-1328</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MRI &amp; Tau PET for the Detection &amp; Longitudinal Tracking of mTBI Effects, Chronic Traumatic Encephalopathy, &amp; Their Differentiation from Alzheimer’s Disease</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Dr. Charles Bernick</td>
<td></td>
</tr>
<tr>
<td>Dawn Matthews, MS, MM¹, Randolf Andrews, MS¹, Ana ¹ Lukic, PhD², Virendra Mishra, PhD², Sarah Banks, PhD², Charles Bernick, MD²</td>
<td></td>
</tr>
<tr>
<td>¹ADMdx, Chicago, IL, ²Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #297</th>
<th>MHSRS-18-1373</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment of Monitoring Occupational Overpressure Exposure, Neurocognitive Performance &amp; Physiological Responses During Training: A Longitudinal Study</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: Ms. Meron Ghebremedhin</td>
<td></td>
</tr>
<tr>
<td>Meron Ghebremedhin, MS, Christina LaValle, MS, Alejandro Ramos, BS, Anthony Misistia, MS, Jonathan Salib, MS, Gary Kamimori, PhD</td>
<td></td>
</tr>
<tr>
<td>Walter Reed Army Institute of Research, Silver Spring, MD</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #298</th>
<th>MHSRS-18-1375</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinicopathological Evaluation of 15 OEF/OIF Veterans Exposed to Blast &amp; Impact Traumatic Brain Injury: A CENC &amp; VA-BU-CLF Case Series</strong></td>
<td></td>
</tr>
<tr>
<td>Presentation Author: ENS Patrick Kiernan</td>
<td></td>
</tr>
<tr>
<td>ENS Patrick T. Kiernan, BA¹,², Bobak Abdolmohammadi, BA², Lee E. Goldstein, MD, PhD², Bertrand R. Huber, MD, PhD¹,², Victor E. Alvarez, MD¹,², Thor D. Stein, MD, PhD¹,², Michael L. Alosco, PhD², Jesse Mez, MD, MS², Christopher J. Nowinski, PhD², Hannah Gardner, BA², Ian Mahar, PhD², Jonathan D. Cherry, PhD², Raymond Nicks, MS², Sarah Svirsky, BA², Audrey Hildebrandt, BA², David Kwasnik, BA², Carol A. Kubilus², Kerry A. Cormier, BA², Rebecca F. Mathias², Laney Evers, BA², Neil W. Kowall, MD¹,², Douglas I. Katz, MD², Brigid Dwyer, MD², Robert C. Cantu, MD², Robert A. Stern, PhD², Ann C. McKee, MD¹,²</td>
<td></td>
</tr>
<tr>
<td>¹Veterans Affairs Boston Healthcare System, Boston, MA, ²Boston University School of Medicine, Boston, MA, ³Midwestern University Arizona College of Osteopathic Medicine, Glendale, AZ</td>
<td></td>
</tr>
</tbody>
</table>
Poster Session I

MHSRS-18-1402 POSTER SESSION 1 - #299
[18F] AV-1451 Tauopathy PET Imaging & Plasma NF-L Levels in Veterans with Probable CTE
Presentation Author: Dr. Dara Dickstein
Dara L. Dickstein, PhD1,2, Jennifer A. Short, MSc3, Kristen Dams-O’Connor, PhD3, Andrew Knutsen, PhD2, Lale Kostakoglu, MD3, Karin Knesaurek, MD3, Dzung Pham, PhD2, Barry Jordan, MD4, Wayne Gordon, PhD5, Gregory Elder, MD3, Georgina Perez-Garcia, PhD3, Anna E. Tschielfy, PhDB, Richard M. McCarron1,2, PhDB, Stephen T. Ahlers, MD6, Elaine Peskind, MD7,8, Steven T. DeKosky, MD9, James R. Stone, MD PhD10, Jaj Blennow, MD PhD11, Henrik Zetterberg, MD PhD11, Mary Sano, PhD1,2,5, Patrick R. Hof, MD3, Sam Gandy, MD PhD3,5, Richard M. McCarron1,6, PhD6, Stephen T. Ahlers, MD6, Elaine Peskind, MD7,8, Steven T. DeKosky, MD9, James R. Stone, MD PhD10, Jaj Blennow, MD PhD11, Henrik Zetterberg, MD PhD11, Mary Sano, PhD1,2,5, Patrick R. Hof, MD3, Sam Gandy, MD PhD3,5
1Uniformed Services University of Health Sciences, Bethesda, MD, 2 Center for Neuroscience & Regenerative Medicine, Bethesda, MD, 3 Icahn School of Medicine at Mount Sinai, New York, NY, 4 Weill Medical College of Cornell University, New York, NY, 5 James J. Peters VA Medical Center, Bronx, NY, 6 Navy Medical Research Center, Bethesda, MD, 7 University of Washington, Seattle WA, 8 VA Northwest Network Mental Illness Research, Education, & Clinical Center, Seattle WA, 9 University of Florida, Gainesville, FL, 10 University of Virginia, Charlottesville, VA, 11 University of Gothenburg, Gothenburg, Sweden

MHSRS-18-1586 POSTER SESSION 1 - #300
Blast Exposure Accelerates Aging in Rats
Presentation Author: Dr. Peethambaran Arun
Peethambaran Arun, PhD, Franco Rossetti, PhD, Donna M. Wilder, MS, Sujith Sajja, PhD, Steve VanAlbert, BE, Ying Cheng, MD, Ying Wang, MD, Irene D. Gist, MS, Joseph B. Long, PhD Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1616 POSTER SESSION 1 - #301
Fast Running Tools for Modeling Repetitive Blast Loads, Body Responses & Personal Protection in Combat & Training
Presentation Author: Dr. Andrzej Przekwas
Andrzej Przekwas, PhD1, HT Garimella, PhD1, Tim Zehnbauer, MSc1, XG Tan, PhD2, ZJ Chen, PhD2, Reuben Kraft, PhD2, Raj K. Gupta, PhD2
1 CFD Research Corp., Huntsville, AL, 2 CFDRC, Naval Research Laboratory, Washington, DC, 3 Pennsylvania State University, University Park, PA, 4 USAMRMC, Fort Detrick, MD

MHSRS-18-1641 POSTER SESSION 1 - #302
Two Phase Head Response in Postmortem Human Surrogates Due to Various Short-Duration Overpressure Loading Conditions
Presentation Author: Alexander Iwaskiw
Alex Iwaskiw, Kyle Ott, Robert Armiger, Alexis Wickwire, Vanessa Alphonse, PhD, Liming Voo, Catherine Carneal, Andrew Merkle
The Johns Hopkins University Applied Physics Laboratory, Laurel, MD

MHSRS-18-1683 POSTER SESSION 1 - #303
The Performance Evaluation of Combat Helmets Under Blast Loading in the Shock Tube
Presentation Author: Dr. Maciej Skotak
Ryan M. Rattazzi1, Dhruv Patel1, Eren Alay, MS1, Maciej Skotak, PhD3, James Q. Zheng, PhD2, Virginia Halls2, Namas Chandra, PhD1
1 New Jersey Institute of Technology, Newark, NJ, 2 United States Army, Fort Belvoir, VA

MHSRS-18-1775 POSTER SESSION 1 - #304
Blast-Related Stress: Investigating the Relationship Between Experienced Blast Overpressure, Stress, & Negative Symptomologies
Presentation Author: Dr. Michael Egnoto
MJ Egnoto, PhD, W Carr, LA Riviere Walter Reed Army Institute of Research
MHSRS-18-1879  POSTER SESSION 1 - #305
The Development of Risk Curves for Blast-Related Neurological Deficits
Presentation Author: Dr. Timothy Walilko
Tim Walilko, PhD¹, Jason Bailes, PhD², Pam VanderVort, PhD³, Lindsey Hubert, PhD⁴, Laila Zai, PhD⁵, Josh Duckworth, MD⁶
¹Applied Research Associates, Littleton, CO, ²Camp Pendleton, CA, ³Virginia Tech, Blacksburg, VA, ⁴Kansas State University Manhattan, KS, ⁵Lucent, Parker, CO, ⁶Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1940  POSTER SESSION 1 - #306
Evidence for Chronic Axonal Injury Caused by Repetitive Blast in a Mouse Model of Mild Traumatic Brain Injury
Presentation Author: Dr. Joachim Spiess
Joachim Spiess, PhD, MD¹,², Palamadai N. Venkatasubramanian, Ph.D³, Juan C. Pina-Crespo, PhD, VDM⁴, Amanda Roberts, PhD⁵, Guillermina Garcia², Kiran Mathews⁶, Paul Rigby, PhD⁷, Matthew Smith⁸, CDR Josh L. Duckworth, MD⁹, Alice M. Wynicz, PhD¹⁰
¹Cortrop Incorporated, Encinitas, CA, ²Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, ³Northshore University Healthsystem, Evanston, IL, ⁴The Scripps Research Institute, La Jolla, CA, ⁵L3 Applied Technologies, San Diego, CA, ⁶Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1957  POSTER SESSION 1 - #307
Magnetic Resonance Spectroscopy of Brain Injury in the Military Veterans & Retired NFL Athletes
Presentation Author: 2LT Joshua Ladner
2LT Joshua R. Ladner¹,², Huijun Liao², Kristin Heaton PhD³, Inga Koerte⁴, Martha Shenton⁵, Robert Stern, PhD⁶, Alexander P. Lin, PhD²
¹Harvard Medical School, Boston, MA, ²Brigham & Women’s Hospital, Boston, MA, ³US Army Research Institute of Environmental Medicine, Natick, MA, ⁴Boston University School of Medicine, Boston, MA

MHSRS-18-2124 - POSTER SESSION 1 - #309
Longitudinal Changes in Cortical Thickness Associated with Military mTBI: A CENC Study
Presentation Author: Dr. Nicholas Davenport
Nicholas Davenport, PhD, James Gullickson, BA
Minneapolis VA Health Care System, Minneapolis, MN & University of Minnesota, Minneapolis, MN

MHSRS-18-2134  POSTER SESSION 1 - #310
Development of an Effective Primary Passive Screening Process to Identify Individuals at Risk of Blast Exposure Vulnerability: Gauging Ambulation in Training (GAIT)
Presentation Author: Dr. Rohan Banton
Rohan Banton, PhD¹, Josh Duckworth², Chris Rhea³, Richard Bauman², Fabio Leonessa²
¹US Army Research Laboratory, Aberdeen Proving Ground, MD, ²Uniformed Services University of the Health Sciences, MD, ³University of North Carolina, Greensboro, NC

MHSRS-18-2140  POSTER SESSION 1 - #311
Computational Model Development to Capture Primary & Reduced Secondary Shock Wave Impact on A Surrogate Head Model
Presentation Author: Dr. Rohan Banton
Rohan Banton, PhD¹, Thuvan Piehler¹, Nicole Zander¹, Randy Mrozek², Richard Benjamin¹, Josh Duckworth²
¹US Army Research Laboratory, Aberdeen Proving Ground, MD, ²Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-2163 - POSTER SESSION 1 - #312
INvestigating training assoCIated blast pathology over time in service members exposed to repeated sub-Concussive Blast Events: A Proposal for the INVICTA-II longitudinal study
Presentation Author: CDR Josh Duckworth
Eric B. Schneider¹,², Christy L. Ventura¹, Fabio Leonessa¹, CDR Josh L. Duckworth³
¹University of Virginia School of Medicine, Charlottesville, VA, ²Johns Hopkins University School of Medicine, Baltimore, MD, ³Uniformed Services University of the Health Sciences, Bethesda, MD
**ADVANCES IN TREATMENT FOR ACUTE RADIATION SYNDROME**

**MHSRS-18-0031**  **POSTER SESSION 1 - #313**

**Treatment & Prevention of Chemical & Radiation Poisoning**

Presentation Author: Dr. Sanjay Awasthi  
Sanjay Awasthi, MD, Sharda Singh, PhD  
Texas Tech University Health Sciences Center, Lubbock, TX

**MHSRS-18-0360**  **POSTER SESSION 1 - #314**

**Biomarkers & Multiparametric Biodosimetry After Mixed-Field (Neutron & Gamma) & Pure Gamma Radiation Exposure**

Presentation Author: HM2 Mohammed Ismail  
HM2 Mohammed Ismail, AS, Kevin Heiber, MS, Katya Krasnopolsky, BS, Paul Stanton, MS, Arpitha Doreswamy, MS, Natalia Ossetrova, PhD

**MHSRS-18-0481**  **POSTER SESSION 1 - #315**

**Ketone Ester, (R)-3-Hydroxybutyl (R)-3-Hydroxybutyrate, A Novel Radiation Medical Countermeasure: In Vitro & In Vivo Studies**

Presentation Author: Dr. Alexandra Miller  
AC Miller,3, V Grijl2, R Rivas3, L Tesoro1, V Villa1, R McMahon1, D Yanushkevich1, P Pavolic3, G Kovalenko3, N Kozaric3, V Riley3, R Pawloski4; R Veech2  
1Uniformed Services University of Health Sciences Bethesda, MD, 2Columbia University, New York, NY, 3New York University School of Medicine, New York, NY, 4National Institutes of Health, Rockville, MD

**MHSRS-18-0574**  **POSTER SESSION 1 - #316**

**Temporal Trajectory of microRNA Expression Patterns in Response to Lethal Radiation Dose in Mouse Model**

Presentation Author: Mr. Nabarun Chakraborty  
Nabarun Chakraborty, MS, MBA1, Raina Kumar, MS2, Dana Hamad, BS2, George Dimitrov, MS2, Aarti Gautam, PhD4, Rasha Hammamieh, PhD4, Vidiya P Kumar, PhD5, Sanchita P Ghosh, PhD5  
1The Geneva Foundation, US Army Center for Environmental Health Research, Fort Detrick, MD, 2ABCC, Fredrick National Lab for Cancer Research, Fort Detrick, MD, 3ORISE, US Army Center for Environmental Health Research, Fort Detrick, MD, 4US Army Center for Environmental Health Research, Fort Detrick, MD, 5Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-0576**  **POSTER SESSION 1 - #317**

**Cross-Talk Among Different Tissues at the Genome-Epigenome Levels in Response to Lethal Radiation Dose: A Two Strain Minipig Model**

Presentation Author: Mr. Nabarun Chakraborty  
Nabarun Chakraborty, MS, MBA1, Raina Kumar, MS2, Allison Hoke, MS3, Dana Hamad, BS3, Bintu Sowe, BS3, Aarti Gautam, PhD4, Rasha Hammamieh, PhD4, Maria Moroni, PhD5  
1The Geneva Foundation, US Army Center for Environmental Health Research, Fort Detrick, MD, 2ABCC, Fredrick National Lab for Cancer Research, Leidos Biomed, Inc, Fort Detrick, MD, 3ORISE, US Army Center for Environmental Health Research, Fort Detrick, MD, 4US Army Center for Environmental Health Research, Fort Detrick, MD, 5Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-0681**  **POSTER SESSION 1 - #318**

**Measuring Human RNA Biomarkers in Saliva for Prediction of Health Effects in Radiological/Nuclear Scenarios**

Presentation Author: MAJ Patrick Ostheim  
MAJ Patrick Ostheim, MD1, Aleš Tichy, PharmD, PhD2, Alzbeta Zavelova, MD1, Matthias Port, MD1, Michael Abend, MD1  
1Bundeswehr Institute of Radiobiology, Munich, Germany, 2University of Defence in Brno, Czech Republic, 3University Hospital, Hradec Kralove, Czech Republic
<table>
<thead>
<tr>
<th>Poster Session 1 - #319</th>
<th>Developing of Diagnostic Tools for Rapid &amp; Deployable Triage of Radiation Casualties Combining Results from Animal Experiments &amp; Human Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0682</td>
<td>Presentation Author: COL Matthias Port</td>
</tr>
<tr>
<td></td>
<td>COL Matthias Port, PhD, Michael Abend, PhD</td>
</tr>
<tr>
<td></td>
<td>Bundeswehr Institute of Radiobiology affiliated to the University of Ulm, Munich, Germany</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #320</th>
<th>Transcriptomic Analysis of the Effects of Lethal &amp; Non-Lethal Doses of Ionizing Radiation on Mouse Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0707</td>
<td>Presentation Author: Dr. Duncan Donohue</td>
</tr>
<tr>
<td></td>
<td>Duncan E. Donohue, PhD1,2, Matthew Kobe4, Aarti Gautam4, Nabarun Chakraborty1,2, Stacy-Ann Miller1,2, Dean S. Rosenthal2, Lauren T. Moffatt2, Jeffrey W. Shupp2, Marti Jett4, Abdulnaser Alkalil3, John L. Clifford2, Rasha Hammamieh2</td>
</tr>
<tr>
<td></td>
<td>1US Army Center for Environmental Health Research, Fort Detrick, MD, 2The Geneva Foundation, Fort Detrick, MD, 3Washington Hospital Center, MedStar Research Institute, Washington, DC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #321</th>
<th>The Use of Myoblasts to Determine Long Term Effects of Radiation Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0725</td>
<td>Presentation Author: Dr. Tracy Criswell</td>
</tr>
<tr>
<td></td>
<td>Yu Zhou, PhD, Hailey Premo, Shay Soker, PhD, Tracy Criswell, PhD</td>
</tr>
<tr>
<td></td>
<td>Wake Forest Baptist Medical Center, Winston-Salem, NC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #322</th>
<th>Identification of an Epigenomic Signature of Trace Neutron &amp; Alpha Particle Radiation Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0879</td>
<td>Presentation Author: LTC Robert McMahon</td>
</tr>
<tr>
<td></td>
<td>AC Miller1,2, V Grilj2, R McMahon1, R Rivas3, V Villa1, L Tesoro1, D Yanushkevich1, P Pavolic3, G Kovalenko3, N Kozaric3, V Riley2, G Garty2, D Brenner2</td>
</tr>
<tr>
<td></td>
<td>1Uniformed Services University of Health Sciences, Bethesda, MD, 2Columbia University, New York, NY, 3New York University School of Medicine, New York, NY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #323</th>
<th>Temporal &amp; Spatial Quantification of Tissue Oxygen Saturation &amp; Melanin Deposition During Whole Breast Radiation Using Spatial Frequency Domain Imaging (SFDI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1682</td>
<td>Presentation Author: Dr. Gordon Kennedy</td>
</tr>
<tr>
<td></td>
<td>Anaïs Leproux, PhD2, Randy Wei, MD1, Jeffrey Kuo, MD1, Parima Daroui, MD PhD1, Nilam Ramsinghani, MD1, Muthana Al-Ghazi, PhD1, Gordon T Kennedy, PhD1, Anthony J Durkin, PhD1, Bruce J Tromberg, PhD1 1University of California, Irvine, CA, 2Memorial Radiation Oncology Medical Group, Fountain Valley, CA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #324</th>
<th>TLR4 Inhibition Alleviates IR-Induced Intestinal Injury &amp; Underlying Sepsis in C/EBPδ-Deficient Mice</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1803</td>
<td>Presentation Author: Dr. Sudip Banerjee</td>
</tr>
<tr>
<td></td>
<td>Sudip Banerjee, PhD1, Qiang Fu, MD, PhD1, Sumit Shah, MBBS, MPH1, Stepan Melnyk B, PhD2, Martin Hauer-Jensen, MD, PhD1, Snehalata Pawar, A, PhD1 1College of Pharmacy, University of Arkansas for Medical Sciences, Little Rock, AR, 2Arkansas Children’s Hospital Research Institute, Little Rock, AR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #325</th>
<th>Cebpd is Essential for Gamma-Tocotrienol Mediated Protection Against Radiation-Induced Hematopoietic &amp; Intestinal Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1864</td>
<td>Presentation Author: Dr. Snehalata Pawar</td>
</tr>
<tr>
<td></td>
<td>Sudip Banerjee PhD1, Sumit Shah MBBS, MPH1, Stepan B. Melnyk PhD2, Martin Hauer-Jensen MD, PhD1 1College of Pharmacy, University of Arkansas for Medical Sciences, Little Rock, AR, 2Arkansas Children’s Hospital Research Institute, Little Rock, AR</td>
</tr>
</tbody>
</table>
Poster Session I

MHSRS-18-2103  POSTER SESSION 1 - #326
Prostaglandin E2 Given Before Lethal Radiation Exposure Protects Against Late Thymic Dysfunction & Immunesuppression in Survivors
Presentation Author: Dr. Tong Wu
Tong Wu, MD, Artur Plett, PhD, Hui Lin Chua, PhD, Louis M. Pelus PhD, Christie M. Orschell, PhD
Indiana University School of Medicine, Indianapolis, IN

PSYCHOLOGICAL HEALTH & RESILIENCE

MHSRS-18-0162  POSTER SESSION 1 - #327
Strengthening Health & Improving Emotional Defenses
Presentation Author: Dr. Seth Elkin-Frankston
Seth Elkin-Frankston, PhD, James Niehaus, PhD, Arthur Wolloco, BA Charles River Analytics, Cambridge, MA

MHSRS-18-0204  POSTER SESSION 1 - #328
Implementing Psychological Health Data: How the Psychological Health Center of Excellence (PHCoE) Translates Data into Research, Policy, & Practice
Presentation Author: Dr. Melissa Waitsman
Melissa Waitsman, PhD, Zachary Peters, MPH, CAPT Carrie Kennedy, US Navy, PhD
Psychological Health Center of Excellence, Silver Spring, MD

MHSRS-18-0211  POSTER SESSION 1 - #329
Pre-Deployment Stress Management Training & US Soldier Adaptation in Afghanistan
Presentation Author: Dr. Coleen Crouch
Coleen L. Crouch, PhD, Dennis McGurk, PhD, Amy B. Adler, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-0324  POSTER SESSION 1 - #330
Self-Reported Resilience, Somatization, Health, & Health Biomarkers Among a Sample of US Military Active Duty & Veterans
Presentation Author: Dr. Valerie Rice
Valerie J. Rice, PhD, Paul J. Schroeder, PhD
1Army Research Laboratory, Fort Sam Houston, TX, 2DCS Corp, Alexandria, VA

MHSRS-18-0421  POSTER SESSION 1 - #331
An Approach to Monitoring the Quality & Effectiveness of Military Service Combat & Operational Stress Control (COSC) Programs
Presentation Author: Dr. Ilene Klein
Ilene Klein, PhD, Monique Moore, PhD, Janice Patterson, MPH, Christian Evans, MA, Denise Cooper, PhD, Peter Hanke, MA, MDiv, Michelle Tsai, PsyD, Mark Bates, PhD
Defense Health Agency, Silver Spring, MD.

MHSRS-18-0445  POSTER SESSION 1 - #332
Performance Differences on Cognitive Assessment of Two Different Naval Special Warfare Rates: Pilot Data to Suggest the Importance of Assessment Specificity when Evaluating Different Naval Occupations
Presentation Author: Mr. Dale Bergquist-Turori
Dale Bergquist-Turori, MS1, Karen R. Kelly, PhD2
1Leidos, San Diego, CA, 2Naval Health Research Center, San Diego, CA
MHSRS-18-0504  POSTER SESSION 1 - #333
Developing Tobacco Control Interventions Across the Lifespan of Military Personnel: Training Phase
Presentation Author: Dr. Melissa Little
Melissa A. Little, PhD1, Gerald W. Talcott2, PhD, Jon O. Ebbert, MD2, Timothy McMurry, PhD3, Xin Qun Wang, MS3, Ann S. Hryshko-Mullen4, Robert C. Klesges, PhD3
1University of Virginia, Lackland Air Force Base, TX, 2Mayo Clinic, Rochester, MN, 3University of Virginia, Charlottesville, VA, 4Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio- Lackland Air Force Base, TX

MHSRS-18-0599  POSTER SESSION 1 - #334
Soldier Attitudes Toward Behavioral Health Profiles in One US Army Brigade Combat Team
Presentation Author: MAJ Justin Curley
MAJ Justin Curley, MD, Jennifer McDonald, PhD, Katie Nugent, PhD, Kristina Clarke-Walper, MPH, Elizabeth Penix, BA, Lyndon Riviere, PhD, Paul Kim, MPH, Joshua Wilk, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

OPEN  POSTER SESSION 1 - #335

MHSRS-18-0813  POSTER SESSION 1 - #336
Mental Skills Training Enhances Warfighter Performance During Intensive Training
Presentation Author: Dr. Jason Jameson
Jason T. Jameson, PhD1, Karen R. Kelly, PhD2
1Leidos, Inc, San Diego, CA, 2Naval Health Research Center, San Diego, CA

MHSRS-18-0834  POSTER SESSION 1 - #337
Dendritic Morphology of Neurons in the Limbic System Following Social Isolation as Mediated by the Effects of Age & Enriched Environment
Presentation Author: LT Neal McNeal
LT Neal McNeal, PhD1, Natalee Hite, BA2, Mckensy Hudson2, Ashley Dagner, BS3, Miranda Cox3, Blessy Johnson, BS3, Michael J. Hylin, PhD2, Angela J. Gritto, PhD3
1Naval Medical Research Unit San Antonio, Joint Base San Antonio Fort Sam Houston, TX, 2Southern Illinois University, Carbondale, IL, 3Northern Illinois University, DeKalb, IL

MHSRS-18-0871  POSTER SESSION 1 - #338
Early Accession Prediction of Receiving Mental Health Diagnoses During Military Service
Presentation Author: Dr. Diane Williams
Diane Williams, PhD1, Hannah Kwiatkowski2
1Naval Health Research Center, San Diego, CA, 2Leidos, San Diego, CA

MHSRS-18-0920  POSTER SESSION 1 - #339
NORTH STAR: Light Touch, Multi-pronged Prevention
Presentation Author: Dr. Amy Slep
Amy M. Smith Slep, PhD, Richard E. Heyman, PhD, J. Mark Eddy, PhD, Michael F. Lorber, PhD
New York University, New York, NY

MHSRS-18-0968  POSTER SESSION 1 - #340
Stability of Psychosocial Attributes & Health Behaviors in the Army
Presentation Author: Mrs. Jessica Kegel
Jessica Kegel1, Josh Kazman2, Patricia Deuster2
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD
MHSRS-18-1059  POSTER SESSION 1 - #341
A Comprehensive Assessment of Aggression & Behavioral Health Symptomology Among Active Duty Soldiers
Presentation Author: Ms. Sarah Hinman
Sarah J. Hinman, Caitlin Porter, Jeffrey M. Osgood, Phillip J. Quartana
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1299  POSTER SESSION 1 - #342
Sleep is a Robust Mediator of Combat Exposure on Health Related Behaviors
Presentation Author: CPT Jeffrey Osgood
CPT Jeffrey M. Osgood, PhD¹, Patrick H. Finan, PhD², Sarah J. Hinman, BS¹, Christine J. So, MA¹, Phillip J. Quartana, PhD¹ ¹Walter Reed Army Institute of Research, Silver Spring, MD, ²Johns Hopkins University School of Medicine, Baltimore, MD

MHSRS-18-1374  POSTER SESSION 1 - #343
Smoking & Health in Combat Soldiers During the Deployment Cycle
Presentation Author: Dr. Alexa Lopez
Alexa Lopez, PhD¹, Alexxa Bessey, MPS², Julie Merrill, MA¹, MAJ Walter Sowden, PhD² ¹US Army Medical Research Directorate-West, Joint Base Lewis-McChord, WA, ²Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1459  POSTER SESSION 1 - #344
Return to Duty Practices of Army Behavioral Health Providers in Garrison
Presentation Author: Dr. Coleen Crouch
Coleen Crouch, PhD, MAJ Justin M. Curley, MD, CPT Jamie T. Carreno, PhD, Joshua E. Wilk, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1460  POSTER SESSION 1 - #345
Patterns of Acute Stress Disorder & the Impact of Neuropsychiatric Symptoms in a Sample of Blast-Injured Military Service Members: A Latent Profile Analysis
Presentation Author: Dr. Casey Straud
Casey Straud, PsyD¹, Willie Hale, PhD², John Moring, PhD³, Jose Lara-Ruiz, MA¹,², Richard A. Bryant, PhD³, Lt Col Monty T. Baker, PhD⁴, Jeffery Cigrang, PhD⁵, Col William Isler, PhD⁴, Stacey Young-McCaughan, RN, PhD⁴, Alan L. Peterson, PhD¹,², STRONG STAR Consortium ¹University of Texas Health Science Center at San Antonio, San Antonio, TX, ²University of Texas at San Antonio, San Antonio, TX, ³University of New South Wales, Sydney, Australia, ⁴Wilford Hall Ambulatory Surgical Center, Lackland Air Force Base, TX, ⁵Wright State University, Dayton, OH, ⁶South Texas Veterans Health Care System, San Antonio, TX

MHSRS-18-1475  POSTER SESSION 1 - #346
Longitudinal Association Between Stress-Related Mental Health Difficulties & Attentional Deficits in Active Duty Military
Presentation Author: Dr. Richard Servatius
Richard J. Servatius, PhD¹, Justin D. Handy, PhD¹, Michael J. Doria, PhD², W. Geoffrey Wright, PhD³, Jack W. Tsao, PhD⁴ ¹Syracuse VA Medical Center, Syracuse, NY, ²United States Coast Guard, Washington, DC, ³Temple University, Philadelphia, PA, ⁴Memphis VA Medical Center, Memphis, TN

MHSRS-18-1480  POSTER SESSION 1 - #347
Longitudinal Association Between Stress-Related Mental Health Difficulties & Attentional Deficits in Active Duty Military
Presentation Author: Dr. Richard Servatius
Syracuse VA Medical Center, Syracuse, NY

MHSRS-18-1529  POSTER SESSION 1 - #348
Burnout Among Military Family Physicians
Presentation Author: CPT Bianca Howard
CPT Bianca J. Howard, MD¹, George W. Clement, MD¹, Lloyd A. Runser, MD¹, Juliana S. Ee, PhD¹, Briana M. Lindberg, MD¹, Matthew S. Hing, MD², Melissa M. Roberts, MD¹ ¹Womack Army Medical Center, Fort Bragg, NC, ²Novant Health Family Medicine Residency, Charlotte, NC
MHSRS-18-1553  POSTER SESSION 1 - #349
Building Resilience via Heart Rate Variability Biofeedback in the Reserve Component: Evaluation of a Mobile Technology Combined with a Portable Heart Rate Monitor
Presentation Author: Dr. Maria Davila
Maria Davila, PhD\textsuperscript{1}, Paul Kizakevich, MS\textsuperscript{2}, Randy Eckhoff, BS\textsuperscript{2}, Gregory Lewis, PhD\textsuperscript{3}, Laurel Hourani, PhD\textsuperscript{2}
\textsuperscript{1}University of North Carolina, Chapel Hill, NC, \textsuperscript{2}RTI International, Durham, NC, \textsuperscript{3}Indiana University, Bloomington, IN

MHSRS-18-1574  POSTER SESSION 1 - #350
The Relationship Between Ethical Leadership, Psychological Safety, & Attitudes Related to Performance
Presentation Author: Ms. Alexxa Bessey
Alexxa Bessey, MS\textsuperscript{1}, Janna Mantua, PhD\textsuperscript{1}, Tobin Thomas\textsuperscript{2}, Walter Sowden, PhD\textsuperscript{1}
\textsuperscript{1}Walter Reed Army Institute of Research, Silver Spring, MD, \textsuperscript{2}Medical Research Directorate West, Tacoma, WA

MHSRS-18-1612  POSTER SESSION 1 - #351
The Physiology of Positive Psychology: Heart Rate Variability, Posttraumatic Growth, & Coping Styles in the Military
Presentation Author: Dr. Jessica Morgan
Jessica Kelley Morgan, PhD\textsuperscript{1}, Laurel L. Hourani, PhD, MPH\textsuperscript{1}, Marian E. Lane, PhD\textsuperscript{1}, Timothy Morgan\textsuperscript{1}, Maria Davila, PhD\textsuperscript{2} \textsuperscript{1}RTI International, Research Triangle Park, NC, \textsuperscript{2}University of North Carolina, Chapel Hill, NC

MHSRS-18-1615  POSTER SESSION 1 - #352
BART - A Mobile Application for Improving Psychological Resilience via Self-Administered Paced Breathing & Heart Rate Variability Biofeedback
Presentation Author: Mr. Paul Kizakevich
Paul N. Kizakevich\textsuperscript{1}, Maria Davila\textsuperscript{2}, Randy Eckhoff\textsuperscript{3}, Greg Lewis\textsuperscript{4}, Rebecca Watkins\textsuperscript{1}, Matt Boyce\textsuperscript{1}, Laurel Hourani\textsuperscript{1}
\textsuperscript{1}University of North Carolina, Chapel Hill, NC, \textsuperscript{2}RTI International, Durham, NC, \textsuperscript{3}Indiana University, Bloomington, IN

MHSRS-18-1630  POSTER SESSION 1 - #353
HRV Biofeedback as a Resilience Building Intervention in the Reserve Component
Presentation Author: Dr. Laurel Hourani
Laurel Hourani, PhD\textsuperscript{1}, Sree Meleth, PhD\textsuperscript{1}, Paul Kizakevich, MS\textsuperscript{1}, Randy Eckhoff, MS\textsuperscript{1}, Jess Morgan, PhD\textsuperscript{1}, Tim Morgan, MA\textsuperscript{1}, Belinda Weimer, MA\textsuperscript{1}, Marion Lane, PhD\textsuperscript{1}, Derek Ramirez, MS\textsuperscript{1}, Maria Davila Hernandez, PhD\textsuperscript{2}
\textsuperscript{1}RTI International, Durham, NC, \textsuperscript{2}University of North Carolina at Chapel Hill, Chapel Hill, NC

MHSRS-18-1820  POSTER SESSION 1 - #354
Calibrating the Audit-C for Detecting Alcohol Misuse Among Male US Army Soldiers
Presentation Author: Dr. Farifteh Duffy
Farifteh F. Duffy, PhD, Lyndon A. Riviere, PhD, Joshua E. Wilk, PhD, Amy Adler, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1825  POSTER SESSION 1 - #355
Religiosity & Support for the Use of Enhanced Interrogation
Presentation Author: CDR Stuart Hitchcock
Naval Medical Center Portsmouth, Portsmouth, VA

MHSRS-18-1983  POSTER SESSION 1 - #356
Social Support Networks of Vietnam Veterans: A Typology of Relations
Presentation Author: Lt Col Sarah Huffman
Sarah Huffman, PhD\textsuperscript{1}, Neil Grunberg, PhD\textsuperscript{2}, David Schaefer, PhD\textsuperscript{3}, Laura Taylor, PhD\textsuperscript{4}, Patrick DeLeon, PhD\textsuperscript{5}, Christine Kasper, PhD\textsuperscript{6}
\textsuperscript{1}88th MDG Wright Patterson AFB, \textsuperscript{2}Dayton, OH, \textsuperscript{3}Uniformed Services University, Bethesda, MD, \textsuperscript{4}The University of California, Irvine, CA, \textsuperscript{5}Uniformed Services University, Bethesda, MD, \textsuperscript{6}Uniformed Services University, Bethesda, MD
THE HEALTH & READINESS OF MILITARY FAMILIES

MHSRS-18-0035  POSTER SESSION 1 - #357
The Impact of Family Well-Being on the Service Member's Reasons for Leaving the Military
Presentation Author: Mrs. Kelly Woodall
Kelly Woodall, MPH1, Teresa Powell, MS1, Valerie Stander, PhD2, Millennium Cohort Family Study Team 1Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Deployment Health Research Department, Naval Health Research Center, San Diego, CA

MHSRS-18-0046  POSTER SESSION 1 - #358
Presentation Author: Mrs. Kerri-Ann Welch
Kerri-Ann Welch, FHEA, Vivienne Tippett, PhD, Ian Shochett, PhD
Queensland University of Technology, Brisbane, Queensland, Australia

MHSRS-18-0056  POSTER SESSION 1 - #359
Factors Impacting Case Management Services for Military Families
Presentation Author: Ms. Robyn Martin
Renee Dell’Acqua, MPH(c)1, Shannon Fitzmaurice, MPH1, Robyn Martin, MPH1, CDR Abigail Yablonsky, PhD2 1Leidos, San Diego, CA, 2Naval Health Research Center, San Diego, CA

MHSRS-18-0057  POSTER SESSION 1 - #360
Presentation Author: Dr. Sabrina Richardson
Sabrina Richardson, PhD1, Kelly A. Woodall1, Jaqueline C. Pflieger1, Lyndon Riviere2, Valerie A. Stander3 1Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Walter Reed Army Institute of Research, Silver Spring, MD, 3Naval Health Research Center, San Diego, CA

MHSRS-18-0109  POSTER SESSION 1 - #361
The Influence of Family Stressors on the Satisfaction of Male & Female Service Members
Presentation Author: Ms. Towanda Street
Towanda Street1, Amy Lewin1, Kelly Woodall2, Valerie Stander3 1University of Maryland, College Park, MD, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 3Naval Health Research Center, San Diego, CA

MHSRS-18-0374  POSTER SESSION 1 - #362
Male Soldiers’ Attitudes toward Women
Presentation Author: Dr. Cristóbal Berry-Cabán
Cristóbal S. Berry-Cabán, PhD1, Lindsay M. Orchoowski, PhD2, Michele Wimsatt, MS1, Tremaine Winstead, MA1, Donna Kazemi, PhD3 1Womack Army Medical Center, Fort Bragg, NC, 2Alpert Medical School of Brown University, RI, 3University of North Carolina at Charlotte, Charlotte, NC

MHSRS-18-0466  POSTER SESSION 1 - #363
Children's Sleep Issues After a Parent is Seriously Injured
Presentation Author: CPT Saira Ahmed
CPT Saira Ahmed, MD1, Apryl Susi, MS2,3, CAPT Gregory H. Gorman, MD1, Elizabeth J. Hisle-Gorman, MSW, PhD2,3 1Pediatrics, National Capital Consortium, Bethesda, MD, 2,3Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2Uniformed Services University, Bethesda, MD
<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#364</th>
<th>Helping High School Aged Military Dependents with ASD Gain Employment Skills Through Project SEARCH Plus ASD Supports at Fort Eustis</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0605</td>
<td></td>
<td>Presentation Author: Dr. Carol Schall Carol Schall, PhD, Holly Whittenburg, MEd, Jennifer McDonough, MS Virginia Commonwealth University, Richmond, VA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#365</th>
<th>“I See What You’re Saying” Using Art Therapy to Enhance Communication &amp; Resiliency with Military Service Members &amp; Their Spouses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-0637</td>
<td></td>
<td>Presentation Author: Ms. Gayla Elliott Gayla Elliott MA, ATR(^2), Suzanne Martin PsyD, ABPP(^1,3) (^1)Naval Medical Center Camp Lejeune, Camp Lejeune, NC, (^2)National Endowment for the Arts, Washington, DC, (^3)Defense &amp; Veterans Brain Injury Center, Fort Bragg, NC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#366</th>
<th>Supporting Parents of Injured Service Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1100</td>
<td></td>
<td>Presentation Author: Dr. Jennifer Martindale-Adams Jennifer Martindale-Adams, EdD, MS(^1,2), Jeffrey Zuber(^1,2), Marshall Graney(^2), Robert Burns(^1), Linda O. Nichols(^1,2) (^1)University of Tennessee Health Science Center, Memphis, TN, (^2)Memphis Veterans Affairs Medical Center, Memphis, TN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#367</th>
<th>Core Competencies of Supporting Military Families on the Home Front – Everyone in the Family Serves</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1244</td>
<td></td>
<td>Presentation Author: Col Mona Pearl Treyball Col Mona Pearl Treyball, PhD, RN, CNS, CCRN-K, FAAN University of Colorado, Aurora, CO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#368</th>
<th>Financial Hardship &amp; Health Among Soldiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1400</td>
<td></td>
<td>Presentation Author: Dr. Lyndon Riviere Lyndon A. Rivier, PhD, Farifteh F. Duffy, PhD, Paul Y. Kim, MA Walter Reed Army Institute of Research, Silver Spring, MD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#369</th>
<th>Competency-Based Family Therapy with Military Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1446</td>
<td></td>
<td>Presentation Author: Dr. Sebastian Perumbilly Southern Connecticut State University, New Haven, CT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#370</th>
<th>Integrating Soldier’s Heart Transformational Model (SHTM) in Couple &amp; Family Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1452</td>
<td></td>
<td>Presentation Author: Dr. Sebastian Perumbilly Southern Connecticut State University, New Haven, CT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#371</th>
<th>Drinking Behavior &amp; Motives Among Military-Connected Couples: Findings from the SERVe Daily Family Study of Post-9/11 Active &amp; Separated Service Members &amp; Their Spouses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1512</td>
<td></td>
<td>Presentation Author: Mr. James Lee James Lee, BA(^1), Cynthia Mohr, PhD(^1), Leslie Hammer, PhD(^1,2) (^1)Portland State University, Portland, OR, (^2)Oregon Health &amp; Science University, Portland, OR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1</th>
<th>#372</th>
<th>Mental Health Trends in Military-Connected Children &amp; Adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHSRS-18-1513</td>
<td></td>
<td>Presentation Author: Dr. Elizabeth Hisle-Gorman Elizabeth Hisle-Gorman, MSW, PhD(^1), Apryl Susi, MS(^2) &amp; Gregory H. Gorman, MD, MHS(^1,2) (^1)Uniformed Services University, Bethesda, MD, (^2)Walter Reed National Military Medical Center, Bethesda, MD</td>
</tr>
</tbody>
</table>
**MHSRS-18-1605**  **POSTER SESSION 1 - #373**

**Strengthening Military Families – Lesbian, Gay, & Bisexual Couples in the Military: A Post-DADT Examination of Relationship Health, Perceived Community Acceptance, & Mission Readiness**

Presentation Author: Dr. Jeff Cigrang
Jeff Cigrang, PhD, Christina Balderamma-Durbin, PhD, Amy Slep, PhD, Rick Heyman, PhD, Doug Snyder, PhD, Kristin Lindahl, PhD, Maj Jordan Simonson, USAF, Capt Michael Ann Glotfeller, USAF, Kelsey Lorko, BS, Danielle Mitnick, PhD

1Wright State University, Dayton, OH, 2Binghamton University (SUNY), Binghamton, NY, 3New York University, New York, NY, 4Texas A&M University, College Station, TX, 5University of Miami, Coral Gables, FL, 6HQ Air Force Personnel Center, San Antonio, TX, 788th Medical Group, Dayton, OH

**MHSRS-18-1745**  **POSTER SESSION 1 - #374**

**A Decade of Research Evidence About Military Families: Trends, Patterns, & Gaps in the Literature**

Presentation Author: Dr. Stacy Ann Hawkins
Stacy Ann Hawkins, PhD, Yxsel Melendrez Ramirez, Jackson Tolins, Jacob N. Hawkins, Marisa M. Nihill, Kristine Liu, Anne Condon
Army Analytics Group, Monterey, CA

**MHSRS-18-1766**  **POSTER SESSION 1 - #375**

**Recommendations for Facilitating Cross-National Transfer of Research & Learning in the Field of Wellbeing of Children from Military Families: An Integrative Review of Measures Assessing the Wellbeing of Children from Military Families**

Presentation Author: Dr. Antje Buehler
CMMH, GAF

**MHSRS-18-1768**  **POSTER SESSION 1 - #376**

**Risk & Resilience Factors for Mental Health of Children from German Military Families**

Presentation Author: Dr. Antje Buehler
E Wimmer, MS, A Buehler, L Thurn, M Guile, K. Cunitz, GW Willmund, P Zimmermann, JM Fegert, M Kölich, U Ziegenhain, K Mörtl

1Sigmund Freud Institute Wien, 2CMMH, GAF, 3University Ulm, University Clinic Ulm, Child & Youth Psychiatry

**MHSRS-18-1812**  **POSTER SESSION 1 - #377**

**Building Healthy Military Communities: Results from a Rapid Needs Assessment of Pilot Sites**

Presentation Author: Dr. Salvatore Libretto
Salvatore Libretto, PhD, Ashleigh Simon, MPH, CPH, Sheryl Hoehner, MS, RDN, LDN, CAPT Kimberly Elenberg, Patricia Deuster, PhD

1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Office of the Under Secretary of Defense for Personnel & Readiness/Force Resilience/Personnel Risk Reduction, Arlington, VA

**MHSRS-18-1912**  **POSTER SESSION 1 - #378**

**Correlates of PostTraumatic Growth in Spouses of US Service Members Deployed to Iraq or Afghanistan**

Presentation Author: Dr. Andrea Warner Stidham
Andrea Warner Stidham, PhD, MSN, RN
Kent State University, Kent, OH

**MHSRS-18-1977**  **POSTER SESSION 1 - #379**

**Lessons Learned in the Development of a Mobile App for Military Adolescents to Promote Resilience**

Presentation Author: Dr. Kathryn Puskar
Kathryn Puskar, DrPH, Ran Sun, MSN, Xinxuan Cao, MSN, Ann Gleeson, MS, Debbie Nichols, Naveen Khan, BA

1School of Nursing, University of Pittsburgh, Pittsburgh, PA, 2University of Pittsburgh, Pittsburgh, PA, 3Military Children’s Collaborative Group, Huntington Beach, CA, 4PTPAL, Altadena, LA
Gender, Family of Origin Experiences, & Current Romantic Relationship Functioning in Entry-Level Military Couples

Presentation Author: Dr. Jeffrey Cigrang

Jeff Cigrang, PhD, Nichole Kuck, PsyM, Abigail Ngayan, PsyM, Courtney Yahle, BA, Christina Balderamma-Durbin, PhD, Danielle Mitnick, PhD, Lt Col Elizabeth Najera, Doug Snyder, PhD, Amy Slep, PhD, Rick Heyman, PhD
1Wright State University, Dayton, OH, 2SUNY Binghamton University, New York, NY, 3New York University, New York, NY, 4Keesler AFB, MS, 5Texas A&M University, College Station, TX

Evaluation of a Brief Marriage Intervention for Internal Behavioral Health Consultants in Military Primary Care

Presentation Author: Capt Abby Fields

Fields, Abby D., PhD, Fedynich, Ashley, MA, Maher, Emily, MA, Kessler-Walker, Dawn, PhD, Weiss, Andrea, PhD, Kilgore, Ashley, MA, Cordova, James, PhD, & Cigrang, Jeffery, PhD
1Wilford Hall Ambulatory Surgical Center, JBSA Lackland, TX, 2Wright State University, Dayton, OH, 3Clark University, Worcester, MA, 4Malcolm Grow Medical Clinics & Surgery Center, JB Andrews, MD

Family Caregiver Needs at One Year Post-Traumatic Brain Injury: A VA TBI Model Systems Study

Presentation Author: Dr. Jacob Finn

Jacob A. Finn, PhD, Lillian Flores Stevens, PhD, Risa Nakase-Richardson, PhD, Bridget Cotner, PhD, Susan Ropacki, PhD, Mary Jo Pugh, PhD, Margaret Wells, MA, Austin Smith, BA, Angelle Sander, PhD, Jeff Kreutzer, PhD, Therese O'Neill-Pirozzi, PhD, Laura Dreer, PhD
1Minneapolis VA HealthCare System, Minneapolis, MN, 2Hunter Holmes McGuire VA Medical Center, Richmond, VA, 3James A. Haley VA Medical Center, Tampa, FL, 4Palo Alto VA Medical Center, Palo Alto, CA, 5University of Utah, Salt Lake City, UT, 6San Antonio VA Medical Center, San Antonio, TX, 7TIRR Memorial Hermann Rehabilitation Center, Houston, TX, 8Virginia Commonwealth University, Richmond, VA, 9Spaulding Rehabilitation Network, Boston, MA, 10University of Alabama Birmingham, Birmingham, AL

“Military Family” in Policy: Comparing Meaning Across the United States, United Kingdom, Canada, & Australia

Presentation Author: Dr. Heidi Cramm

Heidi Cramm, PhD, Rachael Gribble, PhD, Alyson Mahar, PhD, Kelli Muir, PhD, Stewart Muir, PhD, Galina Daraganova, PhD, David Albright, PhD, Nicola Fear, DPhil
1Queen’s University, Kingston, ON, Canada, 2King’s College London, London, UK, 3University of Manitoba, Winnipeg, MB, Canada, 4University of Alabama, Tuscaloosa, AL, 5Australian Institute of Family Studies, Melbourne, Australia

Novel Products for Lessening the Impacts of Neurological Trauma & PTSD

Presentation Author: Dr. Philip Davis

Military-Tailored Yoga for Veterans with Post-Traumatic Stress Disorder

Presentation Author: MAJ Robin Cushing

MAJ Robin Cushing, MPAS, DrPH, Kathryn Braun, DrPH, Alan Katz, MD, MPH, Susan Alden, C-IAYT, 1st Infantry Division, Fort Riley, KS, 2University of Hawai’i at Manoa, Honolulu, HI, 3Warriors At Ease, Kailua, HI
MHSRS-18-0065  POSTER SESSION 1 - #386  
**Interpersonal Psychotherapy for Treatment of Post Deployment-Related Depression: A Case Report**  
Presentation Author: Dr. Colleen Becket-Davenport  
Colleen Becket-Davenport, PsyD, Kathryn Bleiberg, PhD, JoAnn Difede, PhD  
New York Presbyterian-Weill Cornell Medicine, New York, NY

MHSRS-18-0101  POSTER SESSION 1 - #387  
**DBT Lite: Adapting the DBT Model to an Active Duty Military Environment**  
Presentation Author: Dr. Tim Hoyt  
Sarah J. McCreight, PhD1, Carol S. Campbell, LMHC1, Daniella M. Preece, PsyD2, Tim Hoyt, PhD3  
1Madigan Army Medical Center, Tacoma, WA, 23rd Brigade Combat Team, 10th Mountain Division, 3Defense Health Agency, Tacoma, WA

MHSRS-18-0167  POSTER SESSION 1 - #388  
**OPEN**

MHSRS-18-0178  POSTER SESSION 1 - #389  
**Shifting the Paradigm in PTSD Treatment: Warrior Care Network Intensive Outpatient Programs**  
Presentation Author: Dr. Sheila Rauch  
Sheila A.M. Rauch, PhD1,2, Mike Richardson3, Barbara O. Rothbaum3, Roger Brooks3, Alyson Zalta3, Jo Sormberger3, Margaret Harvey6, Mike Brennan6, Rebecca VanHorn4  
1Emory University School of Medicine, Atlanta, GA, 2Atlanta VA Healthcare System, Atlanta, GA, 3Wounded Warrior Project, Jacksonville, FL, 4Rush University, Chicago, IL, 5University of California Los Angeles, Los Angeles, CA, 6Massachusetts General Hospital, Boston, MA

MHSRS-18-0185  POSTER SESSION 1 - #390  
**From Bench to Battlefield: The Psychological Health Center of Excellence’s (PHCoE’s) Knowledge Translation Activities**  
Presentation Author: MAJ Aimee Ruscio  
Carrie Kennedy, PhD, Kate McGraw, PhD, Julie Chodacki, PsyD, Jorielle Houston, PhD, MAJ Aimee Ruscio, PhD, Marjorie Campbell, PhD, Angela Williams, PsyD, Jennifer Bell, MD  
Psychological Health Center of Excellence, Silver Spring, MD

MHSRS-18-0216  POSTER SESSION 1 - #391  
**Developing & Testing a Web-Based Knowledge Dissemination Tool on Post-Traumatic Stress: Increasing Primary Care Providers Knowledge, Treatment, & Referral Practices for the Military & Veteran Community**  
Presentation Author: Dr. Christopher Spera  
Christopher Spera, PhD1, Nida Corry2, Lauren Olsho3, Kelly Lack3, Chris Flygare3  
1Abt Associates, Bethesda, MD, 2Abt Associates, Durham, NC, 3Abt Associates, Cambridge, MA

MHSRS-18-0220  POSTER SESSION 1 - #392  
**Hypertension in Military Veterans is Associated with Combat Exposure & Injury**  
Presentation Author: Dr. Jeffrey Howard  
Jeffrey T. Howard, PhD1, Richard F. Armenta, PhD3, MPH, Ian J. Stewart, MD3, Claire Kolaja, MPH2, Jonathan A. Sosnov, MD2, Rudolph Rull, PhD2, Jud C. Janak, PhD1, Lauren E. Walker, MSW2, Daniel W. Trone, PhD2  
1Department of Defense Joint Trauma System, Joint Base San Antonio-Fort Sam Houston, TX, 2The Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 3David Grant USAF Medical Center, Travis AFB, CA, 4San Antonio Military Medical Center, Joint Base San Antonio-Fort Sam Houston, TX, 5Deployment Health Research Department, Naval Health Research Center, San Diego, CA

MHSRS-18-0281  POSTER SESSION 1 - #393  
**PTSD, Other Psychological Health Diagnoses, & Multimorbid Physical Health Conditions**  
Presentation Author: Dr. Marjorie Campbell  
Marjorie Campbell, PhD1,2, Abigail Garvey Wilson, PhD, MPH1,3, Jean Otto, DrPH, MPH3,2, Bradley Belsher, PhD1,2, Daniel Evatt, PhD1,2  
1Psychological Health Center of Excellence, Silver Spring, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3George Washington University, Washington, DC
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

Poster Session I

MHSRS-18-0337 - POSTER SESSION 1 - #394
A Novel Orally Active Triple Reuptake Inhibitor for the Treatment of Post-Traumatic Stress Disorder (PTSD): D-578 Attenuates Abnormal Fear Behavior in a Rodent Model of Traumatic Stress
Presentation Author: Mr. Frank Bymaster
Frank P. Bymaster¹, Timothy Hsu¹, Michael Lisieski²,³, Arman Harutyunyan²,³, Banibrata Das³, Israel Liberzon⁴, Maarten Reith⁵, Shane A. Perrine⁶, Alok K. Dutta¹,³
¹TRImaran Pharma Inc, Nashua, NH, ²Wayne State University School of Medicine, Detroit, MI, ³Wayne State University, Detroit, MI, ⁴University of Michigan, Ann Arbor, MI, ⁵New York University, New York, NY

OPEN

MHSRS-18-0449 - POSTER SESSION 1 - #395
The Reconsolidation of Traumatic Memories Protocol (RTM) for PTSD: Treating Trauma Quickly, Robustly, & Safely
Presentation Author: Dr. Richard Gray
Richard M. Gray, PhD, Frank Bourke, PhD The Research & Recognition Project, Inc, Corning, NY

MHSRS-18-0545 - POSTER SESSION 1 - #397
Cannabidiol Versus Placebo Treatment for PTSD & Chronic Pain in Military Subjects
Presentation Author: Dr. Eric Hollander
E. Hollander¹, B. Logan², V. Nezgovo rova³, M. Zola³, V. Weedman²
¹Albert Einstein College of Medicine, Bronx, NY, ²United States Army Medical Department Activity of the 101st Airborne Division, Fort Campbell, KY

MHSRS-18-0588 - POSTER SESSION 1 - #398
Periodontal Disease & Bruxism in Posttraumatic Stress Disorder: A Case Control Study
Presentation Author: MAJ Felix Woerner
MAJ Felix Woerner, DMD¹, Thomas Eger, DMD², Jutta Gohr, DMD¹,², Roger Braas, MD¹, Anne Wolowski, DMD, PhD²
¹German Armed Forces Central Hospital Coblenz, Coblenz, Germany, ²German Armed Forces Medical Support Center Wilhelmshaven, Wilhelmshaven, Germany, ³University of Muenster, Muenster, Germany

OPEN

MHSRS-18-0730 - POSTER SESSION 1 - #400
Development of an Interfering Peptide for the Prevention & Treatment of PTSD
Presentation Author: Dr. Fang Liu

MHSRS-18-0735 - POSTER SESSION 1 - #401
Deployed Military Medics: Impact of Combat & Healthcare Trauma Exposure
Presentation Author: Mr. Brian Moore
Brian Moore¹,², Alan L. Peterson, PhD¹,³, Monty T. Baker, PhD⁴, Brian A. Moore, MA¹,², Willie J. Hale, PhD¹,², Jeremy S. Joseph, PhD¹, Casey L. Straud, PsyD¹, Cynthia L. Lancaster, PhD⁵, Richard J. McNally, PhD⁵, William C. Isler, PhD⁴, Brett T. Litz, PhD⁷,⁸, Jim Mintz, PhD¹
¹University of Texas Health Science Center at San Antonio, San Antonio, TX, ²University of Texas at San Antonio, San Antonio, TX, ³South Texas Veterans Health Care System, San Antonio, TX, ⁴Wilford Hall Ambulatory Surgical Center, San Antonio, TX, ⁵University of Nevada Reno, Reno, NV, ⁶Harvard University, Cambridge, MA, ⁷VA Boston Healthcare System, Boston, MA, ⁸Boston University, Boston, MA

MHSRS-18-0736 - POSTER SESSION 1 - #402
Riluzole for PTSD: Efficacy of a Glutamatergic Modulator as Augmentation Treatment for Combat-Related Posttraumatic Stress Disorder
Presentation Author: Dr. Catherine Dempsey
Catherine L. Dempsey PhD¹, David M. Benedek, MD¹, Patricia T. Spangler, PhD¹, James C. West, MD¹, Kyle Possemato, PhD², Shannon McKenzie BA²
¹Uniformed Services University, Bethesda, MD, ²Syracuse VA Medical Center, Syracuse, NY
MHSRS-18-0800  POSTER SESSION 1 - #403
Differential Expression of Inflammatory Genes Across Tissue & Time in Response to Traumatic Stress in Mice
Presentation Author: Mr. Ross Campbell
Ross Campbell1, Aarti Gautam2, Allison Hoke3, Seid Muhie3, Rasha Hammamieh2, Marti Jett2
1Advanced Biomedical Computing Center, Frederick, MD, 2US Army Center for Environmental Health Research, Fort Detrick, MD, 3Geneva Foundation, Fort Detrick, MD

MHSRS-18-0895  POSTER SESSION 1 - #404
Sub-Anesthetic Intravenous Ketamine Infusion Enhanced Fear Memory & Brain Glucose Metabolism (18F-FDG PET) in Sprague-Dawley Rats
Presentation Author: CDR Kennett Radford
CDR Kennett D. Radford, PhD, CRNA1, Thomas Y. Park, BA1, Shalini Jaiswal, MS1, Andrew Knutsen, PhD1, Lisa A. Osborne-Smith, PhD, CRNA2, Bernard J. Dardzinski, PhD1, Kwang H. Choi, PhD1 1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Oregon Health & Science University, Portland, OR

MHSRS-18-0898 - POSTER SESSION 1 - #405
The Role of Exercise in the Treatment of PTSD
Presentation Author: Dr. Stacey Young-McCaughan
Stacey Young-McCaughan, RN, PhD1, Alan L. Peterson, PhD, ABPP1,2, Jim Mintz, PhD3,4, Willkie Hale, PhD1,3, STRONG STAR Consortium
1University of Texas Health Science Center at San Antonio, San Antonio, TX, 2South Texas Veterans Health Care System, San Antonio, TX, 3University of Texas at San Antonio, San Antonio, TX

MHSRS-18-0904  POSTER SESSION 1 - #406
Modulation of Associative Learning & Reflexive Behavior Depends on Timing of Administration of the Fatty Acid Amide Hydrolase (FAAH) Inhibitor URB597
Presentation Author: Dr. Emily Lowery-Gionta
E. Lowery-Gionta, PhD, L. Simmons, M. Etuma, E. Bergman, N. Moore
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-0949  POSTER SESSION 1 - #407
Reflexive, Exploratory, & Learning Behavior Characterization of Nociceptin/Orphanin FQ (NOP) Receptor Antagonists in a Rodent Model of Traumatic Stress
Presentation Author: Dr. Rachel Taylor
Rachel Taylor, PhD, Isaac Jeong, BS, Matthew May, MS, Matthew Ventura, BS, Nicole Moore, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-0978  POSTER SESSION 1 - #408
Association of N-Acetylaspartate Concentration in Anterior Cingulate & Amygdala with Treatment Response to Riluzole Augmentation for Posttraumatic Stress Disorder
Presentation Author: David Benedek
Patricia T. Spangler3, Jason Cole4, James C. West4, Catherine L. Dempsey4, Brian Andrews-Shigaki4, Gail H. Kohls3, COL David M. Benedek1
1Uniformed Services University, Bethesda, MD, 2Office of Naval Research, Arlington, VA, 3Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1024  POSTER SESSION 1 - #409
Impact of Antipsychotic Versus Non-Antipsychotic Medications to Augment First-Line PTSD Medications in Returning Iraq & Afghanistan Veterans: A National VA Data Study
Presentation Author: Dr. Beth Cohen
Beth E. Cohen, MD, MAS1,2, Janet Tang, PhD1,2, Anne Woods, MS1,2, Shira Maguen, PhD1,2, Karen Seal, MD MPH1,2, Nancy Bernardy, PhD3,4, Ilse Wiechers, MD, MPP, MHS3, Thomas Neylan, MD1,2
1San Francisco VA Medical Center, CA, 2University of California, San Francisco, CA, 3National Center for PTSD, White River Junction VA, VT, 4Geisel School of Medicine at Dartmouth, Hanover, NH, 5Palo Alto VA Health Care System, CA
MHSRS-18-1027  POSTER SESSION 1 - #410
A Retrospective Comparative Effectiveness Study of Medications for Posttraumatic Stress Disorder in Routine Practice
Presentation Author: Dr. Brian Shiner
Brian Shiner, MD, MPH1,2, Christine Leonard Westgate, MS1, Jiang Gui, PhD2, Shira Maguen, PhD3,4, Yinong Young-Xu, ScD, MA, MS2,5, Paula P. Schnurr, PhD2,6, Bradley V. Watts, MD, MPH2,5
1Veterans Affairs Medical Center, White River Junction, VT, 2Geisel School of Medicine at Dartmouth, Hanover, NH, 3Veterans Affairs Medical Center, San Francisco, CA, 4University of California, San Francisco, CA, 5National Center for Patient Safety, White River Junction, VT, 6National Center for Posttraumatic Stress Disorder, White River Junction, VT

MHSRS-18-1089  POSTER SESSION 1 - #411
Evaluation of Neuroendocrine Function & Long-Term Health Outcomes in Service Members Treated at the CRCC
Presentation Author: Mr. Jonathan Statz
Jonathan K. Statz, MS1,3, Stephanie L. Ciarlone, PhD1,3, Jessica A. Goodrich, BA1,3, Richard M. McCarron, PhD1,2, Anna E. Tschiffely, PhD1
1Naval Medical Research Center, Silver Spring, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD

MHSRS-18-1090  POSTER SESSION 1 - #412
Transcranial Direct Current Stimulation (tDCS) Paired with a Cognitive Task Reduces Impulsivity in a Clinical Population of Veterans
Presentation Author: Dr. Casey Gilmore
Casey S. Gilmore, PhD1,2, Patricia J. Dickmann, MD2,3, Greg J. Lamberty, PhD2,3, Kelvin O. Lim, MD1,3
1Defense & Veterans Brain Injury Center, Minneapolis, MN, 2Minneapolis VA Health Care System, Minneapolis, MN, 3University of Minnesota, Minneapolis, MN

MHSRS-18-1136  POSTER SESSION 1 - #413
SCFA as a Potential Mechanism of the Gut-Brain Axis Connection
Presentation Author: Dr. Katherine Bates
Katherine Bates, PhD, Amanda Elliott, Kaitlyn Enright, Latisha Jefferies, PhD
United States Air Force Academy, Colorado Springs, CO

MHSRS-18-1161  POSTER SESSION 1 - #414
Challenges in Implementing a Clinical Trial Using a First-In-Class Medication Targeted to Treat PTSD
Presentation Author: Dr. JoAnn Difede
JoAnn Difede, PhD1, Andrew McAleavey, PhD1, Adina Jick1, Katarzyna Wyka, PhD1, Michael Brownstein, PhD, MD2, Eve Damiano, MS, RAC2, Neal Simon, PhD2
1Weill Cornell Medicine, New York, NY, 2Azevan Pharmaceuticals, Bethlehem, PA

MHSRS-18-1183  POSTER SESSION 1 - #415
WAAVES+: A Fast & Accurate Automated Ultrasonic Vocalization (USV) Scoring Program
Presentation Author: Dr. Ryan Snyder
Ryan Snyder, PhD1, Kristophaber, Christine L. Duvauchelle, PhD2, W. Todd Maddox, PhD1, Nitish Mittal, PhD2, Catalina Cervantes, PhD2, Jaxon Bailey2
1Cornerstone Research Group, Miamisburg, OH, 2University of Texas, Austin, TX, 3Cognitive Design & Statistical Consulting, Austin, TX

MHSRS-18-1234  POSTER SESSION 1 - #416
Recruiting Service Members for Studies of Posttraumatic Stress Disorder Treatments: Experiences from a Randomized Controlled Trial of Stellate Ganglion Block
Presentation Author: Kristine Rae Olmsted
Samantha Charm, MPH, Kristine L. Rae Olmsted, MSPH, Jessica Kelley Morgan, PhD, Russ Vandermaas-Peeler, MS, Bradford B. Walters, MD, PhD
RTI International, Research Triangle Park, NC
MHSRS-18-1357  POSTER SESSION 1 - #417
Enhancing Exposure Therapy for PTSD: Virtual Reality & Imaginal Exposure with a Cognitive Enhancer
Presentation Author: JoAnn Difede
JoAnn Difede, PhD1, Barbara Rothbaum, PhD2, Christopher Reist, MD3, Michael Roy, MD, MPH4, Francis Lee, MD, PhD1, Katarzyna Wyka, PhD1, Lisa Spielman, PhD1, Judith Cukor, PhD1, Tanya Jovanic, PhD2, Seth Norholm, PhD2, Albert “Skip” Rizzo, PhD5 1Weill Cornell Medicine, New York, NY, 2Emory University, Atlanta, GA, 3VA Long Beach Healthcare System, Long Beach, CA, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of Southern California, Playa Vista, CA

MHSRS-18-1428  POSTER SESSION 1 - #419
Enhancing Massed-Prolonged Exposure for Combat PTSD: A Case Report
Presentation Author: Dr. Casey Straud
Casey Straud, PsyD1, Tabatha Blount1, Edna Foa2, Carmen McLean3, Lily Brown2, Richard Schobitz4, & Alan Peterson1,5,6 1University of Texas Health Science Center at San Antonio, San Antonio, TX, 2University of Pennsylvania, Philadelphia, PA, 3VA Palo Alto Health Care System, Menlo Park, CA, 4Brooke Army Medical Center, Joint Base San Antonio-Fort Sam Houston, San Antonio, TX, 5South Texas Veterans Health Care System, San Antonio, TX, 6University of Texas at San Antonio, San Antonio, TX

MHSRS-18-1433  POSTER SESSION 1 - #420
Clinical Perspectives on Working with Military Service Members
Presentation Author: Dr. Sebastian Perumbilly
Southern Connecticut State University, New Haven, CT

MHSRS-18-1486  POSTER SESSION 1 - #421
Post-Traumatic Stress Disorder is Associated with Further Increased Parkinson’s Disease Risk in Veterans with Traumatic Brain Injury
Presentation Author: Dr. Donna White
Donna L. White, PhD, MPH, Mark Kunik, MD, MPH, Hong Yu1, Helen Kim, Peter Richardson, Ricardo Jorge, MD Michael E. DeBakey VA Medical Center, Houston, TX & Baylor College of Medicine, Houston, TX

MHSRS-18-1528  POSTER SESSION 1 - #422
Gene Expression Changes & Cerebral Autonomic Markers Associated with Recovery in an Interdisciplinary Integrative Care Model for Service Members with Combat related Traumatic Brain Injury & Post-Traumatic Stress Disorder
Presentation Author: Dr. Thomas DeGraba
Thomas DeGraba, MD1, Herbert Benson, MD2, Robert Koffman, MD1, Donna Neuges, MD1, Manoj Bhasin, PhD3 1Walter Reed National Military Medical Center, Bethesda, MD, 2Harvard Medical School, Boston, MA, 3Beth Israel Deaconess Medical Center, Boston, MA

MHSRS-18-1536  POSTER SESSION 1 - #423
Post-Traumatic Stress Disorder is Associated with Reduced Prefrontal Alpha-Band Activity During Working Memory in Patients with a History of Mild Traumatic Brain Injury
Presentation Author: Dr. Thomas DeGraba
Thomas DeGraba, MD, Mihai Popescu, PhD, Andra Popescu, David Fernandez-Fidalgo, John Hughes Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1550  POSTER SESSION 1 - #424
PTSD susceptibility & challenges: Pathophysiological consequences of Behavioral symptoms
Presentation Author: Dr. Mulugu Brahmajothi
Mulugu V. Brahmajothi, PhD1, Mohamed B Abou-Donia, PhD2 1Duke University Medical Center, Durham, NC, 2Duke Institute for Brain Science, Durham, NC
OPEN

POSTER SESSION 1 - #425

MHSRS-18-1620 POSTER SESSION 1 - #426
Effectiveness of the DROP Study Pilot: Initial Results from an Army Behavioral Health Provider Training Targeting Therapeutic Alliance & Premature Therapy Dropout
Presentation Author: Dr. Katie Nugent
Katie L. Nugent, PhD,1,2 Kristina M. Clarke-Walper, MPH,3 James B. Macdonald, PhD,3 Elizabeth A. Penix, BA,1 Kelly Woolaway Bickel, PhD,3 Tari A. Rangel,1,3 Ranilo M. Laygo, PhD,3 Joshua E. Wilk, PhD,3
1Walter Reed Army Institute of Research, Silver Spring, MD, 2TechWerks, Arlington, VA, 3Office of the Surgeon General of the Army, Fort Sam Houston, San Antonio, TX

MHSRS-18-1625 POSTER SESSION 1 - #427
A Novel NMDA Receptor Modulator, NYX-783, Shows Therapeutic Potential as a Treatment for PTSD & TBI
Presentation Author: Dr. Joseph Moskal
EM Colechio, L Cacheaux, K Leaderbrand, JS Burgdorf, AL Gross, M Schmidt, RA Kroes, MA Khan, CN Cearley, TM Madsen, JR Moskal
Northwestern University, Evanston, IL

MHSRS-18-1970 POSTER SESSION 1 - #428
Differential Treatment Effects of a Sublingual Formulation of Cyclobenzaprine (TNX-102 SL*) on Dissociative Symptoms of Derealization & Depersonalization in a Military-Related PTSD Population: Retrospective Analysis of a Double-Blind Randomized Study
Presentation Author: Dr. Gregory Sullivan
Gregory Sullivan, MD,1 R Michael Gendreau, MD, PhD,2 Judy Gendreau, MD,2 Ashild Peters, RN,2 Perry Peters,3 Amy Forst,3 Jean Engels, MS,3 Seth Lederman, MD,3
1Tonix Pharmaceuticals, Inc, New York, NY, 2Gendreau Consulting, Poway, CA, 3Engels Statistical Consulting LLC, Minneapolis, MN

MHSRS-18-1739 POSTER SESSION 1 - #429
Effectiveness of a Mindfulness-Based Group Therapy (MBGT) Integrative Restoration (iREST) for Active Duty Personnel with Mild Traumatic Brain Injury (mTBI) in an Outpatient Clinic
Presentation Author: Mrs. Tabitha Alverio
Tabitha Alverio, MA, Ralph Arnold, DMin, EdD, LPCS, Angela Sutherland, MPH, Suzanne G. Martin, PsyD, MPH
University of North Carolina at Charlotte, Charlotte, NC

MHSRS-18-2041 POSTER SESSION 1 - #430
Vagus Nerve Stimulation Accelerates Extinction, Generalizes Extinction, & Reduces PTSD Symptoms in Rats
Presentation Author: Dr. Lindsey Noble
Lindsey Noble, PhD, Venkat Meruva, Ashleigh Chuah, Kathleen Callahan, Christa McIntyre, PhD
The University of Texas at Dallas, Richardson, TX

MHSRS-18-1853 POSTER SESSION 1 - #431
Service Dog Training in the National Capital Region: A 5-Year Retrospective Review
Presentation Author: Ms. Jerika Taylor
Taylor, Jerika1,4, Roddy, Will1,4, Nordstrom, Michelle1,4, Olanrewaju, Christine1,4, Daugherty, Stephanie1,4, Hagen, Erin1,4, Isaaco, Bradi1,4, Pasquina, Paul1,4, Pascale, Blaise1,4
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2The Center for Rehabilitation Sciences Research, Bethesda, MD, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-2121 POSTER SESSION 1 - #432
Neurophysiology of Anger in PTSD
Presentation Author: Dr. Stanley Smerin
Stanley E. Smerin, PhD, He Li, MD PhD
Uniformed Services University of the Health Sciences, Bethesda, MD
Poster Session I

**MHSRS-18-1875**  **POSTER SESSION 1 - #433**

**A Novel Resiliency Training Program for Rehabilitation & Integration of Service Members with PTSD**

Presentation Author: COL Hemant Thakur

COL (Ret) Hemant Thakur, MD\(^1\), Olurinde Oni, MBBS, MPH\(^2\), Vikas Sharma, MD, MHSA\(^3\), Rishi Sharma, MD, MHSA\(^4\), Mukut Sharma, PhD\(^5\), Salwa Maalouf, MPH\(^6\), Douglas M. Burns, PhD\(^7\), Ram Sharma, PhD, MHSA\(^5\), Mary E. Oehlert, PhD\(^2\)

\(^1\)Veterans Affairs Medical Center, Kansas City, MO, \(^2\)Veterans Affairs Medical Center, Leavenworth, KS

**MHSRS-18-2174**  **POSTER SESSION 1 - #434**

**Self Reported Vestibular Symptoms & Vestibular Function in Veterans with Post Traumatic Stress Disorder**

Presentation Author: Dr. Jorge Serrador

MC Schubert\(^1\), Y Haber\(^1,2\), S Wood\(^3\), K. Brewer\(^1,2\), H Chandler\(^1\), JM Serrador\(^1,2\)

\(^1\)Department of Veteran Affairs, East Orange, NJ, \(^2\)Rutgers Biomedical Health Sciences, Newark, NJ, \(^3\)Johns Hopkins, Baltimore, MD, \(^4\)Azusa Pacific University, Azusa, CA

**MHSRS-18-1905**  **POSTER SESSION 1 - #435**


Presentation Author: Dr. Ian Holloway

Ian W Holloway\(^1\), Sheree M. Schrager\(^2\), Jeremy Goldbach\(^3\), Carl Castro\(^4\), Henry F Raymond\(^5\)

\(^1\)University of California Los Angeles, Los Angeles, CA, \(^2\)California State University, Northridge, CA, \(^3\)University of Southern California, CA, \(^4\)University of California San Francisco, San Francisco, CA

**MHSRS-18-1915**  **POSTER SESSION 1 - #436**

**Optimizing Vagus Nerve Stimulation Parameters to Potentiate Fear Extinction in Rats Exposed to Severe Trauma**

Presentation Author: Dr. Rimenez Rodrigues de Souza Rimenez R. Souza, PhD, Nicole M. Robertson, David T. Pruitt, PhD, Ezek Matthew, Michel Tabet, Phillip A. Gonzales, Seth A. Hays, PhD, Michael P. Kilgard, PhD, Christa K. McIntyre, PhD, Robert L. Rennaker, PhD

The University of Texas at Dallas, Richardson, Texas

**OPEN**  **POSTER SESSION 1 - #437**

**DISPARITIES IN PTSD RISK FACTORS & TREATMENT ACCESS, USAGE, & OUTCOMES. HOW CAN WE IMPROVE?**

**MHSRS-18-0100**  **POSTER SESSION 1 - #438**

**Predictors of PTSD Symptom Increase in Previously Deployed Military Service Members with Subsyndromal PTSD**

Presentation Author: Ms. Robyn McRoy

Robyn Highfill-McRoy, MA, MPH, CPH\(^1\), Jordan A. Levine, MPH\(^2\), Gerald E. Larson, PhD\(^3\), Sonya Norman, PhD\(^3\), Emily Schmied, PhD\(^1\), Cynthia J. Thomsen, PhD\(^2\)

\(^1\)Leidos, San Diego, CA, \(^2\)Naval Health Research Center, San Diego, CA, \(^3\)University of California San Diego, La Jolla, CA

**MHSRS-18-0491**  **POSTER SESSION 1 - #439**

**Neurobehavioral Indices Improve Early Mechanism Based Classification of Trauma Survivors**

Presentation Author: Ziv Ben-Zion

Ziv Ben-Zion\(^1,2\), Yoav Zeevi\(^3,4\), Nimrod Jakob Kenyan\(^1,4\), Roeve Admon\(^5\), Israel Liberzon\(^6\), Arieh Y. Shalev\(^5\), Yoav Benjamin\(^7,8\) & Talma Hendler\(^1,2,6,8\)

\(^1\)Sourasky Medical Center, Tel-Aviv, Israel, \(^2\)Sagol School of Neuroscience, Tel-Aviv University, Tel-Aviv, Israel, \(^3\)Tel-Aviv University, Tel-Aviv, Israel, \(^4\)School of Psychological Sciences, Tel-Aviv University, Tel-Aviv, Israel, \(^5\)University of Haifa, Haifa, Israel, \(^6\)University of Michigan, Ann Arbor, MI, \(^7\)NY Langone Medical Center, New York, NY, \(^8\)Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel
MHSRS-18-0742  POSTER SESSION 1 - #440
Demographic Predictors of Psychotherapy Utilization at VA Hospitals Among Veterans Diagnosed with PTSD: Who Gets an Adequate Dose?
Presentation Author: Dr. Samantha Moshier
Samantha Moshier, PhD1, Sarah E. Kleiman, PhD1,2, Hassen Abdulkerim, MS3, Michelle J. Bovin, PhD1,3, Alexandra Zax, BA4, Gabrielle M. Gauthier, BA5, Daniel Bertenthal, MPH6, Raymond C. Rosen, PhD6, Terence M. Keane, PhD1,3, Brian P. Marx, PhD1,3
1VA Boston Healthcare System, Boston, MA, 2Boston University School of Medicine, Boston, MA, 3National Center for PTSD, 4San Francisco VA Medical Center, San Francisco, CA, 5New England Research Institutes, Watertown, MA

MHSRS-18-1105  POSTER SESSION 1 - #441
Evacuation Time After Combat Injury- Does It Affect Development of PTSD?
Presentation Author: Dr. Matthew Noble
Matthew Noble, DO1, Lauren Walker, MSW1, Guillaume Hoareau, PhD, DVM1, Ian Stewart, MD1,2
1David Grant USAF Medical Center, Travis AFB, CA, 2Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1172  POSTER SESSION 1 - #442
Targeted Strategies to Accelerated Evidence-Based Psychotherapy Implementation in Military Settings
Presentation Author: Dr. Alan Peterson
Craig Rosen, PhD1,2, Alan Peterson, PhD3,4, David Riggs, PhD5,6, Stacey Young-McCaughan, RN, PhD7, Elisa Borah, PhD8, William Brim, PsyD7, Kate Comtois, MPH, PhD9, Jeffrey Cook, PsyD1, Adrian Davis, MA1, Katherine Dondanville, PsyD1, Erin Finley, PhD1, Allison Hancock, PhD1, Margaret-Anne Mackintosh, PhD1, Andrea Neitzer, MS1, Josef Ruzek, PhD1,3, Shannon Wittey-Stirman, PhD1,2, Carmen P McLean, PhD1,2
1National Center for PTSD, Menlo Park, CA, 2Stanford University, School of Medicine, Stanford, CA, 3Palo Alto University, Palo Alto, CA, 4University of Texas Health Science Center at San Antonio, San Antonio, TX, 5South Texas Veterans Health Care System, San Antonio, TX, 6University of Texas at San Antonio, San Antonio, TX, 7Uniformed Services University of the Health Sciences, Center for Deployment Psychology, Bethesda, MD, 8University of Texas at Austin, Austin, TX, 9University of Washington, Seattle, WA

MHSRS-18-1437  POSTER SESSION 1 - #443
How Effective is a Behavioral Health Clinician Registry at Mitigating Burnout in the VA, DoD, & Community? Results from the PTSD Clinicians Exchange
Presentation Author: Ms. Kristina Clarke-Walper
Kristina Clarke-Walper, MPH1, Elizabeth A. Penix, BA2, Felicia Trachtenberg, PhD2, Ashley Magnavita, MPH2, Erica Simon, PhD3,5, Julia Coleman, BA2, Samantha Regala, BS3,6, Kile Ortigo, PhD3,4, Josef I. Ruzek, PhD3,4, Raymond C. Rosen, PhD3,7, Joshua E. Wilk, PhD1
1Walter Reed Army Institute of Research, Silver Spring, MD, 2New England Research Institutes, Newton, MA, 3National Center for PTSD, Palo Alto, CA4, VA Palo Alto Health Care System, Palo Alto, CA, 6Palo Alto Veterans Institute for Research, Palo Alto, CA

MHSRS-18-1449  POSTER SESSION 1 - #444
Deployment-Related Increases in Sleep Disturbance & Post Traumatic Stress Mediate the Association between Combat Exposure Post-Deployment Anger & Aggression
Presentation Author: Ms. Caitlin Porter
Caitlin Porter, MS, Sarah Hinman, BA, Jeffrey Osgood, PhD, Phillip Quartana, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1801  POSTER SESSION 1 - #445
Disparities in Treatment Completion Among Individuals Receiving Prolonged Exposure & Virtual Reality Exposure Therapies for PTSD in Research Settings
Presentation Author: Dr. Katarzyna Wyka
Katarzyna Wyka, PhD, JoAnn Difede, PhD
Weill Cornell Medicine, New York, NY
Poster Session I

MHSRS-18-2083 POSTER SESSION I - #446
Gender & Race Differences in Deployment-Related Risk Factors Among Veterans with PTSD & Comorbid Substance Use Disorders
Presentation Author: Ms. Callah Davis
Callah M. Davis, BA, CJ Seitz-Brown, PhD, Christian Conley, BA, Isabel F. Augur, BS, Therese Kileen, PhD, Sudie E. Back, PhD
Medical University of South Carolina & Veterans Health Administration, Charleston, SC

MHSRS-18-2132 POSTER SESSION I - #447
Ethnoracial Differences in Treatment Outcomes for Co-Occurring PTSD & Substance Use Disorder Among OIF/OEF Veterans
Presentation Author: Mrs. Delisa Brown
Delisa Brown, MA1, Julanne Flanagan, PhD2, Therese Killeen, PhD2, Callah Davis, BA2, Sudie E. Back, PhD2
1Howard University, Washington, DC, 2Medical University of South Carolina, Charleston, SC

SUICIDE IN THE MILITARY: SURVEILLANCE, PREVENTION, & INTERVENTION

MHSRS-18-0267 POSTER SESSION I - #448
Presentation Author: Dr. Jennifer Tucker
Jennifer Tucker, PhD, Larry Pruitt, PhD Psychological Health Center of Excellence, Defense Health Agency, Silver Spring, MD

MHSRS-18-0036 POSTER SESSION I - #449
Use of Crisis Management Interventions Among Suicidal Patients: Results of a Randomized Controlled Trial
Presentation Author: Dr. Craig Bryan
Alexis M. May, David C. Rozek National Center for Veterans Studies, Salt Lake City, UT & The University of Utah, Salt Lake City, UT

MHSRS-18-0064 POSTER SESSION I - #450
Development of a Front-Line Leader Tool for Assessing Suicide Risk Factors
Presentation Author: Dr. Tim Hoyt
Tim Hoyt, PhD1, Diana Repke, PsyD2, David Barry, PhD2, Margaret Baisley, PhD2, Shellie Jervis, PsyD3, Ryan Black, LCSW3, Sarah McCreight, PhD2, Daniel Prendergast, PhD2, Chauncy Brinton, PsyD2, Rohul Amin, MD4
1Defense Health Agency, Tacoma, WA, 2Madigan Army Medical Center, Tacoma, WA, 31st Stryker Brigade Combat Team - 2nd Infantry Division, Tacoma, WA, 47th Infantry Division, Tacoma, WA

MHSRS-18-0249 POSTER SESSION I - #451
Suicide Mortality in Active-Duty Populations: A Within- & Between-Country Comparison
Presentation Author: Dr. Derek Smolenski
Derek J. Smolenski, PhD, MPH1, Elizabeth Rolland-Harris, PhD1, Kate Harrison, PhD2
1Department of Veterans Affairs Puget Sound Health Care System, Seattle, WA, 2Naval Health Research Center, San Diego, CA

MHSRS-18-1021 POSTER SESSION I - #452
Combat Experiences & Suicide Attempts in a Large US Military Cohort
Presentation Author: Ms. Cynthia LeardMann
Cynthia A. LeardMann, MPH1, Rayna Matsuno, PhD1, Edward J. Boyko, MD, MPH2, Teresa Powell, MS1, Dennis Faix, MD, MPH1, Charles W. Hoge, MD3
1The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc, Bethesda, MD, 2Department of Veterans Affairs Puget Sound Health Care System, Seattle, WA, 3Naval Health Research Center, San Diego, CA
**MHSRS-18-1438 POSTER SESSION 1 - #453**

The Association Between Aggression & Suicidal Behaviors in Substance Use Disorder Treatment Seeking Veterans

Presentation Author: Ms. Amanda Price
Amanda Price, MS1,2, Jennifer Olson-Madden, PhD3,4, Karson Stevenson, BS1, Mark Ilgen, PhD1,2
1University of Michigan- Michigan Medicine, Ann Arbor, MI, 2Veterans Administration Center for Clinical Management Research, Ann Arbor, MI, 3Rocky Mountain Mental Illness Research Education & Clinical Center, Denver, CO, 4University of Colorado Anschutz Medical Campus, Aurora, CO

**MHSRS-18-1764 POSTER SESSION 1 - #454**

Suicidality in German Armed Forces: Trends, Risk Factors & Actual Perspectives for Prevention

Presentation Author: MAJ Christian Helms
MAJ Christian Helms, GD Willmund, MD Center for Military Mental Health, Military Hospital Berlin, Berlin, Germany

**MHSRS-18-1903 POSTER SESSION 1 - #455**

Prevalence & Predictors of Suicidality Following Mild TBI

Presentation Author: Dr. Lauren Fisher
Lauren B. Fisher, PhD1, Stephanie Agtarap, PhD2, Sonia Jain, PhD2, Xiaoying Sun, MS2, Geoffrey T. Manley, MD, PhD2, Joseph T. Giacino, PhD4, Murray B. Stein, MD, MPH2,5, TRACK-TBI Investigators
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2University of California San Diego, La Jolla, CA, 3University of California San Francisco, San Francisco, CA, 4Spaulding Rehabilitation Hospital, Harvard Medical School, Boston, MA, 5VA San Diego Healthcare System, San Diego, CA

**MHSRS-18-2068 POSTER SESSION 1 - #456**

Military Service & Firefighting Service: An Investigation into the Effects of Military Service on Psychiatric Symptoms Experienced by US Firefighters

Presentation Author: Ms. Anna Gai
Anna R. Gai, MS, Ian H. Stanley, MS, Melanie A. Hom, MS, Thomas E. Joiner, PhD
Florida State University, Tallahassee, FL

**MHSRS-18-2133 POSTER SESSION 1 - #457**

Trained, ETS Sponsor & Veteran Support Organization Membership to Assist Transitioning Veterans: A Multi-Arm, Parallel Randomized Controlled Trial

Presentation Author: Lt Col Joseph Geraci
Lt Col Joseph Geraci, LMHC1,2, Caroline Angel, PhD4, Marianne Goodman, MD2, Nicholas Armstrong, PhD3, Gilly Cantor, MA2, George Bonanno, PhD4
1Teachers College, Columbia University, New York, NY, 2Department of Veterans Affairs, New York, NY, 3US Army, 4Team Red, White, & Blue, Tampa, FL, 5Syracuse University Institute for Veterans & Military Families, Syracuse, NY

**MHSRS-18-2155 POSTER SESSION 1 - #458**

Identifying Soldiers at Risk for Suicide & Specific Ways of Decreasing Risk

Presentation Author: Dr. Alexander Niculescu
Alexander B. Niculescu, MD, PhD1,2, Daniel F. Levey, PhD2, Helen Le Niculescu, PhD2, Scott A. Edwards, PhD3
1Indianapolis VA Medical Center, Indianapolis, IN, 2Indiana University School of Medicine, Indianapolis, IN, 3Indiana National Guard, Joint Forces Headquarters, Indianapolis, IN
INTEGRATING ‘OMICS INTO THE WARRIOR CARE TOOLBOX OF THE MILITARY HEALTH SYSTEM

MHSRS-18-0191 POSTER SESSION 1 - #459
A virome-wide approach for discovering new cancer viral etiologies
Presentation Author: Dr. Dawei Li

MHSRS-18-0250 POSTER SESSION 1 - #460
Parity of Patient & Provider Perceptions of Omics-Integrated Military Medicine
Presentation Author: Maj Cubby Gardner
Maj Cubby L. Gardner, USAF, PhD, FNP-C, Megan D. Maxwell, MS, LCPC, Rebecca L. Hsu, BA, Devan Petersen, MPH, Stacey Pereira, PhD, Jill O. Robinson, MA, Amy L. McGuire, JD, PhD, Robert C. Green, MD, MPH, MiSeq Project
159th Medical Wing, Joint Base San Antonio - Lackland AFB, TX, 2Brigham & Women’s Hospital, Boston, MA, 3Baylor College of Medicine, Houston, TX, 4Harvard Medical School, Boston, MA, 5Partners Personalized Medicine, Boston, MA, 6The Broad Institute of MIT & Harvard, Cambridge, MA

MHSRS-18-0312 POSTER SESSION 1 - #461
Provider Perspectives & Experiences with Genomic Sequencing in the Military Healthcare System: A Qualitative Study in Anticipation of Large-Scale Genomic Sequencing
Presentation Author: Ms. Lydia Hellwig
Lydia Hellwig, ScM, CGC, Suzanne O’Neill, PhD, Clesson Turner, MD
1The Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2The Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda, MD, 3Lombardi Comprehensive Cancer Center, Washington, DC

MHSRS-18-0316 POSTER SESSION 1 - #462
Precision Medicine in Clinical Cardiovascular Care: Implementation of a Multidisciplinary Cardiogenetics Clinic
Presentation Author: Ms. Lydia Hellwig
Lydia Hellwig, ScM, CGC, Clesson Turner, MD, Craig Dobson, MD, Autumn Mains, RN, Ayson Krokozsky, MS, CGC, Joseph May, MD, MPH, Dennis Shanta, RN, Mark Haigney, MD
1The Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2The Uniformed Services University of the Health Sciences, Bethesda, MD, 3Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-0703 POSTER SESSION 1 - #463
Data Agnostic Knowledge Exploration & Integration for the Identification of Chronic Neuropathic Pain Gene Networks from the Transcriptome Profile of Brain Regions
Presentation Author: Mrs. Raina Kumar
Raina Kumar, Ross Campbell, Aarti Gautam, George Dimitrov, Seshalalini Srinivasan, Dana Hamad, Natasha M. Sosanya, Bopaiha P. Cheppudira, Robert J. Christy, MAJ Stephen Crimmins, John L. Clifford, Rasha Hammanieh
1US Army Center for Environmental Health Research, Fort Detrick, MD, 2Leidos Biomed Inc, Fort Detrick, MD, 3US Army Institute of Surgical Research, Fort Sam Houston, TX, 4ORISE, US Army Center for Environmental Health Research, Fort Detrick, MD, 5Geneva Foundation, US Army Center for Environmental Health Research, Fort Detrick, MD

MHSRS-18-0721 POSTER SESSION 1 - #464
Proteomic Analysis of Inflammatory Biomarkers Associated with Breast Cancer Recurrence
Presentation Author: Dr. Meera Srivastava
Meera Srivastava, PhD, Alakesh Bera, PhD, Ofer Eidelman, PhD, Michael Eklund, MS, Matthew Hueman, MD, Harvey B. Pollard, MD, PhD, Hai Hu, PhD, Craig Shriver, MD
1Uniformed Services University Health Sciences, Bethesda, MD, 2Chan Soon Shiong Institute of Molecular Medicine, Windber, PA, 3Walter Reed National Military Medical Center, Bethesda, MD
**MHSRS-18-0726**  **POSTER SESSION 1 - #465**  
The John P. Murtha Cancer Center Clinical Proteomics Platform: Overview & Capabilities  
Presentation Author: Dr. Thomas Conrads  
Thomas Conrads, PhD, Nicholas W. Bateman, PhD, Brian L. Hood, PhD, Ming Zhou, PhD, Jeremy Loffredo, BS, Quisong Wang, MS, Niyati Parikh, PhD, Yovanni Casablanca MD, Chad Hamilton, MD, G. Larry Maxwell, MD, Craig Shriver, MD  
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center (WRNMMC), Annandale, VA, 2Inova Center for Personalized Health, Fairfax, VA, 3Inova Fairfax Medical Campus, Falls Church, VA, 4USUHS, Bethesda, MD, 5WRNMMC, Bethesda, MD

**MHSRS-18-0864**  **POSTER SESSION 1 - #466**  
LINE-1 Retrotransposon Drives Oncogenesis Via the TGF-1 Signaling Pathway: Implications for Lung Cancer Prevention & Treatment  
Presentation Author: Dr. Patrick Silva  
Patrick J. Silva, PhD, Stefano Guerra, MD, PhD, Emma Bowers, PhD, Elsa M. Reyes-Reyes, PhD, Irma N. Ramos, MD, Pasano Bojang, PhD, Kenneth S. Ramos MD, PhD  
1Office of the Senior Vice President for Health Sciences, Tucson, AZ, 2University of Arizona College of Medicine, Tucson, AZ, 3University of Arizona Cancer Center, Tucson, AZ, 4University of Arizona Health Sciences, Tucson, AZ, 5University of Arizona College of Medicine, Phoenix, AZ

**MHSRS-18-0979**  **POSTER SESSION 1 - #467**  
Building a Digital Biobank Technology Platform for Military Precision Medicine  
Presentation Author: Lt Col Michael Holmes  
Lt Col Michael Holmes, Lt Col Ruth Brenner  
Air Force Medical Support Agency, Falls Church, VA

**MHSRS-18-1148**  **POSTER SESSION 1 - #468**  
Genomic Analysis of Renal Medullary Carcinoma Tumors  
Presentation Author: Dr. Shyh-Han Tan  
Jesse Fox, PhD, Denise Young, BS, Yingjie Song, BS, Heng Cheng Hu, PhD, Anthony Soltis, PhD, Matthew D. Wilkerson, PhD, Clifton L. Dargard, PhD, Inger L. Rosner, MD, Isabell A. Sesterhenn, MD, Shiv Srivastava, PhD, Shyh-Han Tan, PhD  
1Uniformed Services University (USUHS) & the Walter Reed National Military Medical Center, Rockville, MD, 2USUHS, Bethesda, MD, 3Joint Pathology Center, Silver Spring, MD

**MHSRS-18-1227**  **POSTER SESSION 1 - #469**  
A Simple, Rapid & Robust Switch-Based miRNA Detection Method  
Presentation Author: Dr. Sarjubhai Patel  
Sarjubhai Patel, PhD, Braxton A. Norwood, PhD, Stephanie McCalla, PhD  
1FYRDiagnostics LLC, Missoula, MT, 2Montana State University, Bozeman, MT

**MHSRS-18-1295**  **POSTER SESSION 1 - #470**  
The Acceleration & Enhancement of Research Across the DoD Military Clinical Trials Network Through the Development of Murtha Cancer Center Biobank Repository  
Presentation Author: Ms. Nicole Wolf  
Nicole Wolf, MS, LTC Justin Wells, MC, MD, COL Joel Moncur, MC, MD, Stella Somiari, PhD, Hai Hu, PhD, Leonid Kvecher, MS, COL Craig Shriver, MC, MD  
1Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda, MD, 2Chan Soon-Shiong Institute of Molecular Medicine, Windber, PA

**MHSRS-18-1321**  **POSTER SESSION 1 - #471**  
Multi-Omics in Precision Medicine for Metabolic Health: Identification of Biomarkers for Disease Conditions  
Presentation Author: Dr. Guanshi Zhang  
Guanshi Zhang, PhD, Manjula Darshi, PhD, John Kim, BS, Daniel Montemayor, PhD, Kumar Sharma, MD  
University of Texas Health Science Center at San Antonio, San Antonio, Texas
Poster Session I

**MHSRS-18-1377**  
**POSTER SESSION 1 - #472**  
**Population-Based Malaria Parasite Diversity Study: Whole Genome Sequencing to Assess Threat, Inform Vaccine Development & Monitor Drug Resistance (Study in progress in early phase, open to invite partnership)**  
Presentation Author: CAPT Ilin Chuang  
CAPT Ilin Chuang, MD1, Jennifer Kookén, PhD2, Viseth Ngaay, MD2  
1Navy Medical Research Center, Silver Spring, MD, 2Walter Reed Army Institute of Research, Silver Spring, MD

**MHSRS-18-1394**  
**POSTER SESSION 1 - #473**  
**A Point of Care ‘Omics Platform for In-Field Warrior Care**  
Presentation Author: Dr. Johann deSa  
Johann deSa, PhD, Michael Neidrauer, PhD  
Instadiagnostics Inc, Philadelphia, PA

**MHSRS-18-1434**  
**POSTER SESSION 1 - #474**  
**Multi-Omic Integration to Systematically Discover Novel Tumor Biology & Drug Targets for Mesothelioma**  
Presentation Author: Dr. Christopher Plaisier  
Christopher Plaisier, PhD1, Chuong Hoang, PhD2  
1Arizona State University, Tempe, AZ, 2NCI, NIH, Bethesda, MD

**MHSRS-18-1464**  
**POSTER SESSION 1 - #475**  
**Ad5/3-NP2: From Targeting Human Colorectal Cancer Stem Cells to Immuno-Oncologics**  
Presentation Author: Dr. John Jessup  
John Jessup, MD1, Mohamed Kabbout, PhD1, Alex Joun, BS1, Nik Korokhov, PhD2, Abid Mattoo, PhD1  
1Inova Health Care System, Falls Church, VA, 2BioReliance, Rockville, MD

**MHSRS-18-1470**  
**POSTER SESSION 1 - #476**  
**Temporal Analysis of Methylation Changes in Burn Sepsis Using a Systems Biology Approach**  
Presentation Author: Ms. Seshamalini Srinivasan  
Seshamalini Srinivasan1,2, Duncan Donohue1,2, Ruoting Yang1,3, Stacy-Ann Miller1,2, Aarti Gautam1, Melissa M. McLawhorn4, Lauren T. Moffatt5, Marti Jett1, Jeffrey W Shupp6,7, Rasha Hammamieh1  
1US Army Center for Environmental Health Research, Fort Detrick, MD, 2The Geneva Foundation, Fort Detrick, MD, 3Frederick National Laboratory for Cancer Research, Frederick, MD, 4MedStar Washington Hospital Center, Washington, DC, 5MedStar Health Research Institute, Washington, DC

**MHSRS-18-1610**  
**POSTER SESSION 1 - #477**  
**Trans-Omic Machine Learning Technologies Applied to Progressive Diseases Facing Warfighters**  
Presentation Author: Dr. Daniel Montermayor  
Daniel Montermayor, PhD, Guanshi Zhang, PhD, Manjula Darshi, PhD, Kumar Sharma MD  
University of Texas Health Science Center, San Antonio, TX

**MHSRS-18-1698**  
**POSTER SESSION 1 - #478**  
**From Discovery to Product: What Does it Take to Make a Successful Biomarker?**  
Presentation Author: Dr. Malena Rone  
USAMMA, Fort Detrick, Frederick, MD

**MHSRS-18-1727**  
**POSTER SESSION 1 - #479**  
**Integrative Omics Approach for the Rapid Identification of the Mechanism of Action of Emerging Threat Agents**  
Presentation Author: Dr. Ziad Sahab  
Akos Vertes1, Albert B. Arul1, Peter Avar1, Andrew R. Korte1, Camille Lombard-Banek1, Peter Nemes1,2, Lida Parvin1, Ziad J. Sahab, PhD1, Bindesh Shrestha1,3, Sylwia A. Stopka1, Wei Yuan1, Deborah I. Bunin4, Merrill Knapp4, Andrew Poggio4, Carolyn L. Talcott5, Brian M. Davis5, Christine A. Morton5, Christopher J. Sevinsky5, Maria I. Zavodszyk5  
1George Washington University, Washington, DC, 2University of Maryland, College Park, MD, 3Waters Corporation, Beverly, MA, 4SRI International, Menlo Park, CA, 5GE Global Research, Niskayuna, NY
MHSRS-18-1951  POSTER SESSION 1 - #480
A Next-Generation Multiomics Platform Enables Rapid Characterization of Global Drug Mechanism & Clinical Proteomics
Presentation Author: Dr. Jeremy L Norris
Jeremy L. Norris, PhD, Danielle B. Gutierrez, PhD, Melissa A. Farrow, PhD, Nicole Muszynski, BS, Stacey D. Sherrod, PhD, James C. Pino, BS, Carlos F. Lopez, PhD, D. Borden Lacy, PhD, John A. McLean, PhD, John P. Wikswo, PhD, Eric P. Skaar, PhD, Richard M. Caprioli, PhD
Vanderbilt University, Nashville, TN

MHSRS-18-0194  POSTER SESSION 1 - #481
Population Screening for BRCA1 & BRCA2 Mutations: Results from a Feasibility Study Within a Military Treatment Facility
Presentation Author: Dr. Rachel Ellsworth
Leann Lovejoy², Craig Shriner², Rachel Ellsworth²
¹Chan Soon-Shiong Institute of Molecular Medicine at Windber, Windber, PA, ²Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-0246  POSTER SESSION 1 - #482
Measuring miRNA Response to Predict Adverse Outcomes to Chemical & Physiological Exposures of Air Force Interest
Presentation Author: Mr. Craig McPherson
Craig McPherson¹, Suraj Sakaram¹, Rebecca Migliozzi¹, Heather Fullenkamp¹, Heather A. Pangburn, PhD², Roland Saldanha, PhD³
¹UES Inc, Dayton, OH, ²United States Air Force School of Aerospace Medicine, Wright-Patterson AFB, OH, ³SSI Inc, San Antonio, TX

MHSRS-18-0297  POSTER SESSION 1 - #483
Tumor Size & Overall Survival in Non-Metastatic Colon Cancer Patients in the US Military Health System
Presentation Author: Dr. Kangmin Zhu
Melannie Alexander¹, Craig D. Shriner¹,³, Katherine A. McGlynn², Kangmin Zhu¹,³
¹Walter Reed National Military Medical Center, Bethesda, MD, ²National Cancer Institute, NIH, Bethesda, MD, ³Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0309  POSTER SESSION 1 - #484
Epigenetic-Editing with CRISPR/dCas9 Fusions: A Path to Reversing Adverse Exposures & Engineering Resilience
Presentation Author: Dr. David Metzger
David Metzger, PhD, Heather A. Pangburn, PhD, Roland Saldanha, PhD
US Air Force School of Aerospace Medicine, Wright-Patterson Air Force Base, OH

MHSRS-18-1277  POSTER SESSION 1 - #485
Individuals with Reduced Metabolism CYP2C8 & CYP2C9 Haplotypes Self-Adjusted Ibuprofen Dose in the Coriell Personalized Medicine Collaborative
Presentation Author: Dr. Stefan Zajic
Stefan C. Zajic¹, Joseph P Jarvis¹, Pan Zhang¹, Kaveri D. Rajula¹, Andrew Brangan¹, Ruth Brenner², Michael P Dempsey³, Michael F. Christman¹
¹Coriell Institute for Medical Research, Camden, NJ, ²Air Force Medical Support Agency, Falls Church, VA, ³Defense Threat Reduction Agency, Fort Belvoir, VA
**PRECISION MEDICINE IN CRITICAL CARE FOR THE INJURED WARFIGHTER**

**MHSRS-18-0187  POSTER SESSION 1 - #486**

**Attributable Economic Benefit & Medical Innovation: A Case Study of a Clinical Decision Support Tool That Predicts the Onset of Venous Thromboembolism**

Presentation Author: Mr. Felix Chang

Felix K. Chang¹², Allan D. Kirk, MD, PhD¹³,⁵, Timothy G. Buchman, MD, PhD¹³,⁵, Eric A. Elster, MD¹³⁵

¹Uniformed Services University of the Health Sciences and the Walter Reed National Military Medical Center, Bethesda, MD, ²DecisionQ, Arlington, VA, ³Duke University Medical Center, Durham, NC, ⁴Emory University School of Medicine, Atlanta, GA, ⁵Surgical Critical Care Initiative, Bethesda, MD

**MHSRS-18-0382  POSTER SESSION 1 - #487**

**HMGB1 & Cerebral Mitochondrial Dysfunction are Associated with Mortality in Rats with Blast Injury & Severe Hemorrhage**

Presentation Author: Dr. Zhangsheng Yang

Zhangsheng Yang, PhD, Tony Chao, PhD, Celina A. Valdez, BS, David M. Burmeister, PhD, COL (Ret) Leopoldo C. Cancio, MD, Yansong Li, MD

US Army Institute of Surgical Research, Fort Sam Houston, TX

**MHSRS-18-0395  POSTER SESSION 1 - #488**

**Trajectory of Pathogen-Associated Molecular Pattern (PAMP) Levels in a Burn Patient**

Presentation Author: Dr. Taylor Schlotman

Taylor E. Schlotman, PhD¹, Lee C. Mangum, PhD¹, Benjamin Seiler, BS², Mark Cartwright, PhD², Donald Ingber, MD, PhD², Michael Super, PhD², LTC Kevin S. Akers, MD²

¹US Army Institute of Surgical Research, Fort Sam Houston, TX, ²Wyss Institute, Harvard University, Boston, MA

**MHSRS-18-0397  POSTER SESSION 1 - #489**

**Comparison of Measures of Compensatory Reserve & Tissue Oxygen in Differentiating Tolerance to Simulated Hemorrhage**

Presentation Author: Dr. Taylor Schlotman

Taylor Schlotman, PhD, Jeffrey T. Howard, PhD, Victor A. Convertino, PhD

US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

**MHSRS-18-0408  POSTER SESSION 1 - #490**

**Real-Time Small-Volume Blood Sampling & Analysis for Coagulopathy of Trauma Analytes**

Presentation Author: Dr. Brian Ferguson

Jinpeng Wang, PhD¹, Qiang Gong, PhD¹, Peter Mage, PhD²

¹Aptitude Medical Systems, Santa Barbara, CA, ²Stanford University, Stanford, CA

**MHSRS-18-0420  POSTER SESSION 1 - #491**

**Fidgetin-Like 2: A Microtubule-Based Regulator of Ocular Wound Healing**

Presentation Author: Dr. Brian O’Rourke

Brian O’Rourke, PhD¹, Yang Jing, MD, PhD², Roy Chuck, MD, PhD², Cheng Zhang, MD², David Sharp, PhD¹² ¹MicroCures Inc, Bronx, NY, ²Albert Einstein College of Medicine, Bronx, NY

**MHSRS-18-0451  POSTER SESSION 1 - #492**

**Hemoadsorption with CytoSorb Porous Polymer Beads Improves Survival of Rats Exposed to an Acutely Lethal Dose of Aflatoxin**

Presentation Author: Dr. Karl-Gustav Ruggeberg

Karl-Gustav Ruggeberg, PhD, Pamela O’Sullivan, Timothy Kovacs, Kathryn Dawson, PhD, Phillip P. Chan, MD, PhD, Thomas D. Golobish, PhD, & Maryann C. Gruda, PhD

CytoSorbents Medical, Monmouth Junction, NJ
Establishing Acceptance Criteria for Validation of the Pro-Calcitonin Quantitation Assay Using Different Immune-Assay Platforms

Presentation Author: Dr. Meenu Upadhyay
Meenu Upadhyay1,2, Anissa Wiley1,2, Shenaid Channer1,2, Jaspreet Seth1, Neal Iwakoshi1,3, Bartley Adams1,4, Evelyn Coleman1,4, Angela McKenzie1,4, Matthew Hueman1,2, Eric Elster1,2
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3Emory University, Atlanta, GA, 4Duke University, Durham, NC

Towards Early Prediction of Vasospasm & Mortality Following Severe Traumatic Brain Injury (sTBI)

Presentation Author: Dr. Rima Rindler
Rima S. Rindler, MD3, Sheila Eshraghi, MD3, Vivek Khatri, PhD, MHS2, Neal Iwakoshi2,3, Seth Schobel, PhD2, Eric Elster, MD2,3, Nicholas Boulis, MD3
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Emory University School of Medicine, Atlanta, GA

Surgical Critical Care Initiative (SC2I) Severe Traumatic Brain Injury (sTBI) Protocol

Presentation Author: Dr. Vivek Khatri
Vivek Khatri, PhD, MHS2, Rima S. Rindler, MD3, Sheila Eshraghi, MD3, Neal Iwakoshi2,3, Seth Schobel, PhD2, Eric Elster, MD2,3, Nicholas Boulis, MD3
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Emory University School of Medicine, Atlanta, GA

The Impact of Augmented Renal Clearance on the Pharmacokinetics of Ciprofloxacin & Levofloxacin in Critically Ill Trauma, Surgical, & Burn Patients: An Individual & Population-Based Analysis

Presentation Author: 2LT Kelly Ivins-O’Keefe
2LT Kelly Ivins-O’Keefe, BA1,2, Taylor Schlotman, PhD2, Kevin Akers, MD1,2
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2US Army Institute of Surgical Research, Fort Sam Houston, TX

Surgical Critical Care Initiative: Implementation of Good Clinical Laboratory Practices Across the Consortium

Presentation Author: Mrs. Robyn Osborne
Robyn Osborne, MS1,4, Jaspreet Seth, PhD4, Anissa Wiley, MS4, Neal Iwakoshi, PhD2,4, Brianna Rice, MBA2,4, Caroline Clear, MBA2,4, Angela McKenzie1,4, Evelyn Coleman1,4, Marcella Sarzotti-Kelsoe, PhD2,4, Arnaud Belard, MBA4, Jennifer Cheeseman, MS1,4, Mary-Beth Joshi, MPH1,4, Timothy Buchanan, PhD, MD2,4, Allan Kirk, MD, PhD1,4, Eric Elster, MD2,4
1Duke University, Durham, NC, 2Emory University, Atlanta, GA, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5Duke Clinical Research Institute, Durham, NC

Circulating Caspase Activity in Trauma Patients as a Biomarkers of Injury Severity & Short-Term Outcomes

Presentation Author: Dr. Muath Bishawi
Muath Bishawi, MD, MPH1,4, Bria Johnston, BS1,4, Chandra Almond, MA1,4, Linda Stempora, Alexander T. Limkakeng, MD, MHS1,4, Jennifer Cheeseman, MS1,4, Eric Elster, MD3,4, Allan D Kirk, MD, PhD1,4
1Duke University, Durham, NC, 2Emory University, Atlanta, GA, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD
### Poster Session 1

#### MHSRS-18-0792  POSTER SESSION 1 - #499

**Invasive Fungal Infection Clinical Decisions Support Tool Validation Data Suggests Clinical Utility**  
Presentation Author: Dr. Seth Schobel  
Seth Schobel, PhD\(^1\), Arnaud Belard, MBA\(^1\), Felipe Lisboa, MD\(^1\), Benjamin K. Potter, MD\(^1\), Eric Elster, MD\(^1\)

\(^1\)Walter Reed National Military Medical Center, Bethesda, MD, \(^2\)Uniformed Services University of the Health Sciences, Bethesda, MD

#### MHSRS-18-0805  POSTER SESSION 1 - #500

**Changes in the Gene Expression & Inflammatory Profiles in a Non-Human Primate (Rhesus Macaque) Upper Extremity Vascularized Composite Allograft (VCA) Model**  
Presentation Author: Mr. Gerardo Rodriguez  
Gerardo J. Rodriguez, BS\(^1\), R. Madelaine Paredes, PhD\(^1\), CDR Jacob J. Glaser, USN, MDFACS\(^1\), CDR Forest R. Sheppard, MDFACS, USAF\(^1\)

\(^1\)Naval Medical Research Unit San Antonio, JBSA-Fort Sam Houston, TX, \(^2\)59th Medical Wing, JBSA-Fort Sam Houston, TX

#### MHSRS-18-0816  POSTER SESSION 1 - #501

**Surgical Critical Care Initiative: Harmonization & Implementation of a Biobanking & Assay Standard Terminology Across the Consortium**  
Presentation Author: Mrs. Mary-Beth Joshi  
Mary-Beth Joshi, MPH\(^1\), Andy MacKelfresh, MBA\(^1\), Anissa Wiley, MS\(^1\), Neal Iwakoshi, PhD\(^1\), Arnaud Belard, MBA\(^1\), Jennifer Cheeseman, MS\(^1\), Caroline Clear, MBA\(^1\), Timothy Buchman, PhD, MD\(^1\), Allan Kirk, MD, PhD\(^1\), Eric Elster, MD\(^1\)

\(^1\)Duke University, Durham, NC, \(^2\)Emory University, Atlanta, GA, \(^3\)Walter Reed National Military Medical Center, Bethesda, MD, \(^4\)Uniformed Services University of the Health Sciences, Bethesda, MD, \(^5\)Duke Clinical Research Institute, Durham, NC

#### MHSRS-18-0826  POSTER SESSION 1 - #502

**Surgical Critical Care Initiative Data Management: Systems & Processes Enabling Research & Clinical Decision Support Tool Development to Improve Precision Medicine in Acute Care**  
Presentation Author: Mr. Andy MacKelfresh  
Andy MacKelfresh, MBA\(^1\), Arnaud Belard, MBA\(^1\), Seth Schobel, PhD\(^1\), Alexander Limkakeng, MD, MHS\(^1\), Anne Heath\(^1\), Bonnie Hurst\(^1\), Justin James\(^1\), Oleg Kapeljushnik\(^1\), Michael Shoffner\(^1\), Marcin Sliwowski\(^1\), Jason Lones\(^1\), Laura Pinson\(^1\), Jake Kirschi\(^1\), Megan Turk\(^1\), Chandra Almond MA\(^1\), Caroline Clear, MBA\(^1\), Monica Crubezy, PhD, MSc\(^1\), Brian McCourt\(^1\), Carol Hill, PhD\(^1\), Erich Huang, MD, PhD\(^1\), Allan Kirk, MD, PhD\(^1\), Timothy Buchman, PhD, MD\(^1\), Eric Elster, MD\(^1\)

\(^1\)Duke University, Durham, NC, \(^2\)Emory University, Atlanta, GA, \(^3\)Walter Reed National Military Medical Center, Bethesda, MD, \(^4\)Uniformed Services University of the Health Sciences, Bethesda, MD, \(^5\)Duke Clinical Research Institute, Durham, NC, \(^6\)Renaissance Computing Institute, UNC-Chapel Hill, NC, \(^7\)DecisionQ Corporation, Arlington, VA

#### MHSRS-18-0883  POSTER SESSION 1 - #503

**Clinical Implementation of Research Data-Driven Protocol Between Military & Civilian Trauma Sites: The Model of the Surgical Critical Care Initiative Tissue & Data Acquisition Protocol Patients**  
Presentation Author: Mrs. Chandra Almond  
Chandra Almond, MA\(^1\), Felipe Lisboa, MD\(^1\), Alexander Limkakeng, MD, MHS\(^1\), Jennifer Cheeseman, MS\(^1\), Bria Johnston, BS\(^1\), Arnaud Belard, MBA\(^1\), Caroline Rudolph, MBA\(^1\), Seth Schobel, PhD\(^1\), Mary-Beth Joshi, MPH\(^1\), Andy MacKelfresh, MBA\(^1\), Timothy Buchman, PhD, MD\(^1\), Allan Kirk, MD, PhD\(^1\), Eric Elster, MD\(^1\)

\(^1\)Duke University, Durham, NC, \(^2\)Emory University, Atlanta, GA, \(^3\)Walter Reed National Military Medical Center, Bethesda, MD, \(^4\)Uniformed Services University of the Health Sciences, Bethesda, MD, \(^5\)Duke Clinical Research Institute, Durham, NC

#### MHSRS-18-0885  POSTER SESSION 1 - #504

**Complication Rates After Early Cranioplasty for Severe Traumatic Brain Injury**  
Presentation Author: Dr. James Malcolm  
James G. Malcolm, MD, PhD\(^1\), Rima S. Rindler, MD\(^1\), Mohib Tora, BS\(^1\), Amit Pujari, BS\(^1\), Zayan Mahmooth, BS\(^1\), Sheila R. Eshraghi, MD\(^1\), Eric A. Elster, MD\(^1\), Arnaud J Belard, MBA\(^2\), Nicholas M Boulis, MD\(^1\)

\(^1\)Emory University, Atlanta, GA, \(^2\)Uniformed Services University of the Health Sciences, Bethesda, MD, \(^3\)Walter Reed National Military Medical Center, Bethesda, MD
MHSRS-18-0887  POSTER SESSION 1 - #505
Estimating Timing of Delayed Closure in Wounds with Critical Colonization
Presentation Author: Dr. Felipe Lisboa
Felipe A. Lisboa, MD, Matthew J. Bradley, MD, Seth A. Schobel, PhD, Vivek Khatri, PhD; Edda L. Stymisdottir, MS, Jonathan A. Forsberg, MD, PhD, Benjamin K. Potter, MD, Matthew T. Hueman, MD, Christopher J. Dente, MD, Timothy G. Buchman, MD, PhD, Allan D. Kirk, MD, PhD; Eric A. Elster, MD, Walter Reed National Military Medical Center, Bethesda, MD; University of California, San Francisco, CA.

MHSRS-18-1030  POSTER SESSION 1 - #506
Numerical Polarization-Dependent Particle Sizing Apparatus with Potential Applicability for Platelet Aggregometry
Presentation Author: Ms. Diane Tshikudi
Diane Tshikudi, MS, Zeinab Hajjarian, PhD, Seemantini Nadkarni, PhD
Massachusetts General Hospital, Harvard Medical School, Boston, MA.

MHSRS-18-1113  POSTER SESSION 1 - #507
Expression of High Mobility Group Box 1 Protein in a Polytrauma Model Treated with ECLS at Ground Level & High Altitude
Presentation Author: Dr. Jae Hyek Choi
Jae Hyek Choi, PhD, DVSc, Alexander Dixon, BS, Kyle Sieck, BS, Teryn Roberts, MS, George Harea, BS, Vitali Karaliou, MD, Daniel Wendorff, BS, Brendan Beely, RRT, Leopoldo Cancio, MD, Valerie Sams, MD, Andriy Batchinsky, MD
The Geneva Foundation, Tacoma, WA; United States Army Institute of Surgical Research, JBSA Fort Sam Houston, TX.

MHSRS-18-1163  POSTER SESSION 1 - #508
Flexible Optical Coherence Tomography Endoscopy Detects Narrowing in Lower Respiratory Tract in ARDS Due to Smoke Inhalation & Burn
Presentation Author: Mr. Yusi Miao
The University of Pennsylvania, Philadelphia, PA; University of South Florida, Tampa, FL.

MHSRS-18-1185  POSTER SESSION 1 - #509
In Silico Model of Trauma/Hemorrhage-Induced Inflammation, Coagulopathy, & Resuscitation: Validation in Severely Injured Swine
Presentation Author: Lt Col Jeremy Cannon
Lt Col Jeremy W. Cannon, MD, Noah Brostoff, MS, Kelly Hurst, PhD, John Harn, MS, John Bartels, MS, Rami Namas, MD, Samantha Underwood, MD, Martin Schreiber, MD, Steven Chang, MS, Ande P. Cap, MD, Yoram Vodovotz, PhD
University of Pennsylvania, Philadelphia, PA; Uniformed Services University of the Health Sciences, Bethesda, MD; Immunetics, Pittsburgh, PA; University of Pittsburgh, Pittsburgh, PA; Oregon Health & Science University, Portland, OR; US Army Institute of Surgical Research, Fort Sam Houston, TX.

MHSRS-18-1202  POSTER SESSION 1 - #510
Laryngotracheal & Esophageal Trauma Outcomes from Military Operations in Afghanistan, Iraq, & Syria, 2001-2018
Presentation Author: LCDR Roxanne Mickelson
LCDR Roxanne C. Mickelson, MD, Michael J. Coulter, MD, Judy L. Dye, PhD, RN, ANP, Kaeley B. Shannon, MPH, Matthew W. Keller, MD, Art A. Ambrosio, MD, Michael R. Galanneau, MS; Naval Medical Center, San Diego, CA; Leidos, San Diego, CA; Axiom Resource Management Inc, Falls Church, VA; Naval Hospital, Camp Pendleton, CA; Naval Health Research Center, San Diego, CA.
MHSRS-18-1518  POSTER SESSION 1 - #511  
Prediction of Recovery from Severe Hemorrhagic Shock Using Logistic Regression  
Presentation Author: Mr. Alfredo Lucas  
Alfredo Lucas, Alexander T. Williams, Pedro Cabrales, PhD  
UC San Diego, La Jolla, CA

MHSRS-18-1611  POSTER SESSION 1 - #512  
Heart Rate Variability Detects Burn Injury with/Without Sepsis from Hospital Patient Data  
Presentation Author: Dr. Ravi Radhakrishnan  
Min Zhu1, Claire B. Cummins5, Omar A. Nunez Lopez1, Elizabeth Blears1,2, Jordan Wolf3, Fredrick J. Bohanon1, George C. Kramer4, Ravi S. Radhakrishnan2  
1University of Texas Medical Branch, Galveston, TX, 2Shriners Hospital for Children, Galveston, TX

MHSRS-18-1632  POSTER SESSION 1 - #513  
Tissue & Data Acquisition Protocol: A Two-Year Data Review  
Presentation Author: Dr. Seth Schobel  
Seth Schobel, PhD1,2, Vivek Khatri, PhD1,2, Felipe Lisboa, MD1,2, Matthew J. Bradley, MD1,3, Christopher J. Dente, MD4, Timothy G. Buchman, PhD, MD2,4, Allan D. Kirk, MD, PhD2,5, Benjamin K. Potter, MD1,2, Eric Elster, MD1,2  
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Naval Medical Research Center, Silver Spring, MD, 4Emory University, Atlanta, GA, 5Duke University, Durham, NC

MHSRS-18-1634  POSTER SESSION 1 - #514  
Understanding the Likelihood of Acute Respiratory Distress Syndrome in Trauma Patients  
Presentation Author: Dr. Seth Schobel  
Seth A. Schobel, PhD1,2, Adam McConnell2,6, Vivek Khatri, PhD1,2, Felipe Lisboa, MD1,2, Matthew J. Bradley, MD1,3, Christopher J. Dente MD2,4, Allen D. Kirk, MD, PhD2,5, Benjamin K. Potter, MD1,2, Eric Elster, MD1,2  
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Naval Medical Research Center, Silver Spring, MD, 4Emory University, Atlanta, GA, 5Duke University, Durham, NC

MHSRS-18-1637  POSTER SESSION 1 - #515  
Increased Sensitivity for Prediction of Bacteremia in Combat Trauma Patients  
Presentation Author: CDR Matthew Bradley  
CDR Matthew Bradley, MD1,3, Christopher Dente, MD2,4, Vivek Khatri, PhD, MHS2, Seth Schobel, PhD2, Allan Kirk, MD, PhD2,4, Timothy Buchman, PhD, MD2,4, Eric Elster, MD1,2  
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Naval Medical Research Center, Silver Spring, MD, 4Emory University, Atlanta, GA

MHSRS-18-1638  POSTER SESSION 1 - #516  
Differential Procalcitonin Levels in Patients with Abdominal Versus Non-Abdominal Injuries & its Use as a Prognostic Biomarker  
Presentation Author: Dr. Rondi Gelbard  
Rondi B. Gelbard, MD2,3, Seth A. Schobel, PhD1,2, Vivek Khatri, PhD1,2, Hannah Hensman2,4, Neal Iwakoshi2,3, Meenu Upadhyay, PhD1,2, Christopher Dente, MD2,3, Timothy G. Buchman, MD, PhD2,3, Allan Kirk, MD, PhD2,3, Benjamin K. Potter, MD1,2, Eric Elster, MD1,2  
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Emory University, Atlanta, GA

Poster Session I
**Poster Session I**

**MHSRS-18-1640**  **POSTER SESSION 1 - #517**

Correlation of Bacterial Strains to Open Abdomen Closure Outcomes Establish Importance of Bacterial Contaminants to Complications of Healing

Presentation Author: Dr. Rondi Gelbard
Rondi B. Gelbard, MD, PhD1,2, Seth A. Schobel, PhD1,2, Adam McConnell2,4, Vivek Khatri, PhD1,2, Felipe Lisboa, MD1,2, Neal Ikawoshi, PhD2,3, Christopher Dente, MD2,3, Bryan C. Morse, MD, MS2,3, Timothy G. Buchman, MD, PhD2,3, Allan Kirk MD, PhD2, Eric Elster, MD1,2
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD, 3Emory University, Atlanta, GA, 4DecisionQ, Arlington, VA, 5Duke University, Durham, NC

**MHSRS-18-1642**  **POSTER SESSION 1 - #518**

High Resolution Urine Output Monitoring with the Accuryntm Monitoring System: Developing A Novel Algorithm for Acute Kidney Injury (AKI) in the Severely Injured Intensive Care Unit (ICU) Patient

Presentation Author: Dr. Tessa Walters
Tessa L. Walters, MD1, Daniel Burnett, MD, MBA1, Mehdi Hajinorooyza, PhD1, Kelly P Stanton, PhD1, Saheel Sutaria, MS, BS1, Raoul Coimbra, MD, PhD2, Heather L. Evans, MD, MS3
1Potrero Medical, San Francisco, CA, 2University of California San Diego, San Diego, CA, 3University of Washington, Seattle, WA

**MHSRS-18-1732**  **POSTER SESSION 1 - #519**

Exertional Rhabdomyolysis & Recurrent Hematuria in a Warfighter with Sickle Cell Trait & Podocin Mutation

Presentation Author: Mr. Kevin Chuang
Kevin Chuang, BS1, Nyamkhishig Sambuughin, PhD1, Ming Ren, PhD1, Iren Horkayne-Szakaly, MD2, Sheila Muldoon, MD1, Dale Szpisjak, MD1, Francis O’Connor, MD1, Patricia Deuster, PhD1
1Uniformed Services University, Bethesda, MD, 2Defense Health Agency, Silver Spring, MD

**MHSRS-18-1833**  **POSTER SESSION 1 - #520**

Alterations in Serum Levels of Testosterone & Corticosterone in a Rat Model of Heterotopic Ossification

Presentation Author: Dr. Anthony Foster
Anthony D. Foster, PhD1,2, William Ketchum, MD1,2, Pat Walker, MD1,2, Justin Mygatt, MD, PhD2, Joe Bozzay, MD1,2, Ivan T. Rebustini, PhD1, Matthew J. Bradley, MD1,2
1Naval Medical Research Center, Silver Spring, MD, 2Uniformed Services University & the Walter Reed National Military Medical Center, Bethesda, MD

**MHSRS-18-1902**  **POSTER SESSION 1 - #521**

Quantification of Sarcopenia: Can Magnitude of Trauma Predict Muscle Loss?

Presentation Author: Dr. Yohan Jang
Robert Selley, DO, Yohan Jang, DO, Greg Gaski, MD, Kenneth Buckwalter, MD, Todd Mckinley, MD Indiana University Health Methodist, Indianapolis, IN

**MHSRS-18-1919**  **POSTER SESSION 1 - #522**

Using a Consensus Docking Approach to Estimate the Sociability of FDA-Approved Drugs to Predict Repositioning, Polypharmacology & Side-Effects in Gulf War Illness

Presentation Author: Mr. Rajeev Jaundoo
Rajeev Jaundoo, BSc1, Jonathan Bohmann, PhD2, Gloria E. Gutierrez, MD2, Nancy Klimas, MD1,3, Gordon Broderick, PhD1,4,5, Travis J.A. Craddock, PhD1
1Nova Southeastern University, Fort Lauderdale, FL, 2Southwest Research Institute, San Antonio, TX, 3Miami Veterans Affairs Medical Center, Miami, FL, 4Rochester General Hospital Research Institute, Rochester, NY, 5Rochester Institute of Technology, Rochester, NY
MHSRS-18-1995        POSTER SESSION 1 - #523
Automated Algorithm & System for Noninvasive Detection of Worsening Brain Injuries
Presentation Author: Mr. Alireza Chamanzar
Alireza Chamanzar1, Shilpa George1, Praveen Venkatesh1, Maysam Chamanzar1, Jonathan Elmer2, Lori Shutter2, Pulkit Grover2
1Carnegie Mellon University, Pittsburgh, PA, 2University of Pittsburgh, Pittsburgh, PA

WHAT’S NEW IN GLOBAL HEALTH ENGAGEMENT

MHSRS-18-0025        POSTER SESSION 1 - #524
The Role of Physiatry in Global Health Engagement
Presentation Author: LTC George Smolinski
CPT Daniel McGill, MHA, Andrey Sidorenko, PA-C, COL J. Steven Birchfield, MD
United States Army Europe Office of the Command Surgeon, Wiesbaden, Germany

MHSRS-18-0402        POSTER SESSION 1 - #525
Comparing Hospital Hand Hygiene in Liberia: Soap, Alcohol, & Hypochlorite
Presentation Author: Dr. Lily Horng
Lily Horng, MD1, Andrew Letizia, MD2, Andrew Vaughn, MD3, Fatoma Bolay, PhD4, Stephen Luby, MD1, John Gilstad, MD5
1Stanford University, Stanford, CA, 2Naval Medical Research Unit 3, Cairo, Egypt, 3National Public Health Institute of Liberia, Monrovia, Liberia, 4Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0462        POSTER SESSION 1 - #526
Global Behavioral Health Engagement: Building Capabilities & Capacity in Partner Nations
Presentation Author: CDR Michelle Tsai
CDR Michelle Tsai, RPh, PsyD1, Julie Chodacki, MPH, PsyD2, Kate McGraw, PhD3, David Brown, PhD3, Derek Licina, MPH, DrPH, CPH3, Brad Cogswell, MPH, MPA2 1Defense Health Agency, Silver Spring, MD, 2Regional Health Command-Pacific, Honolulu, HI, 3US Central Command, Tampa, FL

MHSRS-18-0483        POSTER SESSION 1 - #527
The Value of Military Entomology in Global Health Engagement
Presentation Author: LCDR Jeffrey C. Hertz
LCDR Jeffrey C. Hertz1, LCDR Michael L. Fischer2, LT Jennifer A. Knapp3, MAJ Silas A. Davidson4, LT Jodi M. Fiorenzano5, LCDR Ian W. Sutherland6, Capt Caroline Brooks7, LCDR Ephraim V. Ragasa8, CAPT Michael J. Medina9
1Naval Medical Research Unit TWO, Sembawang, Singapore, 2Naval Medical Research Unit SIX, Lima, Peru, 3Naval Environmental & Preventive Medicine Unit No. 5, San Diego, CA, 4Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, 5Navy Environmental & Preventive Medicine Unit No. 6, Honolulu, HI, 6US Navy Entomology Center of Excellence, Jacksonville, FL, 7Theater Preventive Medicine Flight, Kadena AFB, Okinawa, Japan, 83d Medical Battalion, Camp Foster, Okinawa, Japan, 9Bureau of Medicine & Surgery, Falls Church, VA

MHSRS-18-0778        POSTER SESSION 1 - #528
ALCOHOL ABUSE & ASSOCIATIONS WITH SEXUAL RISK BEHAVIORS IN THE ARMED FORCES OF THE DEMOCRATIC REPUBLIC OF THE CONGO
Presentation Author: Dr. Bonnie Tran
Bonnie Tran, PhD, MPH1, Margo Sloan, MPH1, Olivier Kalombo, MPH2, Anthony Mutombe, MD, MPH2 1Defense Health Agency, 2Armed Forces of the Democratic Republic of the Congo

MHSRS-18-1235        POSTER SESSION 1 - #529
Infectious Disease Clinical Research Program (IDCRP) Initiatives Supporting Emerging Infectious Disease (EID) Preparedness & Deployment-Related ID Threat Assessment, Prevention, & Management
Presentation Author: LTC Charlotte Lanteri
LTC Charlotte A. Lanteri, PhD1, Tahaniyat Lalani, MD1,2, David R. Tribble, MD, DrPH4, Timothy H. Burgess, MD5
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2The Henry M. Jackson Foundation for the Advancement of Military Medicine Inc, Bethesda, MD
MHSRS-18-1237  POSTER SESSION 1 - #530
Utilizing Whole Genome Sequencing to Assist in Epidemiologic & Outbreak Investigations of Multidrug-Resistant Organisms at Medical Treatment Facilities
Presentation Author: MAJ Anthony Jones
MAJ Anthony Jones, PhD, Erik Snesrud, Jason Stam, Patrick Mc Gann, PhD, Kate Hinkle, MD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1273  POSTER SESSION 1 - #531
 Developing the Prototype Embedded Health Engagement Team
Presentation Author: Col Edwin Burkett
Col Edwin Burkett, USAF, MD, MBA, MC1,2, Lt. Col Brian Neese, USAF, Joshua Vess, USAF, DDS, MPH2, Juan Uberia, MPH, MSc4, CAPT Anthony Giffay, MD, MBA3, Cristina Lawrence, MS1,2
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2JBSA Lackland, San Antonio, TX, 3United States Navy Pacific Fleet Command, Pearl Harbor, HI, 4Armed Forces Health Surveillance Branch, Silver Spring, MD

MHSRS-18-1284  POSTER SESSION 1 - #532
Salmonella Food Poisoning Among Kosovo Soldiers
Presentation Author: Sabine Sauer
Sabine Sauer3, JM Riehm2, P Simoes3, M Hergenroether2, J Oltersdorf4, U Messelhaeuser5, W Rabsch6, P Joo7
1Bundeswehr Medical Academy, Munich, Germany, 2Central Institute of the Bundeswehr Medical Service, Munich, Germany, 3POR Military, Lisbon, Portugal, 4Central Institute of the Bundeswehr Medical Service, Mainz, Germany, 5Landesuntersuchungsamt Bayern, Oberschleißheim, Germany, 6Robert-Koch Institute, Wernigerode, Germany, 7HUN Military, Budapest, Hungary

MHSRS-18-1477  POSTER SESSION 1 - #533
Analysis of a Cohort of Post-Training Training Follow-Up Data After a Course Conducted on Infection Control & Prevention in East Africa
Presentation Author: MAJ Elena Kwon
MAJ Elena Kwon, CPT Alyson Kil, MAJ Michael D’Onofrio

MHSRS-18-1549  POSTER SESSION 1 - #534
Global Health Engagement in Cambodia: An Update of US Naval Medical Research Unit TWO Capacity Building Activities
Presentation Author: LT Erica Harris
LT Erica R. Harris, PhD, MPH1, Jeffrey C. Hertz, PhD1, Nicholas J. Martin, PhD1, Michael G. Prouty, PhD2, John S. Brooks, MD, MPH1, Dennis J. Faix, MD, MPH1
1Naval Medical Research Unit TWO, Singapore, 2Naval Medical Research Center, Silver Spring, MD

MHSRS-18-1704  POSTER SESSION 1 - #535
First Report of Imported P. Ovale Cases in Peruvian Peace Keepers
Presentation Author: LCDR Danett Bishop
LCDR Danett Bishop, PhD5, Rosio Guerra, MD2, Marianela Oré, RN3, Mariana Ramos, MD1, Wesley Campbell, MD1, Hugo Valdivia, PhD1
1US Naval Medical Research Unit No. 6, Lima, Peru, 2Dirección de Salud de la Marina, Lima, Peru, 3Comando de Salud del Ejército, Lima, Peru
**MHSRS-18-1753**  **POSTER SESSION 1 - #536**

**Joint West Africa Research Group is a MIL-MIL & MIL-CIV Global Health Engagement that Delivers Front-Line Biosurveillance Technologies to West Africa**

Presentation Author: CPT Suzanne Matte

CPT Suzanne Matte¹, Jeff Koehler², Keersten Ricks², Brig. Gen. Johnbull Chukw Mbibii³, Jacinta Elemereg³, Blessing Wilson¹, Chibuzo Achugwo⁴, Rosemary Oby Ndubuisi⁵, Chinonyerem Uzowuru¹, Amaka Nzenwoewu⁶, Zahra Parker⁷, Abiola Fasina⁷, Nkechinyere Harrison³, Abdulwasiu Bolaji Tiamiyu⁴, Air Cdre (Ret) Edward Akinwale⁴, LCDR Joe Diclaro⁵, CDR Andrew Letizia⁶, Jessica Eisner⁷, COL Nelson Michael³, Randal Schoepp², LTC Julie Ake⁸

¹Walter Reed Army Institute of Research, Forest Glenn, MD, ²US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD, ³68 Nigerian Army Reference Hospital Yaba, Lagos, Nigeria, ⁴Military HIV Research Program Nigeria, HJF-MRI, Abuja, Nigeria, ⁵Navy Entomological Center of Excellence, Jacksonville, FL, ⁶Naval Medical Research Unit-3 Ghana Detachment, Accra, Ghana, ⁷Henry M. Jackson Foundation, Bethesda, MD

**MHSRS-18-1757**  **POSTER SESSION 1 - #537**

**Global Health Engagement via the African Cohort Study: Quantifying the Prevalence & Incidence of HIV-Associated Co-infections in Sub-Saharan Africa**

Presentation Author: Mrs. Christina Polyak

Christina S. Polyak, MD, MPH¹,², Trevor A. Crowell, MD, PhD¹,², Allahna L. Esber, PhD¹,², Domenique M. Reed, MPH¹,², Ayaj P. Parikh, MS¹,², Francis Kiweua, MD, MPH⁴, Jonah Maswai, MD⁵, John Owuoth, MD⁵, Lucas Maganga, MD⁵, Emmanuel Bahemana, MD³,⁷, Yakubu Adamu, MD⁴, Leigh Ann Eller, PhD¹,², Patrick W. Hickey, MD², Merlin L Robb, MD¹,², Nelson L. Michael, MD, PhD¹, Julie A. Ake, MD, MSc¹, RV329 AFRICOS Study Team

¹Walter Reed Army Institute of Research, Silver Spring, MD, ²Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, ³Makerere University-Walter Reed Project, Kampala, Uganda, ⁴Henry M. Jackson Foundation Medical Research International, Kenya, ⁵Mbeya Medical Research Centre, Mbeya, Tanzania, ⁶Walter Reed Army Institute of Research, Mbeya, Tanzania, ⁷Henry M. Jackson Foundation Medical Research International, Mbeya, Tanzania, ⁸Walter Reed Army Institute of Research, Abuja, Nigeria

**MHSRS-18-1828**  **POSTER SESSION 1 - #538**

**Patient & Quality of Care Associated Metrics in Team-Based Care Models in Military Intensive Care Units**

Presentation Author: Dr. Melissa Wilson

Kayla Eaton, BSN, RN², Lt Col Sherry Killius, ACNP-BC², Harry Bradstreet, MSN³, Jacob Kaiser, MS³, LTC Kristal Melvin, PhD, NP-C³

¹United States Air Force School of Aerospace Medicine, Wright Patterson AFB, Fairborn, OH, ²Critical Care Air Transport Sustainment Center for the Sustainment of Trauma & Readiness Skills, Cincinnati, OH, ³Brooke Army Medical Center, San Antonio, TX

**MHSRS-18-1950**  **POSTER SESSION 1 - #540**

**JWARG – Building Capacity to Improve Sepsis Diagnosis & Management**

Presentation Author: Dr. Anne Fox

Anne T. Fox, MD¹, Anissa Elayadi, PhD², Danielle Clark, PhD², Josh Chenowith², Michelle Rozo, PhD², Julie Ake, MD³, Andrew Letizia³, George Odouro, MD³, Daniel Ansong, MD³, Fatormah Bolay, PhD³, Jefferson Sibley, MD⁴

¹NAMRU-3, Ghana Detachment, Accra, Ghana, ²ACESO, Bethesda, MD, ³JWARG/MHRP, Bethesda, MD, ⁴Komfo Anokye Teaching Hospital, Kumasi, Ghana, ⁵Liberian Institute of Biomedical Research, Monrovia, Liberia, ⁶Phebe Hospital, Suakoko, Liberia

**GRADUATE MEDICAL EDUCATION & MILITARY READINESS**

**MHSRS-18-0071**  **POSTER SESSION 1 - #541**

**Scholarly Output by Army General Surgery Residents**

Presentation Author: MAJ Timothy Plackett

MAJ Timothy P. Plackett, DO, MPH¹, Ronald A. Gagliano Jr, MD², Reed B. Kuehn, MD³, Peter J. Deveaux, MD⁴, Jason M. Seery, MD⁵

¹Womack Army Medical Center, Fort Bragg, NC, ²Dignity Health Medical Group, Phoenix, AZ, ³Evans Army Community Hospital, Fort Carson, CO, ⁴University of Louisville Medical Center, Louisville, KY, ⁵Martin Army Community Hospital, Fort Benning, GA
MHSRS-18-0072  POSTER SESSION 1 - #542
Emergency Medicine Resident Musculoskeletal Knowledge Improvement After a Dedicated Orthopaedic Trauma Rotation: A Preliminary Study
Presentation Author: CPT Craig Kampfer
CPT Craig J. Kampfer, MD,\(^1\), Christina M. Hylden, MD,\(^1\), James N. Foster, MD,\(^2\), Patrick M Osborn, MD\(^1\)
\(^1\)San Antonio Military Medical Center, San Antonio, TX, \(^2\)Ft Leonard Wood, MO

MHSRS-18-0106  POSTER SESSION 1 - #543
Service as a Military Reserve Neurosurgeon: Impact on Surgeon, Practice, & Community
Presentation Author: LCDR Richard Menger
LCDR Richard Menger, MD, MPA\(^1\), Benjamin F Mundell, PhD\(^2\), Will Robbins, MD\(^3\), Devon Lefever, MD\(^4\), Peter Letarte, MD\(^4\), Randy Bell, MD\(^5\), in conjunction with Council of State Neurosurgical Societies (CSNS) & AANS/CNS Joint Committee of Military Neurosurgeons\(^6\)Louisiana State University Health Sciences Center, Shreveport, LA, \(^7\)Mayo Clinic School of Medicine, Rochester, MN, \(^8\)Wright Patterson Air Force Base, Dayton, OH, \(^9\)Mercy Medical Center, Canton, OH, \(^10\)Uniformed Services University of Health Sciences, Bethesda, MD

MHSRS-18-0136  POSTER SESSION 1 - #544
Results of a Competency Based Education Program for Orthopaedic Surgical Education
Presentation Author: Lt Col Patrick Osborn
Lt Col Matthew R. Schmitz, LTC Thomas C. Dowd, MAJ Jessica C. Rivera

MHSRS-18-0161  POSTER SESSION 1 - #545
Factors Affecting Career Satisfaction Among Military Surgeons
Presentation Author: CPT Tyler Swiss
Kelly Groom, MD\(^1\), James Crawford, MD\(^2\), Erik K. Weitzel, MD\(^3\)
\(^1\)Madigan Army Medical Center, Tacoma, WA, \(^2\)Walter Reed National Military Medical Center, Bethesda, MD, \(^3\)San Antonio Uniformed Health Services Education Consortium, San Antonio, TX

MHSRS-18-0224  POSTER SESSION 1 - #546
Interprofessional Collaboration in Military Healthcare Teams at the War Front & the Home Front: A Scoping Review
Presentation Author: Dr. Meghan Hamwey
Meghan K. Hamwey, PhD\(^1,2\), Karlen S. Bader, BSc\(^1,2\), Holly S. Meyer, PhD\(^1,2\), Steven J. Durning, MD, PhD\(^2\), Anthony R. Artino, PhD\(^1\), Lara Varpio, PhD\(^1\)
\(^1\)The Uniformed Services University of the Health Sciences, Bethesda, MD, \(^2\)Henry M Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD

MHSRS-18-0417  POSTER SESSION 1 - #547
Obstetrics & Gynecology Leadership Roles in Academic Military Treatment Facilities by Subspecialty & Gender
Presentation Author: COL Lisa Foglia
COL Lisa Foglia\(^1\), LTC Alison Batig\(^2\)
\(^1\)Madigan Army Medical Center, Tacoma, WA, \(^2\)3rd ESC, Fort Bragg, NC

MHSRS-18-1863  POSTER SESSION 1 - #548
The Resuscitative Thoracotomy at the Military’s Only Level 1 Trauma Center: Results over the Past Two Years Including Compliance with Published CPGs
Presentation Author: MAJ Vincente Nelson
MAJ Vincente Nelson, MD, Maj Valerie Sams, MD, CDR Jacob Glaser, MD, LTC Scott Trexler, MD, COL Christopher White, MD
MHSRS-18-0473 POSTER SESSION 1 - #549
Residents’ Knowledge, Skills, & Attitudes on Transgender Care After a Brief Clinical Rotation
Presentation Author: Lt Col Irene Folaron
Lt Col Irene Folaron, MD1, Maj Joshua Smalley, MD2, Maj Jeffrey Colburn, MD2
1San Antonio Military Medical Center, JBSA Fort Sam Houston, TX, 2Wilford Hall Medical Center, JBSA Lackland AFB, TX

MHSRS-18-0914 POSTER SESSION 1 - #550
Human Papilloma Virus (HPV) Vaccination Compliance in a Military Aviation Training
Presentation Author: Lt Ian Porter
Lt IM Porter1, G Stoker2, G Rice3, S Seals2, S Drollinger2, H Schutte1
1Naval Aerospace Medical Institute (NAMI), Pensacola, FL, 2University of West Florida, Pensacola, FL

MHSRS-18-1857 POSTER SESSION 1 - #551
Capturing the Entire Learning Space: Assembling a Massive Online ECG Library to Enable Effective Adaptive Learning
Presentation Author: Dr. Martin Pusic
Martin Pusic, MD1, Rose Hatala, MD2, Matthew Lineberry, PhD3, David Cook, MD4, Silas Smith, MD4, David Gelman, MD4
1New York University, New York, NY, 2University of British Columbia, Vancouver, B.C., Canada, 3Kansas University, Kansas City, MO, 4Mayo Clinic, Rochester, MN

PREVENTION OF MUSCULOSKELETAL INJURY IN THE MILITARY

MHSRS-18-0030 POSTER SESSION 1 - #552
The Effects of Continuous PTH Treatment of Human PDL Fibroblasts in an In Vitro Wound Healing Model
Presentation Author: LTC William Gilbert
LTC William A. Gilbert, DMD1, Jermy L. Goodin, PhD2, James C. McPherson III, PhD2, Augustine H. Chuang, PhD2
1Madigan Army Medical Center, Joint Base Lewis-McChord, WA, 2Eisenhower Army Center, Fort Gordon, GA

MHSRS-18-0084 POSTER SESSION 1 - #553
Cross Sectional Area of the Achilles Tendon in a Cohort of Elite Military Warriors Using Standard Ultrasound Techniques
Presentation Author: 2LT Jeffrey Wake
2LT Jeffrey Wake, MS4, ATC1, Kevin D. Martin, DO2, Jeffrey P VanBuren, MS41, Laura Dawson, DO3
1RVUCOM, Parker, CO, 2Evans Army Community Hospital, Colorado Springs, CO, 3Keller Army Community Hospital, West Point, NY

MHSRS-18-0047 POSTER SESSION 1 - #554
Relationship Between Time of Day Tested & Lumbar Spine Strength & Endurance
Presentation Author: Dr. William S Quillen
Brett Neilson, PT, DPT1, LTC (Ret) J Childs, USAF1, LTC Shane Koppenhaver, USA, SP1, CPT Matthew Francis, USA, SP1, CPT Briana Hurley, USA, SP1, CPT Samantha Morgan, USA, SP1, CPT Shawn Stoute, USA, SP1, CDR (Ret) William Quillen, USN, MSC2, John Mayer, DC, PhD1
1Center for Physical Therapy, US Army-Baylor University, San Antonio, TX, 2University of South Florida, Tampa, FL

MHSRS-18-0085 POSTER SESSION 1 - #555
Ultrasound Evaluation of Peroneal Tendon Location Within the Fibular Groove, A Prospective Cohort Study of Asymptomatic Elite Military Service Members
Presentation Author: 2LT Jeffrey Wake
2LT Jeffrey Wake, MS4, ATC1, Kevin D. Martin, DO2, Jeffrey P VanBuren, MS41
1RVUCOM, Parker, CO, 2Evans Army Community Hospital, Colorado Springs, CO
MHSRS-18-0214  POSTER SESSION 1 - #556
Predicting Bone Morphology from DXA Images in a Military Cohort
Presentation Author: Dr. Anthony Iyoho
Anthony Iyoho, PhD1, Vladislav Volman, PhD1, Karen Kelly, PhD2, Laurel Ng, PhD2
1L-3 Applied Technologies Inc, San Diego, CA, 2Naval Health Research Center, San Diego, CA

MHSRS-18-0303  POSTER SESSION 1 - #557
A Wearable Sensor Based System of Estimating Knee Adduction Moment During Walking
Presentation Author: Dr. Wei Liu
Wei Liu, PhD, Kenny Brock, DVM, PhD Edward Via College of Osteopathic Medicine, Auburn, AL

MHSRS-18-0354  POSTER SESSION 1 - #558
Do Clinical Hip & Lumbar Bone Mineral Density Measures Predict Foot-Ankle Injury Risk?
Presentation Author: Dr. Sajal Chirvi
Sajal Chirvi, PhD1,2, Frank A. Pintar, PhD1,2, Narayan Yoganandan, PhD1,2, Michael Kleinberger3
1Medical College of Wisconsin, Milwaukee, WI, 2Zablocki Veterans Affairs Medical Center, Milwaukee, WI, 3US Army Research Laboratory, Aberdeen, MD

MHSRS-18-0414  POSTER SESSION 1 - #559
Association Between Shoe Selection & Lower Extremity Injuries in United States Military Academy Cadets
Presentation Author: CPT Gary Helton
CPT Gary L. Helton, DPT, DSc, OCS, CSCS1, Kenneth L. Cameron, PhD, MPH, ATC, CSCS1, Rebecca A. Zifchack, PhD2, Erin Miller, MS, LAT1, Donald L. Goss, PT, PhD1, Jinsup Song, DPM, PhD2. Michael T. Neary, DPM1
1Baylor University-Keller Army Community Hospital, West Point, NY, 2Temple University School of Podiatric Medicine, Philadelphia, PA, 3United States Military Academy, West Point, NY

MHSRS-18-0446  POSTER SESSION 1 - #561
Mechanism of Injury for Musculoskeletal Injuries in Active Duty Service Members (ADSM) Reporting to Physical Therapy Aboard Two Naval Aircraft Carriers
Presentation Author: Dr. Marco Campello
Tara Brennan, MPH1, Marco Campello, PT, PhD1, Rudi Hiebert, ScM2, Angela Lis, PhD, PT1, CAPT (Ret) Gregg Ziemke, PT, MS, MHA, OCS3, Danielle Faulkner, BS, CCRC2, Sherri Weiser, PhD1 1New York University Hospital for Joint Diseases, New York, NY, 2University of Delaware, Newark, DE, 3Naval Medical Center Portsmouth, Norfolk VA

MHSRS-18-0594  POSTER SESSION 1 - #562
Musculoskeletal Injury Incidence in Deployed Navy Active Duty Service Members (ADSM) Reporting Musculoskeletal Injuries Aboard Two United States Aircraft Carriers
Presentation Author: Dr. Marco Campello
Tara Brennan, MPH1, Marco Campello, PT, PhD1, Rudi Hiebert, ScM2, Angela Lis, PhD, PT1, CAPT (Ret) Gregg Ziemke, PT, MS, MHA, OCS3, Danielle Faulkner, BS, CCRC2, Sherri Weiser, PhD1 1New York University Hospital for Joint Diseases, New York, NY, 2University of Delaware, Newark, DE, 3Naval Medical Center Portsmouth, Norfolk, VA

MHSRS-18-0651  POSTER SESSION 1 - #563
Functional Movement Characteristics of US Marine Corps Recruits, San Diego, CA
Presentation Author: Ms. Kathrine Haluch
Kathrine Haluch, BS1, Stefania Marzano, MS2, James Reading3, Pinata Sessoms, PhD4, Daniel Trone, PhD4 1Eagle Applied Sciences LLC, San Antonio, TX, 2Leidos Inc, San Diego, CA, 3Marine Corps Recruit Depot, San Diego, CA, 4Naval Health Research Center, San Diego, CA
MHSRS-18-0666  POSTER SESSION 1 - #564
Health Hazard Analysis of Neck Musculoskeletal Injury Due to Head-Supported Mass
Presentation Author: Dr. Xianlian Zhou
Xianlian Zhou, Ph.D. 1, Paulien Roos, Ph.D. 1, Xinyu Grace Chen, Ph.D. 1, Phillip Whitley, Ph.D. 1, Donald Goddard 2
1CFD Research Corporation, Huntsville, AL, 2US Army Public Health Center, Aberdeen Proving Ground, MD

MHSRS-18-0712  POSTER SESSION 1 - #565
Science & Technology Knowledge Gaps in Blast Injury Risk to the Lower Extremity, the Spine & Back, & the Upper Extremity
Presentation Author: Dr. Jeffrey Colombe
Jeffrey B. Colombe 1, Anthony Santiago II 1, Elizabeth Brokaw 1, Brian Colder 1, Rachel Spencer 1, Lisa Lalis 1, Raj Gupta 2, Michael Leggieri 2, Jon McConnell 1 1The MITRE Corporation, McLean, VA, 2US Army Medical Research & Materiel Command, Fort Detrick, MD

MHSRS-18-0745  POSTER SESSION 1 - #566
Novel Quantitative MRI UTE-T2* Shows Clinically Occult Subsurface Matrix Changes in Patients at High Risk for PTOA
Presentation Author: Mrs. Ashley Williams
Ashley A. Williams, MS 1,2, Matthew R. Titchenal, MS 1,2, Bao H. Do, MD 1,2, Aditi Guha, MS 1,2, Constance R. Chu, MD 1,2 1Stanford University, Stanford, CA, 2Veterans Affairs Palo Alto Health Care System, Palo Alto, CA

MHSRS-18-1022  POSTER SESSION 1 - #567
Machine Learning to Predict Basic Training Injuries from 3D Body Scan Images
Presentation Author: Dr. Diana Thomas
Diana Thomas, PhD 1, Kevin Talty, BS 1, Patrick Kuiper 1, Steven Morse 1, Kevin Bigelman 1, Steven Heymsfield 2, Michael Scioletti 1 1USMA, West Point, NY, 2Pennington Biomedical Research Center, Baton Rouge, LA

MHSRS-18-1050  POSTER SESSION 1 - #568
Exercise Regimen for Mitigation of Acute & Chronic Neck Pain in Military Aircrew
Presentation Author: Mr. Vignesh Ramachandran
Vignesh Ramachandran, BS 1, Jeffrey A. Jones, MD 1, Richard A. Scheuring, DO 2, Sawan Dalai 3, Sadie M. Henry, MD 4, Clay T. Winkler, MD 5, Bryan G. Anderson, MD 6, David S. Baskin, MD 7, Barry S. Shender, PhD 8 1Baylor College of Medicine, Houston, TX, 2NASA Johnson Space Center, Houston, TX, 3University of Houston, Houston, TX, 4Naval Air Station Patuxent River, Patuxent River, MD, 5Naval Station Mayport, Jacksonville, FL, 6Luke Air Force Base, Glendale, AZ, 7Methodist Houston Hospital, Houston, TX, 8Naval Air Systems Command, Patuxent River, MD

MHSRS-18-1079  POSTER SESSION 1 - #569
Defining Normal Postural Stability with & without Dynamic Head Shake in US Army Aviators
Presentation Author: Dr. Stephanie Karch
Stephanie J. Karch, AuD, PhD 1, Lana Milam, BSN, RN 1,2, Paul St Onge, PhD 1,2, Ben D. Lawson, PhD 1 1US Army Aeromedical Research Laboratory, Fort Rucker, AL, 2Laulima Government Solutions LLC, Orlando, FL, 3Naval Submarine Research Laboratory, Groton, CT

MHSRS-18-1092  POSTER SESSION 1 - #570
A Guide to Understanding Reimbursement & Value-Based Care in the Military Health System
Presentation Author: MAJ Joseph Galvin
MAJ Joseph W. Galvin, DO 1, MAJ Joshua C. Thompson, FACHE 2, LTC Amy M. Thompson, DO 3, LTC Josef K. Eichinger, MD 1, MAJ Jonathan F. Dickins, MD 2, MAJ Stephen A. Parada, MD 3, RADM Bruce L. Gillingham, MD 6 1Blanchfield Army Community Hospital, Fort Campbell, KY, 2Walter Reed Army Institute of Research, Silver Spring, MD, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Medical University of South Carolina, Charleston, SC, 5Dwight D. Eisenhower Army Medical Center, Augusta, GA, 6Bureau of Medicine & Surgery, Falls Church, VA
MHSRS-18-1121 \(\text{POSTER SESSION 1 - #571}\)
Predicting & Planning for Musculoskeletal Service-Connected Disabilities in VA Using Disability Separation Codes for Active Duty OEF/OIF Military Service Members
Presentation Author: Dr. Adi Gundlapalli
Adi V. Gundlapalli, MD, PhD, MS\(^{1,2}\), Andrew M. Redd, PhD\(^{1,2}\), Ying Suo, MStat\(^{1}\), Warren B. P. Pettey, MPH, CPH\(^{1,2}\), Emily Brignone, PhD\(^{2}\), David L. Chin, PhD\(^{2}\), Lauren E. Walker, MSW\(^{4}\), Eduard A. Poltavskiy, MS\(^{4}\), Jud C. Janak, PhD\(^{6}\), Jeffrey T. Howard, PhD\(^{6}\), Jonathan A. Sosnov, MD\(^{1,8}\), Ian J. Stewart, MD\(^{1,8}\)
\(^{1}\)VA Salt Lake City Health Care System, Salt Lake City, UT, \(^{2}\)University of Utah School of Medicine, Salt Lake City, UT, \(^{3}\)VA Pittsburgh Healthcare System, Pittsburgh, PA, \(^{4}\)David Grant USAF Medical Center, Travis AFB, CA, \(^{6}\)Department of Defense Joint Trauma System, Fort Sam Houston, TX, \(^{8}\)US Army Institute of Surgical Research, Fort Sam Houston, TX, \(^{9}\)Brooke Army Medical Center, Fort Sam Houston, TX, \(^{10}\)Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1187 \(\text{POSTER SESSION 1 - #572}\)
Assessing Changes in Knowledge, Attitudes, & Beliefs Towards Injury Prevention During Marine Corps Training
Presentation Author: Ms. Carolyn Dartt
Carolyn Dartt, MEd, ATC, Catherine Donahue, MEd, ATC, Timothy Gribbin, MEd, ATC, Patricia Deuster, PhD, MPH, FACSM, Sarah de la Motte, PhD, MPH, ATC
Uniform Services University, Bethesda, MD

MHSRS-18-1259 \(\text{POSTER SESSION 1 - #573}\)
Downhill Running Impairs Strength & Activation of the Elbow Flexor Muscles
Presentation Author: Dr. Kyle Brandenberger
Kyle J. Brandenberger, Gordon L. Warren, Christopher P. Ingalls, Jeff S. Otis, James A. Doyle
Georgia State University, Atlanta, GA

MHSRS-18-1289 \(\text{POSTER SESSION 1 - #574}\)
NVG Predisposes Neck to Bending Induced Injuries in Sagittal Plane Loading: A Finite Element Study
Presentation Author: Dr. Mike Arun
Yuvaraj Purushothaman, PhD, Mike W.J. Arun, PhD, Jamie Baisden, MD, Narayan Yoganandan, PhD
Medical College of Wisconsin, Milwaukee, WI

MHSRS-18-1435 \(\text{POSTER SESSION 1 - #575}\)
Thoracolumbar Injuries Resulting from Whole-Body Exposure to Vertical Acceleration
Presentation Author: Mr. B. Joseph McEntire
B. Joseph McEntire, MS\(^{1}\), Katie Logsdon, MS\(^{1}\), Kimberly Vasquez, BS\(^{1}\), Ray Daniel, PhD\(^{1,2}\), Frederick T. Brozoski, MS\(^{1}\), Grace M. Lidl, DVM, MD\(^{1}\), Edward L. Mazuchowski, MD, PhD\(^{3}\)
\(^{1}\)US Army Aeromedical Research Laboratory, Fort Rucker, AL, \(^{2}\)Laulima Government Solutions LLC, Orlando, FL, \(^{3}\)San Antonio Military Medical Center/Joint Trauma System, Fort Sam Houston, TX

MHSRS-18-1458 \(\text{POSTER SESSION 1 - #576}\)
Hyperosmolality Attenuates Hyperthermia-Induced Skeletal Muscle Damage in Mammalian Skeletal Muscle
Presentation Author: Dr. Orlando Laitano
Orlando Laitano, PhD, Laila Sheikh, Alex Mattingly, MS, Kevin Murray, MS, Thomas Clanton, PhD
University of Florida, Gainesville, FL

MHSRS-18-1484 \(\text{POSTER SESSION 1 - #577}\)
Be FIT for Adaptive Physical Training
Presentation Author: Mr. Rodney Metoyer
Rodney Metoyer, MS\(^{1}\), Robert Hubal, PhD\(^{2}\), Jerry Heneghan, MBA\(^{1}\)
\(^{1}\)BioMojo LLC, Cary, NC, \(^{2}\)University of North Carolina, Chapel Hill, NC

MHSRS-18-1582 \(\text{POSTER SESSION 1 - #578}\)
An Analysis of Single Nucleotide Polymorphisms that Associate with Osteoarthritis & Rheumatoid Arthritis
Presentation Author: Mr. Tho Hua
Tho Hua, MS, Hui Xia, MS, Manuel Y. Caballero, MS, Jisuk Park, PhD, Ghulam J. Chaudry, PhD
59th Medical Wing, JBSA-Lackland, TX
**Poster Session I**

**MHSRS-18-1603**  
**POSTER SESSION 1 - #579**  
Prospective Evaluation of Glenoid Bone Loss After First-Time & Recurrent Anterior Glenohumeral Instability Events  
Presentation Author: Dr. Jon Dickens  
Jonathan F. Dickens, MD, Sean E. Slaven, MD, Kenneth L. Cameron, PhD, MPH, ATC, Adam M. Pickett, MD, Matthew Posner, MD, Scot E. Campbell, MD, Brett D. Owens MD  
1Keller Army Hospital, United States Military Academy, West Point, NY, 2Walter Reed National Military Medical Center, Bethesda, MD, 3Uniformed Services University of Health Sciences, Bethesda, MD, 4Brooke Army Medical Center, San Antonio, TX, 5Brown Alpert Medical School, Providence, RI

**MHSRS-18-1662**  
**POSTER SESSION 1 - #580**  
Designing Injury Prevention Curriculum in Military Training Environment  
Presentation Author: Ms. Catherine Donahue  
Catherine Donahue, MEd, ATC, Carolyn Dartt, MEd, ATC, Timothy Gribbin, MEd, ATC, Sarah de la Motte, PhD, MPH, ATC  
Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-1713**  
**POSTER SESSION 1 - #581**  
Back Injury History & Body Armor Wear Contribute to Musculoskeletal Pain During Deployment  
Presentation Author: Dr. Sarah de la Motte  
Sarah J. de la Motte, PhD, MPH, ATC, Joshua Kazman, MS, Timothy C. Gribbin, MEd, ATC, Carl Goforth, PhD, Patricia A. Deuster, PhD, MPH  
Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-1724**  
**POSTER SESSION 1 - #582**  
Comparative Effectiveness of Military Boots with & without Energy-Storing-and-Returning Orthotics  
Presentation Author: Mr. Noel Guerrero  
Noel A. Guerrero1,2, Christopher A. Rabago1,3, Elizabeth Russell Esposito1,3,5  
1Brooke Army Medical Center, JBSA Fort Sam Houston, TX, 2Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 3Extremity Trauma & Amputation Center of Excellence, JBSA Fort Sam Houston, TX, 4VA Puget Sound Health Care System Center for Limb Loss & Mobility, Seattle WA, 5Uniformed Services University, Bethesda, MD

**MHSRS-18-1761**  
**POSTER SESSION 1 - #583**  
The Relationship Between Hormonal Contraceptive Use & Anterior Cruciate Ligament Injury Among Active Duty Army Servicewomen  
Presentation Author: CPT Melanie Hosker  
CPT Melanie Hosker, MPAS, Brian Whitcomb, PhD, Lisa Chasan-Taber, ScD, Katherine Boyer, PhD, Raji Balasubramanian, ScD, Craig McKinnon, MPH  
1University of Massachusetts Amherst, Amherst, MA, 2US Army Research Institute of Environmental Medicine, Natick, MA

**MHSRS-18-1860**  
**POSTER SESSION 1 - #584**  
Neuromotor Incoordination Index as a Measure of Physical & Cognitive Fatigue  
Presentation Author: Dr. Jeffrey Palmer  
Jeffrey Palmer, PhD, James Williamson, PhD, Adam Lammert, PhD, Ryan McKinles, PhD, Bea Yu, MS, Michael Nolan, MS, Joey Perricone, Kristin Heaton, PhD, William Tharion, PhD, Reed Hoyt, PhD, Thomas Quatieri, PhD

**OPEN**  
**POSTER SESSION 1 - #585**

**MHSRS-18-1914**  
**POSTER SESSION 1 - #586**  
Prediction of Male & Female Dynamic Spatial Pulling Strength Using a Musculoskeletal Model  
Presentation Author: Dr. Phillip Whitley  
Phillip Whitley, PhD, Paulien Roos, PhD, Donald Goddard  
1CFD Research Corporation, Huntsville, AL, 2US Army Public Health Center, Aberdeen Proving Ground, MD
MHSRS-18-1981  POSTER SESSION 1 - #587
Normative & Reliability References for Field Expedient Screening Items to Assess Physical Performance &
Pain with Movement Among Soldiers in Advanced Individual Training
Presentation Author: MAJ Mark Lester
MAJ Mark E. Lester, DPT, PhD, Amanda J. Humphrey, DPT, Frank Licursi, DPT, Tiffany Paris, DPT, Amanda Pritt, DPT,
Angela Diebel-Lee, DPT, DSc, Theodore Croy, PT, PhD, Scott W. Shaffer, PT, PhD
Army Medical Department Center & School, JBSA-Fort Sam Houston, TX

MHSRS-18-2052  POSTER SESSION 1 - #588
Prevalence of Prior Ankle Pathology in US Marine Officers Entering the Basic Officer Course
Presentation Author: Ms. Amelia Barrett
Amelia S. Barrett, MS, ATC, Zachary D. Johnson, MEd, ATC, Sarah J. de la Motte, PhD, MPH, ATC

MHSRS-18-2090  POSTER SESSION 1 - #589
An In Vivo Comparative Study of Cervical Artificial Discs
Presentation Author: Dr. Hoon Choi
Hoon Choi, MD1,2, Jamie Baisden, MD1, Narayan Yoganandan, PhD1
1Medical College of Wisconsin, Milwaukee, WI, 2Medical College of Wisconsin Green Bay, Green Bay, WI

MHSRS-18-2119  POSTER SESSION 1 - #590
Presentation Author: LTC Colleen Daniels
LTC Colleen Daniels, DrPH, OTR/L, SP, Cara Olsen, DrPH, Ann Scher, PhD, CAPT (Ret) Patricia McKay, MD, COL (Ret)
David Niebuhr, MD, MPH, MSc
Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-2185  POSTER SESSION 1 - #591
Musculoskeletal Injuries Among Female Soldiers Working with Dogs
Presentation Author: MAJ Ran Ankory
Haggai Sherman, MD TLVMC,
Tel Aviv, Israel

MHSRS-18-2189  POSTER SESSION 1 - #592
The Effect of Previous Methylphenidate Use on Incidence of Stress Fractures in Military Recruits: A
Retrospective Cohort
Presentation Author: MAJ Ran Ankory
Haggai Sherman, MD TLVMC,
Tel Aviv, Israel

MHSRS-18-2224  POSTER SESSION 1 - #593
Does Step Frequency Affect Running Injury Incidence: An Observational Study with 12 Month Follow Up
Presentation Author: MAJ Eliza Szymanek

ENVIRONMENTAL & OCCUPATIONAL EXPOSURES

MHSRS-18-0164  POSTER SESSION 1 - #595
Isopropyl Alcohol (IPA) Volatile Sensor Development for In-Flight Air Quality Monitoring
Presentation Author: Mrs. Yen Ngo
Yen H. Ngo1,2, Mike Brothers1,2, Grant Slusher1,2, Ahmad Islam1,2, Kathy Fullerton1, Benji Maruyama1, Jennifer A.
Martin1, Claude Grigsby1, Rajesh R. Naik1, Steve S. Kim1 1Air Force Research Laboratory, Wright-Patterson AFB, OH,
2UES Inc, Beavercreek, OH
MHSRS-18-0207 POSTER SESSION 1 - #596
Thermal Stress Effects on Physiologically Based Pharmacokinetic Model for Ground Crew Personnel
Presentation Author: Mr. Evan Pitts
E Pitts, JM Gearhart, TR Covington, CM Grabinski, DP Yamamoto, D McKenzie-Smith, DK Ott, HA Pangburn
USAF School of Aerospace Medicine, Wright-Patterson AFB, OH

MHSRS-18-0317 POSTER SESSION 1 - #597
Human Neuronal Hypoxia Adaptation Pathways Identified via CRISPR/Cas9 Functional Genomics
Presentation Author: Dr. Oksana Pavlyuk
Oksana M. Pavlyuk, Patrick M. McLendon, Andrea Hoffmann, Jeffrey M. Gearhart, Heather A. Pangburn
1USAF School of Aerospace Medicine, Wright-Patterson AFB, Dayton, OH, 2UES Inc, Dayton, OH, 3Henry M. Jackson Foundation, Bethesda, MD

MHSRS-18-0419 POSTER SESSION 1 - #598
Smokeless Tobacco Use in the US Military: The Role of Military Deployment
Presentation Author: Dr. Jie Lin
Jie Lin, PhD, MPH, Kangmin Zhu, MD, PhD, Aida M. Soliván-Ortiz, DMD, Stacy L. Larsen, DDS, Thomas R. Schneid, DMD, Craig D. Shriver, MD, Sukhyung Lee, MD
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences (USUHS), Bethesda, MD, 3USUHS, San Antonio, TX, 4Uniformed Services University of the Health Sciences, Fort Bragg, NC, 5USUHS, Fort Sam Houston, TX

MHSRS-18-0347 POSTER SESSION 1 - #599
Study of Active Duty Military Personnel for Environmental Deployment Exposures: Pre & Post Deployment Spirometry
Presentation Author: Dr. James Aden
James K. Aden, PhD, Michael J. Morris, MD, Andrew J. Skabelund, Maj, USAF, MC, Frederic A. Rawlins III, Maj, USAF, MC, Roger A. Gallup, MD, Aaron K. Holley, LTC, MC, USA
1San Antonio Military Medical Center, JBSA Fort Sam Houston, TX, 2Keesler Medical Center, Keesler AFB, MS, 3Seton Medical Center, Harker Heights, TX

MHSRS-18-0388 POSTER SESSION 1 - #600
Force Health Protection from Particle Exposures: An Approach to Setting Occupational Exposure Limits for Emerging Particles from In Vitro Toxicity Data Using Suits of Computational Models of Exposure & Lung Tissue Dosimetry
Presentation Author: Dr. Justin Teeguarden
Justin G. Teeguarden, PhD, DABT, Jordan N. Smith, PhD, Dennis Thomas, PhD
1Pacific Northwest National Laboratory, Richland, WA, 2Oregon State University, Corvallis, OR

MHSRS-18-0415 POSTER SESSION 1 - #601
Astaxanthin but Not Quercetin Preserves Mitochondrial Integrity & Function, & Ameliorates Heat-Induced Injury in C2C12 Mouse Myoblasts
Presentation Author: Dr. Tianzheng Yu
Tianzheng Yu, MD, Jacob Dohl, BS, Patricia A. Deuster, PhD Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0422 POSTER SESSION 1 - #602
Electronic Cigarette Use & Related Factors Among Active Duty Service Members in the US Military
Presentation Author: Dr. Jie Lin
Jie Lin, PhD, MPH, Kangmin Zhu, MD, MPH, Paula K. Hoang, DDS, MPH, Aida M. Soliván-Ortiz, DMD, Stacy L. Larsen, DDS, Scott P. Irwin, DDS, Thomas R. Schneid, DMD, Craig D. Shriver, MD, Sukhyung Lee, MD
1Walter Reed National Military Medical Center, Bethesda, MD, 2Uniformed Services University of the Health Sciences (USUHS), Bethesda, MD, 3USUHS, San Antonio, TX, 4USUHS, Fort Bragg, NC, 5USUHS, Fort Sam Houston, TX
MHSRS-18-0454  POSTER SESSION 1 - #603
Development of Operational Exposure Limits for Polyalphaolefin Fluids
Presentation Author: Mr. Barry Marcel
Barry Marcel¹, Teresa Sterner¹,², Karen Mumy¹, Brian Wong²,³, Matthew Wegner⁴, Thomas Snider¹,⁵, Dave Mattie¹
¹Air Force Research Laboratory, Wright-Patterson AFB, OH, ²HJF, Wright-Patterson AFB, OH, ³NAMRU-D, Wright-Patterson AFB, OH, ⁴AFRIMS, Bangkok, Thailand, ⁵Sawdey Solution Services Inc, Beavercreek, OH

MHSRS-18-0457  POSTER SESSION 1 - #604
Demonstration of the US Air Force Toxicology Toolbox for Rapid Assessment of Hazardous Chemicals & Emerging Contaminants
Presentation Author: Dr. Heather Pangburn
Heather A. Pangburn, Yaroslav¹, Dirk Yamamoto¹, Patrick McLendon³, Heather Fullenkamp³, Christina Davidson³, Darrin K. Ott¹, Jeffery M. Gearhart²
¹USAF School of Aerospace Medicine, Wright-Patterson Air Force Base, OH, ²The Henry M. Jackson Foundation, USAF School of Aerospace Medicine, Wright-Patterson Air Force Base, OH, ³UES, Inc, assigned to USAF School of Aerospace Medicine, Wright-Patterson Air Force Base, OH

MHSRS-18-0514  POSTER SESSION 1 - #605
Temporal Effects of 2% Pilocarpine Ophthalmic Solution on Human Pupil Size & Accommodation
Presentation Author: LCDR Micah Kinney
LCDR Micah J. Kinney¹, Andrew D. Johnson², Michael D. Reddix, PhD²
¹Naval Medical Research Unit Dayton, Wright-Patterson AFB, OH, ²Leidos, Shalimar, FL

MHSRS-18-0560  POSTER SESSION 1 - #606
Bronchoalveolar Lavage Cytokine Analysis in Deployment-Related Chronic Respiratory Symptoms
Presentation Author: Jess Anderson

MHSRS-18-0660  POSTER SESSION 1 - #607
Description of Injuries by Weapon Type in Dismounted US Marine Corps Service Members
Presentation Author: Dr. Mary Clouser
Mary Clouser, PhD, MPH¹, Edward Mazuchowski, MD, PhD², Bradney Scott³, Chris Baker⁴, Andrew Olson, MHSA, MS⁵, Eleuterio Galvez, MS⁶
¹Leidos, San Diego, CA, ²Armed Forces Medical Examiners System, Dover, DE, ³Engility Corporation, Fort Benning, GA, ⁴Project Manager Soldier Protection & Individual Equipment, Fort Belvoir, VA, ⁵Naval Health Research Center, San Diego, CA, ⁶Joint Trauma Analysis & Prevention of Injury in Combat, Frederick, MD

MHSRS-18-0686  POSTER SESSION 1 - #608
Geolocational Nexus of Military Infrastructure & Human Exposure: Using a Current Military GIS to Predict, Analyze, Mitigate, & Communicate Health Risks
Presentation Author: Mr. Paul Pirkle
Paul S. Pirkle III, MS¹, Erik Pedersen, PhD², Brietta Carter, MSE³
¹Battelle, Atlanta, GA, ²Toeroek Associates Inc, Arlington, VA, ³Washington State Department of Health, Seattle, WA

MHSRS-18-0862  POSTER SESSION 1 - #609
Development & Testing of a Moderate Size Animal Model System for Inhaled Metabolic Poison Exposure & Novel Antidote Efficacy Evaluation
Presentation Author: Dr. Tina Saber
Tina Saber¹, Mayer Saidian¹,², Sari B. Mahon¹, David Mukai¹, Jangwoen Lee¹, Tanya Burney¹, Vikhyat S. Bebarta³, Philippe Haouzi⁴, Gerry R. Boss⁵, Matthew Brenner⁶
¹University of California, Irvine, CA, ²The Hebrew University of Jerusalem, Israel, ³University of Colorado-Denver, Denver, CO, ⁴Pennsylvania State University College of Medicine, Hershey, PA, ⁵University of California, San Diego, La Jolla, CA
MHSRS-18-0877 | POSTER SESSION 1 - #610
Real-Time Sampling & Analysis of Organo-Phosphate Compounds
Presentation Author: Dr. Mitch Rubenstein
Mitch Rubenstein, PhD2, John Rogers, PhD2, Sungbong Kim, PhD2, Steve Kim, PhD2, Michael Brothers, PhD4, Doug Adkins5, Patrick Lewis5, Joshua Smith, PhD5
1USAF/711th/SAM, WPAFB, Dayton, OH, 2U. Illinois, Urbana, IL, 3USAF/711th/RHXB, WPAFB, Dayton OH, 4UES, Dayton, OH, 5Defiant Technologies Inc, Albuquerque, NM, 7Henry F. Jackson Foundation, Bethesda, MD

MHSRS-18-0881 | POSTER SESSION 1 - #611
Stinging the Conscience: A Case of Severe Hymenoptera Anaphylaxis & the Need for Provider Awareness
Presentation Author: LT Kyle Mikals
LT Kyle Mikals, USN, MC, Douglas Beakes, MD, LCDR Taylor A. Banks, USN, MC Walter Reed National Military Medical Center, Bethesda MD

MHSRS-18-0893 | POSTER SESSION 1 - #612
Epinephrine as a Treatment of Severe Cyanide & Hydrogen Sulfide Intoxication Induced Asystole: A Novel Treatment for Military Occupational Exposures & Chemical Treats
Presentation Author: Col Vikhyat S. Bebarta
Philippe Haouzi1, Takashi Sonobe1, Col Vikhyat S. Bebarta, USAFR2,3, Annick Judenherc-Haouzi2
1Division of Pulmonary and Critical Care, 2Pennsylvania State University College of Medicine, Hershey, PA, 3University of Colorado School of Medicine, Aurora, CO, 4USAF Enroute Care Research Center/59TH MDW, Fort Sam Houston, TX

MHSRS-18-0925 | POSTER SESSION 1 - #613
Delivering Rapid Computational Profiling of Chemicals by High Throughput Toxicokinetics
Presentation Author: Ms. Christina Davidson
Christina Davidson, MS1, Evan Pitts, MS1, Jeffery Gearhart, PhD2, Yaroslav Chushak, PhD2, Heather Pangburn, PhD3
1Aeromedical Research Department, Wright-Patterson Air Force Base, OH, 2Aeromedical Research Department, Wright-Patterson Air Force Base, OH, 3Aeromedical Research Department, USAF School of Aerospace Medicine, Wright Patterson Air Force Base, OH

MHSRS-18-0989 | POSTER SESSION 1 - #614
Imaging Surveillance of Depleted Uranium-Containing Embedded Fragments in Gulf War I Veterans
Presentation Author: Dr. Stella Hines
Stella E. Hines, MD, MSPH1,2, Richard Breyer, MD1, Joanna Gaitens, PhD, RN1,2, Marianne Cloeren, MD, MPH1,2, Marian Condon, MS, RN1, Patricia Gucer, PhD1,2, Marc Oliver, MPH, MBA, RN1,2, Tracy Roth, RN1,2, Melissa McDiarmid, MD, MPH1,2
1Baltimore VA Medical Center, Baltimore, MD, 2University of Maryland School of Medicine, Baltimore, MD

MHSRS-18-0997 | POSTER SESSION 1 - #615
A Novel 3-Dimensional Testicular Organoid Model for the Study of Human Spermatogenesis & Gonadotoxicity In Vitro
Presentation Author: Dr. Colin Bishop
Hooman Sadri-Ardekania1,2, Kara McAbeea1, Nima Pourhabibi Zarandi1, Meimei Wan1, Samuel S. Pendergraft1, Anthony Atala1,2, Colin E. Bishop2
1Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC, 2Wake Forest University Baptist Medical Center, Winston-Salem, NC

MHSRS-18-1032 | POSTER SESSION 1 - #616
Respiratory Exposure to Particulate Matter from Southwest Asia Induces Pulmonary Inflammation & Fibrosis in Mice
Presentation Author: Dr. Gregory Downey
Gregory Downey1, Maria Wong1, Brian Wong2,3, Karen Mummy2, Cecile Rose3, Max Seibold1, Brian Day1, Chu-Hong-Wei1
1National Jewish Health, Denver, CO, 2Naval Medical Research Unit (NAMRU) Dayton, Dayton, OH, 3Henry M. Jackson Foundation, Bethesda, MD
MHSRS-18-1066  POSTER SESSION 1 - #617
LY315920 (IV) & its Prodrug, LY333013 (Oral) Have Characteristics of Broad Spectrum, High Potency Field Antidotes to Snakebite with Potential for FDA Approval: Porcine & Murine Rescue Models of Lethal Envenomation
Presentation Author: Dr. Matthew Lewin
Matthew Lewin, MD, PhD1, Lyndi Gilliam, DVM, PhD2, John Gilliam, DVM2, Tommaso Bulfone, MSc2, Philip Bickler, MD, PhD3
1Ophirex Inc, Corte Madera, CA, 2Oklahoma State University, Stillwater, OK, 3University of California San Francisco, San Francisco, CA

MHSRS-18-1070  POSTER SESSION 1 - #618
Increased Morbidity & Mortality from Influenza Following Exposure to Combustion Derived Particulate Matter
Presentation Author: Dr. Stephania Cormier
Stephania A. Cormier, PhD1, Vivek Patel, PhD1, Wayne L. Backes, PhD2, Jeffrey Harding3
1Louisiana State University, Baton Rouge, LA, 2Louisiana State University Health Sciences Center, New Orleans, LA

MHSRS-18-1101  POSTER SESSION 1 - #619
Assessing Correlations Between Environmental Exposures & Neurological Disorders Through Optimization of Jointly-Developed In Vitro & In Silico Microbiome Models
Presentation Author: Dr. Catherine Cabrera
Catherine Cabrera, PhD, Todd Thorsen, PhD, David Walsh, PhD, Bea Yu, Jim Comolli, E. Victoria Dydek
1MIT Lincoln Laboratory, Lexington, MA

MHSRS-18-1170  POSTER SESSION 1 - #620
Ultra-Thin Optical Coherence Tomography Endoscopy & Automated Tissue Segmentation for 3D Visualization of Acute Airway Injuries Due to Inhalation of Toxic Agents
Presentation Author: Mr. Yusi Miao
Yusi Miao1, Joseph Jing1, Vineet Desai1, Jacqueline Rioux2, Rhonda Garlick2, Livia A. Veress2, Sari Mahon1, Matthew Brenner1, Carl W. White2, Zhongping Chen1
1University of California, Irvine, Irvine, CA, 2University of Colorado Denver, Denver, CO

MHSRS-18-1239  POSTER SESSION 1 - #621
Activity of a Novel Anti-Cancer Agent in Rare Cancers that Disproportionately Affect the Military
Presentation Author: Dr. William Siders
William M. Siders, Jamie Dempsey-Barber, Mahta Samizadeh, Nannan Jia, Louie Treuting, Katherine Arline, Johanne M. Kaplan
SHEPHERD Therapeutics, Natick MA

MHSRS-18-1256  POSTER SESSION 1 - #622
Unbiased High-Content Phenotyping for Personalized Chemical Exposure Risk Assessment
Presentation Author: Dr. Patrick McLendon
Patrick M. McLendon1,2, Daniel W. Cowan1,2, Steven A. Kawamoto2, Rebecca H. Migliozzi1,2, Heather J. Fullenkamp1,2, Charles Kronk1,2, Christina Davidson1,2, Cassidy Bland1,2, Thomas J. Lamkin2, Heather A. Pangburn1
1USAF School of Aerospace Medicine, WPAFB, OH, 2UES Inc, Dayton, OH, 3711th Human Performance Wing/XP WPAFB, OH

MHSRS-18-1267  POSTER SESSION 1 - #623
Former Armed Forces Institute of Pathology & Joint Pathology Center Records Review of Pulmonary Pathology Diagnoses Among US Military Service Members During the Global War on Terror 2002-2015
Presentation Author: Dr. Michael Lewin-Smith
Michael R. Lewin-Smith, MB, BS, Teri J. Franks, MD
Joint Pathology Center, Silver Spring, MD
Poster Session I

MHSRS-18-1314  POSTER SESSION 1 - #624
Mitochondrial DNA Damage & Metabolic Alterations in Gulf War Veterans
Presentation Author: Mr. Brendan Bechard
Brendan Bechard, BA¹,², Julia Golier, MD¹,², Iouri Makotkine, MD¹,², Rachel Yehuda, PhD¹,²
¹Bronx VA Medical Center, New York, NY, ²Icahn School of Medicine at Mount Sinai, New York City, NY

MHSRS-18-1327  POSTER SESSION 1 - #625
E-cigarettes: Epidemiology & Relationships with Urinary Biomarkers in a Nationally Representative Sample (Aged 19 – 25)
Presentation Author: Dr. John Klaric
John S. Klaric, PhD, Thomas Beltran, MA, Y. Sammy Choi, MD
Womack Army Medical Center, Fort Bragg, NC

MHSRS-18-1339  POSTER SESSION 1 - #626
Retrospective Review of Occupant Injuries in Ground Vehicle Accidents, 2010-2015
Presentation Author: Ms. Jennifer Dudek
Jennifer D. Dudek, MPH¹, James S. McGhee, MD, MPH², Valeta Carol Chancey, PhD², Daniel V. Wise, MEd¹,²
¹US Army Aeromedical Research Laboratory, Fort Rucker, AL, ²Laulima Government Solutions LLC, Orlando, FL

MHSRS-18-1354  POSTER SESSION 1 - #627
Suspended Animation as a Countermeasure to Mitigate Casualty in Mass Casualty Scenarios: A Chemical Biological Approach
Presentation Author: Dr. Charles Hong
Charles Hong, MD, PhD
University of Maryland School of Medicine, Baltimore, MD

MHSRS-18-1372  POSTER SESSION 1 - #628
Metals Toxicology Assessment with Electrochemical & Electroanalytical Methods: Introductory Studies for Novel Device Development
Presentation Author: Dr. Cory Rusinek
Cory A. Rusinek, PhD¹,², Mary Ensch¹,², Michael Becker¹, Thomas Schuelke¹,²
¹Fraunhofer USA Inc, East Lansing, MI, ²Michigan State University, East Lansing, MI

MHSRS-18-1414  POSTER SESSION 1 - #629
Salivary Biomonitoring for Rapid Assessment of Chemical Exposures
Presentation Author: Dr. Jordan Smith
Jordan Smith, PhD¹, Thomas Weber, PhD¹, Dan Du, PhD², Yuehe Lin, PhD²
¹Pacific Northwest National Laboratory, Richland, WA, ²Washington State University, Pullman, WA

MHSRS-18-1440  POSTER SESSION 1 - #631
Utilization of 19F MRI for Identification of Iraqi-Afghanistan War Lung Disease
Presentation Author: Dr. Joseph Mammarrappallil
Scott Shofer, MD², Jesse Tucker, MD¹, Martha Carraway, MD⁴, Maureen Ainsle, MS⁴, Samantha Womack, MS⁵, Cecil Charles, PhD⁶
**MHSRS-18-1490** | **POSTER SESSION 1 - #632**

**Toward Standards-Free Small-Molecule Identification for Metabolomics & Exposomics**

Presentation Author: Dr. Ryan Renslow
Ryan S. Renslow¹, Jamie R. Nuñez¹, Sean M. Colby¹, Dennis G. Thomas¹, Malak M. Tfaily¹, Yasemin Yesiltepe¹, Niranjan Govind², John Cort³, Mark Borkum¹, Nancy Washton¹, Nikola Tolic¹, Elin M. Ulrich⁴, Jon R. Sobus⁵, Thomas O. Metz⁶, Justin G. Teeguarden¹,³

¹Pacific Northwest National Laboratory (PNNL), Richland, WA, ²US Environmental Protection Agency, Research Triangle Park, NC, ³Oregon State University, Corvallis, OR

**MHSRS-18-1499** | **POSTER SESSION 1 - #633**

**Biological Passports for Special Operations Personnel**

Presentation Author: Dr. Ryan Woodman
Ryan Woodman, MD, Jeff Student, BS, Warren Lockette, MD
University of Missouri, Columbia, MO

**MHSRS-18-1503** | **POSTER SESSION 1 - #634**

**STAT6-IP Targeting of Innate Immunity for Therapeutic Intervention in Asthma**

Presentation Author: Dr. Elizabeth Fixman
Elizabeth D. Fixman, PhD, Vanessa Moarbes, MSc, Hedi Zhao, BSc, Haya Aldossary, MSc, Véronique Gaudreault, MSc, Jichuan Shan, MD, Lydia Labrie, BSc, Brian J. Ward, MD, MSc
Research Institute of the McGill University Health Centre, Montréal, Québec, Canada

**MHSRS-18-1521** | **POSTER SESSION 1 - #635**

**Sickle Cell Trait & the Military: The Servicemember Beyond the Heat Injury**

Presentation Author: CAPT Darrell Singer
CAPT Darrell E. Singer, USPHS, MC, Celia Byrne, PhD¹, Ligong Chen, MD², Stephanie Shao, MPH¹,², Jonathan Goldsmith, MD¹, COL (Ret) David W. Niebuhr, USA, MC²

¹Uniformed Services of the Health Sciences, Bethesda, MD, ²Walter Reed National Military Medical Center, Bethesda, MD, ³Department of Health & Human Services, Silver Spring, MD

**MHSRS-18-1530** | **POSTER SESSION 1 - #636**

**Experience with Low Dose Computed Tomography for Lung Cancer Screening in a Military Treatment Facility**

Presentation Author: Lt Benjamin Baker
LT Christian S. McEvoy, USN, MD, MPH, MC, Darcy A Jones, MS, Jaclyn Ellis, PhD,  CDR Christopher Oxner, USN, MD, MC, CDR Timothy A Platz, USN, DO, MC
Naval Medical Center Portsmouth (NCMP), Portsmouth, VA

**MHSRS-18-1628** | **POSTER SESSION 1 - #637**

**Effects of Combustion-Derived Particulates on Cytochrome P450-Mediated Foreign Compound Metabolism**

Presentation Author: Dr. Wayne Backes
Wayne L. Backes¹, Stephanie A. Cormier², James R. Reed²

¹Louisiana State University Health Sciences Center, New Orleans, LA, ²Louisiana State University, Baton Rouge, LA

**MHSRS-18-1855** | **POSTER SESSION 1 - #638**

**Evaluation of Anticonvulsant Treatments for Nerve Agent-Induced Seizures Across Sex & Age Groups**

Presentation Author: CPT Liana Matson
CPT Liana Matson, PhD, Kari Haines, Emily Dunn, Cherish Ardinguer, Hilary McCarren, PhD, Stephanie Miller-Smith, PhD, John McDonough, PhD
US Army Medical Research Institute of Chemical Defense
Detection of Salmonella Utilizing Immobilized Antibody Capture & Silica-Encapsulated SERS Nanoparticles
Presentation Author: Mr. Joseph Spano
Joseph L. Spano, MS, Luis A. Martinez, PhD, CAPT Jonathan M. Stahl, USN, DC, DDS, PhD, MPH, Amber M. Mallory, PhD
Naval Medical Research Unit, San Antonio, TX

Environmental, Staff & Patient Safety in MRI
Presentation Author: Dr. Maureen Hood
Maureen Hood, PhD, RN1,2, Robert Shih, MD2, Kester Kemp, BS, RT (MR)2, Vincent Ho, MD, MBA1,2
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD

Upper & Lower Extremity Altitude Chamber DCS
Presentation Author: Lt Col William Hayes
Brooke Army Medical Center, San Antonio, TX

Increased Survival in Severe CO Poisoning Using an Intravenous CO Scavenger Molecule, Mediated by Reversal of CO-Mediated Mitochondrial Dysfunction
Presentation Author: Dr. Jason Rose
Jason Rose, MD, MBA, Qinzi Xu, MD, Ling Wang, MD, PhD, Ivan Azarov, PhD, Nancy Huang, Qin Tong, Kaitlin Bocian, MA, Catherine Corey, MS, MPH, Danielle Guimaraes, PhD, Charles McTiernan, PhD, Christopher O’Donnell, PhD, Sruti Shiva, PhD, Jesus Tejero, PhD, Mark Gladwin, MD
University of Pittsburgh, Pittsburgh, PA

Nerve-on-a-Chip for Screening Neurotoxicity from Exposure to Chemical Compounds
Presentation Author: Dr. Hieu Nguyen
Hieu Nguyen, PhD1, Lowry Curley, PhD1, Michael Moore, PhD1,2
1AxoSim Inc, New Orleans, LA, 2Tulane University, New Orleans, LA

Computational Air Modeling of Flight Line Pollution Generating Operations
Presentation Author: Mr. Daniel Reilly
Daniel Reilly, MS1, Austin Wardall, MS1, Christin Grabinski, PhD2, John Frazey, PhD1,2UES Inc, Dayton, OH, 2Air Force Research Labs, WPAFB, OH

Heavy Metal Effects on Diverse Microbiota
Presentation Author: Dr. John Lewis

Identification & Validation of Bacteria in Water Samples Using Portable Flow Cytometry-Based Technology
Presentation Author: Dr. Amber Mallory
Thomas E. Bird, BS, CAPT Jonathan M. Stahl, DDS, PhD, Amber Mallory, PhD
Naval Medical Research Unit San Antonio, Fort Sam Houston, TX

ARAI Mx – Reconstitution Auto-Injector for Medical Countermeasures
Presentation Author: LTC Arik Eisenkraft
LTC Arik Eisenkraft1,2, Amir Genosar1, Jeff Steward1
1AktiVax Inc, Boulder, CO, 2Hebrew University of Jerusalem
MHSRS-18-1852  POSTER SESSION 1 - #649
Bioaerosol Capture & Identification on a Contaminated Aircraft
Presentation Author: Ms. Megan Steele
Megan Steele¹, Wanda Lyon, PhD², Brian Geier, MS², Zachary Smith, MS², Christin Grabinski, PhD¹
¹United States Air Force School of Aerospace Medicine, Wright Patterson Air Force Base, OH, ²Airman Systems
Director, Wright Patterson Air Force Base, OH

MHSRS-18-2120  POSTER SESSION 1 - #650
Methods to Characterize Operational Impacts of Penetrating, High Power, Radiofrequency Exposures
Presentation Author: Mr. Gregory Rule
Gregory Rule, MS, PE¹, Joseph Paranto, MS², Randolph D. Glickman, PhD³
¹ARA Inc, San Antonio, TX, ²ARA, Inc, Albuquerque, NM, ³University of Texas Health Science Center, San Antonio, TX

MHSRS-18-2182  POSTER SESSION 1 - #652
Prophylactic Preconditioning Troops Against Microbiome Dysbiosis
Presentation Author: Dr. Patrick Gillevet
Patrick Gillevet, PhD

CLINICAL CASE STUDIES: MILITARY PROTOCOLS FOR SURVEILLANCE,
ASSESSMENT, & TREATMENT OF PATIENTS POST-CHEMICAL EXPOSURE

MHSRS-18-0006  POSTER SESSION 1 - #653
Diagnosis & Treatment of Allergic Contact Dermatitis in Austere Environments
Presentation Author: LCDR Kevin Wright
Lcdr Kevin T. Wright, MD¹, Jenna Borok, MAS²
¹Naval Center San Diego, San Diego CA, ²University of California, Los Angeles, CA

MHSRS-18-0050  POSTER SESSION 1 - #654
Enaminone Modulators of Extrasynaptic 4 3 GABAA Receptors Reverse Electrographic Seizures & Prevent
Neuronal Cell Death After Acute Organophosphate Poisoning
Presentation Author: Dr. Timothy Johnstone
Tim Johnstone¹, Hilary McCarren², Derk Hogenkamp³, Kelvin W. Gee¹, John McDonough²
¹University of California - Irvine, Irvine, Irvine, CA, ²US Army Medical Research Institute of Chemical Defense, Aberdeen
Proving Ground, MD

MHSRS-18-0795  POSTER SESSION 1 - #655
Put on Your Mask, You Fool — How Military Medicine Responded to Chemical Warfare Injuries During World
War I & the Value of Medical Museum Collections to Modern-Day Research & Education
Presentation Author: Mr. Timothy Clarke Jr
Timothy Clarke, Steven Hill, Ellen Richardson, Alan Hawk, Laura Cutter, Brian Sapatola, Kristen Pearlstein
Defense Health Agency

MHSRS-18-1205  POSTER SESSION 1 - #656
Ganaxolone for Nerve Agent Status Epilepticus Treatment
Presentation Author: Savitha Reddy

MHSRS-18-1517  POSTER SESSION 1 - #657
Resetting Homeostasis in Gulf War Illness: A Computational Biology Hypothesis Tested in a Translational
Mouse Model
Presentation Author: Dr. Kimberly Kelly
Kimberly A. Kelly¹, Lindsay T. Michalovicz¹, Julie V. Miller¹, Mark Rice³, SaurabhVashishtha², Travis J. Craddock¹, Mary
Anne Fletcher³, Marianna Morris³, Nancy Klmas³, Diane B. Miller¹, Gordon Broderick¹, James PO’Callaghan¹
¹CDC NIOSH, Morgantown, WV, ²University of Alberta, Edmonton, AB, Canada, ³Nova Southeastern University, Fort
Lauderdale, FL, ⁴Rochester General Hospital, Rochester, NY
MEDICAL ADVANCEMENTS IN OPERATIONAL & CLINICAL HEARING PROTECTION & TREATMENT

MHSRS-18-0352 POSTER SESSION 1 - #659
A Behavioral Change Approach to Reduce Hearing Loss Among Service Members: The Department of Defense Hearing Center of Excellence Educational Pilot Study
Presentation Author: Dr. Tanisha Hammill
Tanisha Hammill, PhD, Natasha Gorrell, MSPH, Julieta Scalo, PharmD, PhD, LTC John Merkley, AuD
DoD Hearing Center of Excellence, JBSA Lackland, TX

MHSRS-18-0452 POSTER SESSION 1 - #660
Clinical Trials of Vagus Nerve Stimulation to Treat Tinnitus & PTSD
Presentation Author: Dr. Michael Kilgard
Michael Kilgard, PhD, Jane Wigginton, MD
1University of Texas at Dallas, Richardson, TX, 2University of Texas Southwestern Medical Center, Dallas, TX

MHSRS-18-0837 POSTER SESSION 1 - #661
Hearing Damage Induced by Blast Overpressure at the Mild TBI Level in a Chinchilla Model
Presentation Author: Dr. Rong Gan
Rong Gan, PhD, Tao Chen, MD, Kyle Smith, MS
University of Oklahoma, Norman, OK

MHSRS-18-1463 POSTER SESSION 1 - #662
A Wearable System for the Prevention of Motion Sickness & VR-Induced Sickness
Presentation Author: Dr. Didier Depireux
Didier A. Depireux, PhD1,2,4, Robert True1,4, Jack Daggitt4, Thomas Hardart3, Jonathan Akers, PhD4, Samuel Owen, MS4, Col (Ret), MD5
1University of Maryland, College Park, MD, 2University of Maryland, Baltimore, MD, 3University of Maryland, Baltimore County, MD, 4OtolithLabs, Washington, DC, 5Veterans Administration, Fayetteville, NC

MHSRS-18-1627 POSTER SESSION 1 - #664
Why Correctly Coding Your Diagnosis Matters to Your Patient with Acute Noise-Induced Hearing Loss
Presentation Author: Dr. Carlos Esquivel
John Lally, PhD1, Carlos R. Esquivel, MD2
1San Antonio Military Medical Center, San Antonio, TX, 2Hearing Center of Excellence, San Antonio, TX

OPEN POSTER SESSION 1 - #666

MHSRS-18-1783 POSTER SESSION 1 - #667
Hearing Outcomes in Sudden Sensorineural Hearing Loss in the Department of Defense
Presentation Author: Lt Charlotte Hughes
Lt Charlotte K Hughes, MD, MPH1, Jakob Fischer, MD2, Carlos R. Esquivel, MD1,2, 1Lt Jason Adams, USAF
1San Antonio Military Medical Center, San Antonio, TX, 2Walter Reed National Military Medical Center, Bethesda, MD, 3Hearing Center of Excellence, San Antonio, TX, 4Uniformed Services University of Health Sciences, Bethesda, MD

MHSRS-18-1815 POSTER SESSION 1 - #668
Mechanical Phantom Models for Characterization of Bioeffects of Exposure to Underwater Sound
Presentation Author: Dr. Ethan Hada
Brandon M. Casper, PhD, Matthew A. Babina, M. Eng, Ethan A. Hada, PhD
Naval Submarine Medical Research Laboratory, Submarine Base New London, Groton, CT
MHSRS-18-1869  POSTER SESSION 1 - #669
Development of a New Auditory Injury Model for Quantifying Inner Ear Damage Mechanisms
Presentation Author: Dr. Timothy Walilko
Tim Walilko1, PhD, Nathaniel Greene, PhD2, Jim Easter3, Ted Argo, PhD4, Dan Tollin, PhD2
1Applied Research Associates, Littleton, CO, 2University of Colorado, Aurora, CO, 3Cochlear Boulder, Boulder, CO

MHSRS-18-1922  POSTER SESSION 1 - #670
Investigation of Deep Neural Networks in a Brain-Computer Interface for Two-Talker Attention Decoding
Presentation Author: Dr. Gregory Ciccarelli
Gregory Ciccarelli, PhD2, Michael Nolan2, Joey Perricone3, Paul Calamia, PhD4, Thomas Quatieri, ScD1, James O’Sullivan, PhD3, Nima Mesgarani, PhD2, Christopher Smalt, PhD3
1MIT Lincoln Laboratory, Lexington, MA, 2Columbia University, New York, NY

MHSRS-18-1945  POSTER SESSION 1 - #671
Earplugs for Preventing Blast Injury of the Ear: Acoustic-Fuse & Reversible Designs
Presentation Author: Dr. Soroush Shabahang
Soroush Shabahang, PhD, Behrouz Tavakol, PhD, Seok Hyun Yun, PhD
Harvard Medical School, Massachusetts General Hospital, Boston, MA

MHSRS-18-1978  POSTER SESSION 1 - #672
Assessment of a Commercial Virtual Reality System for Rehabilitation of Warfighters with Multisensory Impairments in Mobile Military Treatment Facilities
Presentation Author: Mrs. Ashley Zaleski-King
Ashley Zaleski-King, AuD, Robin Pinto, AuD, Donielle Brasure, DPT, Rebecca Corlett, DPT, Douglas Brungart, PhD
Walter Reed National Military Medical Center, Rockville, MD

MHSRS-18-2047  POSTER SESSION 1 - #673
Exposure to Intense Noise Causes Acute Vestibular & Balance Loss
Presentation Author: Dr. Michael King
W. Michael King, PhD, Richard Altschuler, PhD, Courtney Stewart, PhD
University of Michigan, Ann Arbor, MI

MHSRS-18-2091  POSTER SESSION 1 - #674
In Search of Secreted Molecular Biomarkers of Noise-Induced Hearing Loss: Cytokine Measurements in Perilymph of Young & Aged Mice
Presentation Author: Dr. Konstantina Stankovic
Konstantina M. Stankovic, MD, PhD1,2, Lukas D. Landegger, MD, PhD1,2, Takeshi Fujita, MD, PhD1,2, Sasa Vasilijic, PhD1,2, Vitor Y. Soares, MD, PhD1,2, Lei Xu, MD, PhD3 Massachusets Eye & Ear, Boston, MA, 2Harvard Medical School, Boston, MA, 3Massachusetts General Hospital & Harvard Medical School, Boston, MA

OCULAR TRAUMA CASUALTY MANAGEMENT GRAND ROUNDS

MHSRS-18-0026  POSTER SESSION 1 - #675
Antimicrobial Blue Light Therapy for Candida Albicans Keratitis in Ex Vivo Rabbit Corneas
Presentation Author: Dr. Quan Yuan
Quan Yan, MD, PhD1,2, Hong Zhu, MD, PhD2, Clemens Alt, PhD1, Xiaodong Sun, MD, PhD2, Clinton K. Murray, MD2, Irmgard Behlau, MD1, Irene E. Kochevar, PhD1, Tianhong Dai, PhD1 Massachusets General Hospital, Harvard Medical School, Boston, MA, 2Shanghai General Hospital, Shanghai Jiao Tong University, Shanghai, China, 31st Area Medical Laboratory, US Army, Aberdeen, MD, 4Mount Auburn Hospital, Harvard Medical School, Cambridge, MA
MHSRS-18-0294  POSTER SESSION 1 - #676
Combining MIGS: A Case Series
Presentation Author: ENS Kevin Chen
Ruston Hess, DO¹, Kevin Chen, MSIV², Won Kim, MD¹
¹Walter Reed National Military Medical Center, Bethesda, MD, ²Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-0313  POSTER SESSION 1 - #677
An Ocular Wound Chamber for the Prevention of Exposure Keratopathy
Presentation Author: SFC Dustyn Rose
SFC Dustyn Rose¹, Andrew W. Holt¹, Jennifer S. McDaniel¹, Elof Eriksson², Anthony J. Johnson¹, Gina L. Griffith¹
¹US Army Institute of Surgical Research, Fort Sam Houston, TX, ²Harvard Medical School, Boston, MA

MHSRS-18-0325  POSTER SESSION 1 - #678
Specialized Pro-Resolving Lipid Mediators, Maresin 1 (MaR1) & Neuroprotectin D1 (NPD1) Reduce Gliosis in Retina & Optic Nerve Injury Induced by Blast Wave Exposure
Presentation Author: Dr. J. David Rios
J. David Rios, Peter Johnson, Leticia Bice, Peter Edsall, Heuy-Ching H. Wang, Brian J. Lund
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

MHSRS-18-0336  POSTER SESSION 1 - #679
Antibiotic Loading of SCCO2 Sterilized & Lyophilized Human Amniotic Membrane
Presentation Author: Dr. Jennifer McDaniel
Jennifer S. McDaniel, PhD, Anthony J. Johnson, MD, David O. Zamora, PhD
US Army Institute of Surgical Research, Fort Sam Houston, TX

MHSRS-18-0425  POSTER SESSION 1 - #680
Prevalence of Myopia & Other Refractive Error in Newly Enlisted Airmen at Joint Base San Antonio (JBSA)- Lackland
Presentation Author: Capt Donovan Reed
Capt Donovan Reed, MD¹, Joseph Santamaria, MD¹, Aditya Mehta, MD¹, Doug Apsey, OD², Gary Legault, MD¹
¹San Antonio Military Medical Center, San Antonio, TX, ²Wilford Hall Ambulatory Surgical Center (WHASC), San Antonio, TX

MHSRS-18-0498  POSTER SESSION 1 - #681
Nanofiber-Reinforced Hydrogels for the Stabilization of Open Globe Injuries
Presentation Author: Dr. Christopher Tison
Lauren Costella, Kelsey Broderick¹, Andrew Eiseman, MD², Christopher Tison, PhD¹
¹Luna Innovations Incorporated, Roanoke, VA, ²Storm Eye Institute, Charleston, SC

MHSRS-18-0534  POSTER SESSION 1 - #682
Targeted Particle Tracking in an Aqueous Chamber Fluid Flow Model
Presentation Author: Ms. Lauren Cornell
LE Cornell¹,², JS McDaniell, L Bunegin, BJ Lund, DO Zamora¹
¹US Army Institute of Surgical Research, JBSA-Fort Sam Houston, TX, ²University of Texas Health Science Center at San Antonio, San Antonio, TX

MHSRS-18-0618  POSTER SESSION 1 - #684
Risk Factors Associated with Developing Proliferative Vitreoretinopathy (PVR) After Posterior Segment Trauma from Combat Injuries in Service Members During OIF/OEF from Data Collected at Walter Reed Army Medical Center (WRAMC) from 2001-2011
Presentation Author: Mr. Brendan Blackford
Brendan Blackford, MHS, LTC Marcus Colyer, MD, Cpt Katherine Baker, DO
Walter Reed National Military Medical Center, Bethesda, MD
MHSRS-18-0808 POSTER SESSION 1 - #685
Identifying the Incidence of Data Entry Errors on Nomograms in Refractive Surgery
Presentation Author: COL Bruce Rivers
COL Bruce A. Rivers, MD\textsuperscript{1}, Denise S. Ryan, MS\textsuperscript{1}, Rose K. Sia, MD\textsuperscript{1}, Michael P Smith, MD\textsuperscript{1}, Vladimir S. Yakopson, MD\textsuperscript{1}, Samantha B. Rodgers, MD\textsuperscript{1}, Ryan L. Roberts, MD\textsuperscript{2} \textsuperscript{1}Fort Belvoir Community Hospital, Fort Belvoir, VA,  \textsuperscript{2}Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-0982 POSTER SESSION 1 - #686
Intraocular Projector Visual Prosthetic Implant Can Restore & Enhance Warfighter Vision
Presentation Author: Dr. Charles Yu
Charles Q. Yu, Mark I. Rosenblatt, Songbin Gong
University of Illinois, Champaign, IL

MHSRS-18-0995 POSTER SESSION 1 - #687
A Rabbit Model of Penetrating Eye Injury Leading to Intraocular Fibrosis in the Posterior Segment
Presentation Author: Dr. Heuy-Ching Wang
Heuy-Ching Wang, PhD, Teresa A Burke, BS, Gregory T Bramblett, MD, PhD, Whitney A Greene, PhD
US Army Institute of Surgical Research, Fort Sam Houston, TX

MHSRS-18-1003 POSTER SESSION 1 - #688
Quantitative Assessment of Retina Explant Viability in a Porcine Ex Vivo Neuroretina Model
Presentation Author: Dr. Heuy-Ching Wang
Heuy-Ching Wang, PhD, Christina L. Rettinger, PhD
US Army Institute of Surgical Research, Fort Sam Houston, TX

MHSRS-18-1272 POSTER SESSION 1 - #689
Effects of a Novel Amnion-Derived Cell Secretome (ST266) in an Ocular Corneal Wound Healing Rabbit Model
Presentation Author: Howard Wessel\textsuperscript{1,2,3,4,5}
Howard Wessel\textsuperscript{1}, Larry Brown\textsuperscript{1}, Erika Klitsch\textsuperscript{1}, Elise Gill\textsuperscript{1}, Justin Prater\textsuperscript{2}, David Culp\textsuperscript{2}, Brian C. Gilger\textsuperscript{3} \textsuperscript{1}Noveome Biotherapeutics Inc, Pittsburgh, PA, \textsuperscript{2}Powered Research LLC, Research Triangle Park, NC, \textsuperscript{3}North Carolina State University College, Raleigh, NC

MHSRS-18-1282 POSTER SESSION 1 - #690
Novel Vision Restorative Therapeutic ‘Lacripep’ from the Ocular Tear Protein ‘Lacritin’
Presentation Author: Dr. Gordon Laurie
Gordon W. Laurie, PhD\textsuperscript{1}, J. Andrew MacKay, PhD\textsuperscript{1}, Robert L. McKown, PhD\textsuperscript{1}, Sarah Knox, PhD\textsuperscript{1}, Nancy A. McNamara, PhD\textsuperscript{1,5} \textsuperscript{1}University of Virginia, Charlottesville, VA, \textsuperscript{2}University of Southern California, Los Angeles, CA, \textsuperscript{3}James Madison University, Harrisonburg, VA, \textsuperscript{4}University of California San Francisco, San Francisco, CA, \textsuperscript{5}University of California Berkeley, Berkeley CA

MHSRS-18-1290 POSTER SESSION 1 - #691
The Phospholipid-Binding Protein Annexin A2 Mediates Development of Proliferative Vitreoretinopathy in a Murine Model of Penetrating Ocular Injury
Presentation Author: Dr. Katherine Hajjar
Katherine A. Hajjar, MD\textsuperscript{1}, Nadia Hedhli, PhD\textsuperscript{1}, Dena Almeida, BS\textsuperscript{1}, Mrinali Patel Gupta, MD\textsuperscript{1}, Szilard Kiss, MD\textsuperscript{1}

MHSRS-18-1360 POSTER SESSION 1 - #692
Characterization of a Porcine Optic Nerve Injury Model
Presentation Author: CPT Andrew Holt\textsuperscript{1,2}
CPT Andrew Holt, PhD\textsuperscript{1}, Elaine Por, PhD\textsuperscript{1}, Vijay Gorantla, MD, PhD\textsuperscript{2}, Melody Sandoval\textsuperscript{1}, Lekrystal Harris\textsuperscript{1}, Jorge Acevedo\textsuperscript{1}, Larry Benowitz, PhD\textsuperscript{1}, Jeffrey Goldberg, MD, PhD\textsuperscript{2}, Gregory Bramblett, MD, PhD\textsuperscript{2}, Jason Harris, MD\textsuperscript{1} \textsuperscript{1}US Army Institute of Surgical Research, Fort Sam Houston, TX, \textsuperscript{2}Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC, \textsuperscript{3}Boston Children’s Hospital & Harvard Medical School, Boston, MA, \textsuperscript{4}Stanford University, Palo Alto, CA
Poster Session I

MHSRS-18-1393  POSTER SESSION 1 - #693
Elimination of Transcription Errors in Refractive Surgery
Presentation Author: Dr. Ryan Roberts
Ryan Roberts, MD1, Denise Ryan, MA2, Rose Sia, MD2, James Colgain, OD2, Thu-Ha Easter, MD1, Paul Houghtaling, MD1, Joseph Pastrnak, MD1, Scott McClellan, MD1, Bruce Rivers, MD2
1Walter Reed National Military Medical Center, Bethesda, MD, 2Fort Belvoir Community Hospital, Alexandria, VA

MHSRS-18-1422  POSTER SESSION 1 - #694
Anti-Inflammatory Effect of a Self-Assembling Peptide in the Lipopolysaccharide Induced Inflammation Model of Eye Injury
Presentation Author: Dr. Rutledge Ellis-Behnke
Rutledge Ellis-Behnke, PhD1-3, SWH Liang, PhD2, Rahul A Jonas, MD1, Jost B. Jonas, MD2, Jayne Prats, PhD4, Terrence Norchi, MD5 Joseph Behnke, BS3
1Massachusetts Institute of Technology, Cambridge, MA, 2University of Hong Kong, Hong Kong, China, 3University of Heidelberg, Mannheim, Germany, 4Arch Therapeutics, Framingham, MA

MHSRS-18-1478  POSTER SESSION 1 - #695
Microvascular Effects Following Traumatic Ocular Injury
Presentation Author: Ms. Adriana Nozima
Adriana M.M. Nozima1, PhD, Jaime Castro1, Oliya Caballero1, Manuel Ledo1, Matthew Harper, PhD2, Susana Martinez-Conde, PhD3, Stephen L. Macknik, PhD1
1State University of New York, Brooklyn, NY, 2University of Iowa, Iowa City, IA

MHSRS-18-1485  POSTER SESSION 1 - #696
Technique for Obtaining Flash Visual Evoked Potentials (fVEP) in the Yucatan Mini-Pig Using a Handheld Device
Presentation Author: SGT Melody Sandoval
Jason Harris, MD, SGT Melody Sandoval, Gregory Bramblett, MD, PhD, Elaine Por, PhD, Chiquita Thomas Benson, MS, Lekrystal Harris, Andrew Holt, PhD
US Army Institute of Surgical Research, Fort Sam Houston, TX

MHSRS-18-1492  POSTER SESSION 1 - #697
Optimization of a Surgical Approach to the Porcine Optic Nerve
Presentation Author: Dr. Gregory Bramblett
Gregory Bramblett, MD, PhD1, Andrew Holt, PhD1, Elaine Por, PhD1, Jason Harris, MD1, Melody Sandoval1, Chiquita Thomas Benson, MS1, Lekrystal Harris1, Vijay Gorantla, MD, PhD2
1US Army Institute of Surgical Research, Fort Sam Houston, TX, 2Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC

MHSRS-18-1818  POSTER SESSION 1 - #698
Sign Location by Profoundly Blind Persons Using a BrainPort Vision Pro Mobile Application
Presentation Author: Dr. Patricia Grant
Patricia Grant1, Meesa Maeng1-2, Tiffany Arango3, Janet P Szlyk4, Rich Hogle4, Derald Woods4, William H. Seiple4
1Wicab Inc, Middleton, WI, 2The Chicago Lighthouse for People Who Are Blind or Visually Impaired, Chicago, IL, 3Northeastern University, Boston, MA, 4Lighthouse Guild, New York, NY

MHSRS-18-1633  POSTER SESSION 1 - #699
Case Report - Emergency Ultrasound Detection of Valsalva Retinopathy
Presentation Author: CPT Kyle Couperus
2LT Stephanie Angel, CPT Kyle Couperus, MD, CPT Noah Kim, MD, LTC Michael Perreault, MD
Madigan Army Medical Center, Tacoma, WA
<table>
<thead>
<tr>
<th>Poster Session 1 - #700</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-2053</strong></td>
</tr>
<tr>
<td>Novel Elovanoids Protect the Retina from Damage &amp; Neurodegenerative Diseases</td>
</tr>
<tr>
<td>Presentation Author: Dr. Nicolas Bazan</td>
</tr>
<tr>
<td>Nicolas G. Bazan, PhD, Khanh Do, PhD, Aubrey Kautzmann, PhD, William C. Gordon, PhD</td>
</tr>
<tr>
<td>LSU Health New Orleans, New Orleans, LA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #701</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-1701</strong></td>
</tr>
<tr>
<td>The USAARL Surrogate Eye Model for Evaluating Anatomical &amp; Biomechanical Responses to Ocular Trauma with or without Protective Eyewear</td>
</tr>
<tr>
<td>Presentation Author: Dr. Michael Smolek</td>
</tr>
<tr>
<td>Michael K. Smolek, PhD, FARVO, LTC James Q. Truong, OD, PhD, Thomas H. Harding, PhD, Morris R. Lattimore, OD, PhD</td>
</tr>
<tr>
<td>United States Army Aeromedical Research Laboratory, Fort Rucker, AL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #702</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-2057</strong></td>
</tr>
<tr>
<td>A Novel Approach to Restoring Sight After Trauma to the Eye Surface</td>
</tr>
<tr>
<td>Presentation Author: Dr. Haydee Bazan</td>
</tr>
<tr>
<td>Haydee E.P. Bazan, PhD, Jiucheng He, MD, PhD, Thang L. Pham, PhD, Azucena Kakazu, PhD</td>
</tr>
<tr>
<td>LSU Health New Orleans, New Orleans, LA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #703</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-1791</strong></td>
</tr>
<tr>
<td>Military Refractive Surgery Practice Patterns Questionnaire</td>
</tr>
<tr>
<td>Presentation Author: MAJ William Gensheimer</td>
</tr>
<tr>
<td>MAJ William G. Gensheimer, MD1, Richard Townley, MD2</td>
</tr>
<tr>
<td>1Malcolm Grow Medical Clinics &amp; Surgery Center, Joint Base Andrews, MD, 2Joint Warfighter Refractive Surgery Center, Joint Base San Antonio – Lackland, TX</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #704</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-2145</strong></td>
</tr>
<tr>
<td>Determination of Tissue Level Injury Threshold for Ocular Trauma by Finite Element Analysis</td>
</tr>
<tr>
<td>Presentation Author: Dr. LiYing Zhang</td>
</tr>
<tr>
<td>LiYing Zhang, PhD, Kunal Dave, BS, Ding Lyu, MS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #705</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-2195</strong></td>
</tr>
<tr>
<td>Development of Differentiation Induction Strategies to Generate Corneal Endothelial Cells from Mesenchymal Stem Cells</td>
</tr>
<tr>
<td>Presentation Author: SPC Austin Rogers</td>
</tr>
<tr>
<td>US Army Medical Research Institute of Chemical Defense, Aberdeen, MD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Session 1 - #706</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHSRS-18-2223</strong></td>
</tr>
<tr>
<td>Design &amp; Fabrication of a Bioengineered Tissue Construct for the Surgical Repair of Sulfur Mustard-Induced Ocular Injury</td>
</tr>
<tr>
<td>Presentation Author: SPC Joshua Hudson</td>
</tr>
<tr>
<td>US Army Medical Research Institute of Chemical Defense, Aberdeen, MD</td>
</tr>
</tbody>
</table>
MISCELLANEOUS

MHSRS-18-2225  POSTER SESSION 1 - #707
InforOEM: Index for Occupational and Environmental Exposure Monitors
Presentation Author: Dr. Kate Horne
Topic Area: Environmental & Occupational Exposures
Daniel Logsdon, MS, Joshua Elliott, Jaime Nichols, MPH, Helen Phipps, PhD, Sara Sanders, Martin Wojtyniak, PhD, Kate Horne, PhD
Booz Allen Hamilton, Falls Church, VA

MHSRS-18-1593  POSTER SESSION 1 - #708
Effectiveness of a Novel Prehospital Trauma Training Program for Austere, High Volume Trauma, International Settings: A Prospective Study
Presentation Author: Dr. Nee-Kofi Mould-Millman
Topic Area: Research in Prolonged Field Care and Pre-Hospital Tactical Combat Casualty Care
Nee-Kofi Mould-Millman, MD, Julia Dixon, MD, Andrew Hopkinson, Andrew Lamp, Peter Lesch, Michael Lee, Binyamien Kariem, Wayne Philander, Aldrin Mackier, Craig Williams, Shaheem de Vries, MBChB, MPhil, Maj Steven G. Schauer, MD, MS, LTC Cord Cunningham, MD, MPH, Maj Joe Maddry, MD, Col Vikhyat Bebarta, MD, Adit A. Ginde, MD, MPH
1University of Colorado, School of Medicine, Aurora, CO, 2Western Cape Government Health, Emergency Medical Services, Cape Town, South Africa, 3USAF Enroute Care Research Center, JBSA, Fort Sam Houston, TX, 4US Army Institute of Surgical Research, Fort Sam Houston, TX

MHSRS-18-1716  POSTER SESSION 1 - #709
ErythroMer (EM), a Nanoscale Bio-Synthetic Artificial Red Blood Cell: Pre-Clinical Results
Presentation Author: Dr. Jennifer Richards
Topic Area: Miscellaneous
MHSRS-18-1076 POSTER SESSION 2 - #435
Symptom Validity Screening & Mild Traumatic Brain Injury in a Non-Treatment Seeking Veteran Sample
Presentation Author: Dr. Casey Gilmore
Casey S. Gilmore, PhD1,2, Greg J. Lambert, PhD1,3, Nathaniel W. Nelson, PhD2,4, Kelvin O. Lim, MD1,2,3
1Defense & Veterans Brain Injury Center, Minneapolis, MN, 2Minneapolis VA Medical Center, Minneapolis, MN, 3University of Minnesota, Minneapolis, MN, 4University of St. Thomas, Minneapolis, MN

MHSRS-18-1078 POSTER SESSION 2 - #436
feasibility assessment of a flexible outcome assessment battery for use in longitudinal TBI research
Presentation Author: Dr. Yelena Bodien
Yelena G Bodien, PhD1,2, Mark Sherer, PhD1,3, Sabrina R Taylor, PhD5, Sureyya Dikmen, PhD6, John K Yue, BA2, Murray Stein, MD7, John D Corrigan, PhD8, Harvey Levin, PhD4, Nancy Temkin, PhD4, Joan Machamer, MA6, Kim Boase, BA6, Mary Vassar, RN, MS9, Michael McCrea, PhD9, Thomas McAllister, MD10, John Whyte, MD, PhD11, Joel H Kramer, PsyD9, Laura Ngwenya, MD, PhD12, Geoffrey T Manley, MD, PhD9, Joseph T Giacino, PhD2, TRACK-TBI Investigators
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2Spaulding Rehabilitation Hospital, Harvard Medical School, Charlestown, MA, 3TIRR Memorial Hermann, Houston, TX, 4Baylor College of Medicine, Houston, TX, 5University of California, San Francisco, CA, 6University of Washington, Seattle WA, 7University of California, San Diego, CA, 8The Ohio State University, Columbus OH, 9Medical College of Wisconsin, Milwaukee, WI, 10University of Indiana School of Medicine, Indianapolis, IN, 11Moss Rehabilitation Research Institute, Elkins Park, PA, 12University of Cincinnati, Cincinnati OH

MHSRS-18-1096 POSTER SESSION 2 - #437
Functional Status Examination in Patients with Moderate to Severe Traumatic Brain Injuries
Presentation Author: Dr. Nancy Temkin
Joan Machamer, MA1, Nancy R. Temkin, PhD1, Geoffrey T. Manley, MD2, Sureyya Dikmen, PhD3
1University of Washington, Seattle, WA, 2University of California San Francisco & Zuckerberg San Francisco General Hospital, San Francisco, CA

MHSRS-18-1120 POSTER SESSION 2 - #438
White-Matter Abnormalities in Sport-Related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-Dod Care Consortium
Presentation Author: Dr. Yu-Chien Wu
Yu-Chien Wu, PhD1, Sourajit Mitra Mustafi, PhD1, Jaroslav Harezlak, PhD2, Kevin M. Koch, PhD3, Andrew S. Nencka, PhD3, Timothy B. Meier, PhD3, John D. West, MS1, Christopher C. Giza, MD4, John P. DiFiori, MD4, Kevin M. Gusiewicz, PhD5, Jason P. Mihalik, PhD6, Stephen M. LaConte, PhD5, Stefan M. Duma, PhD6, Steven P. Broglio, PhD7, Andrew J. Saykin, PsyD8, Michael McCrea, PhD9, Thomas W. McAlliste, MD1
1Indiana University School of Medicine, Indianapolis, IN, 2Indiana University, Bloomington, IN, 3Medical College of Wisconsin, Milwaukee, WI, 4David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA, 5University of North Carolina, Chapel Hill, NC, 6Wake-Forest & Virginia Tech University, Roanoke, VA, 7University of Michigan, Ann Arbor, MI

MHSRS-18-1126 POSTER SESSION 2 - #439
Effects of Motion-Based Gaming on Day-to-Day Activity, Cognitive Processing Speed, Executive Functioning, & User Experience During Physical Therapy in Veteran Mild Traumatic Brain Injury Patients
Presentation Author: Sai Yalla
Sai V Yalla, PhD1, Vasanth Subramanian, MS1, Bharathi Swaminathan, MD2, William Cotter, MD2, Ravi Shah, PsyD3, Cynthia Putnam, PhD4, Amanda F Lin, DSc1
1Rosalind Franklin University of Medicine & Science, North Chicago, IL, 2Captain James A. Lovell Federal Health Care Center, North Chicago, IL, 3Adler School of Professional Psychology, Chicago, IL, 4DePaul University, Chicago, IL
Central Sensorimotor Integration Test: Test-Retest Reliability & Learning Effects
Presentation Author: Dr. Lucy Parrington
Lucy Parrington, PhD, Nicholas Kreter, BS, Peter C. Fino, PhD, Robert J. Peterka, PhD, Laurie A. King, PhD
1Oregon Health & Science University, Portland, OR, 2VA Portland Health Care System, Portland, OR, 3National Center for Rehabilitative Auditory Research, VA Portland Health Care System, Portland, OR

Predicting Primary Clinical Profiles in Former Military Personnel & Civilians with Chronic mTBI: A TEAM-TBI Study
Presentation Author: Dr. Anthony Kontos
Anthony P Kontos, PhD, Michael W. Collins, PhD, Anne Mucha, DPT, Valerie Reeves, PhD, Cyndi Holland, MPH, Kathryn Edelman, MS, Ava M. Puccio, PhD, Walter Schneider, PhD, David O. Okonkwo, MD, PhD
1University of Pittsburgh, Pittsburgh, PA, 2UPMC Sports Medicine Concussion Program, Pittsburgh, PA, 3Department of Physical Therapy, Majmaah University, Saudi Arabia, 4UPMC Eye & Ear Institute, Pittsburgh, PA

FNIRS Changes During Dual-Task Balance Assessment Following Concussion
Presentation Author: Dr. Anthony Kontos
Anthony P Kontos, PhD, Patrick J. Sparto, PhD, PT, Valerie Reeves, PhD, Cyndi Holland, MPH, Abdulaziz A. Alkathiry, PhD, PT, Theodore J. Huppert, PhD, Joseph Furman, MD, PhD
1University of Pittsburgh, Pittsburgh, PA, 2UPMC Sports Medicine Concussion Program, Pittsburgh, PA, 31st Special Forces Group (A), Joint Base Lewis-McChord, WA, 4Centers for Rehabilitation Services, Pittsburgh, PA, 5Geneva Foundation, Joint Base Lewis-McChord, WA, 6Duquesne University, Pittsburgh, PA, 7UPMC Eye & Ear Institute, Pittsburgh, PA

Reliability of the Vestibular Ocular Motor Screening (VOMS) Tool in a Military Clinic Setting
Presentation Author: Dr. Anthony Kontos
Anthony P Kontos, PhD, MAJ Katrina Monti, PA, MAJ Eliot Thomasma, DPT, Michael W. Collins, Anne Mucha, DPT, Valerie Reeves, PhD, Drew Thomas, Cyndi Holland, MPH, Pat Sparto, PhD, Susan Whitney, PhD, PT, Greg Marchetti, PhD, Joseph Furman, MD, PhD
1University of Pittsburgh, Pittsburgh, PA, 2UPMC Sports Medicine Concussion Program, Pittsburgh, PA, 31st Special Forces Group (A), Joint Base Lewis-McChord, WA, 4Centers for Rehabilitation Services, Pittsburgh, PA, 5Geneva Foundation, Joint Base Lewis-McChord, WA, 6Duquesne University, Pittsburgh, PA, 7UPMC Eye & Ear Institute, Pittsburgh, PA

The Expanded Automatic Assessment of Postural Stability: The xAAPS
Presentation Author: Dr. Alessandro Napoli
Alessandro Napoli, PhD, Stephen M. Glass, PhD, Carole A. Tucker, PT, PhD, iyad Obeid, PhD
Temple University, Philadelphia, PA

Development & Future Directions of a Return to Duty Assessment Toolkit for Neurosensory Injury
Presentation Author: Ms. Norah Hass
Norah Hass, MA, Melody King, Amanda Kelley, PhD
1US Army Aeromedical Research Laboratory, Fort Rucker, AL, 2Oak Ridge Institute for Science & Education, Oak Ridge, TN

The Clinical Utility of Using Involuntary Eye Movements to Assess Concussion
Presentation Author: Dr. Nicholas Port
Nicholas, Port, PhD
Indiana University, Bloomington, IN
MHSRS-18-1496  POSTER SESSION 2 - #448  
Informing Return-to-Combat Criteria in Soldiers Following Blast-Induced Traumatic Brain Injury Based on Recovery of Long Term Potentiation in Rat Organotypic Hippocampal Slice Cultures  
Presentation Author: Mr. Nevin Varghese  
Nevin Varghese, MS, Barclay Morrison III, PhD  
Columbia University, New York, NY

MHSRS-18-1573  POSTER SESSION 2 - #449  
Measuring the Acute Effects on Sleep After Sport-Related Concussion Using Self-Report & Actigraph Measures  
Presentation Author: Ms. Anna Klotz  
Anna Klotz, LAT1, Daniel Huber2, Ciaran M. Considine, PhD2, Michael M. McCrea, PhD1, Lindsay D. Nelson, PhD1  
1Medical College of Wisconsin, Milwaukee, WI, 2Vanderbilt University Medical Center, Nashville, TN

MHSRS-18-1588  POSTER SESSION 2 - #450  
The Impact of Headache Symptoms on Quality of Life in a TBI Population  
Presentation Author: Mr. Brian Moore  
Theresa Rizk, BA1, Annie-Lori Joseph, BA1, Katelyn Garcia, BA2, Brian Moore, PA-C MPH2, John Dsurney, PhD2, Leighton Chan, MD MPH2,3  
1National Institutes of Health Clinical Center, Bethesda, MD, 2Uniformed Services University, Bethesda, MD

MHSRS-18-1591  POSTER SESSION 2 - #451  
Acute Blood Levels of UCH-L1 & S100B Predict Different Clinical Sequelae of Sport-Related Concussion  
Presentation Author: Nicholas Guzowski  
Nicholas Guzowski, BA, Lindsay Nelson, PhD, Timothy Meier, PhD, Michael McCrea, PhD  
Medical College of Wisconsin, Milwaukee, WI

MHSRS-18-1601  POSTER SESSION 2 - #452  
Blink Reflex Parameters in Baseline, Active, & Head-Impact Division I Athletes  
Presentation Author: CSM Dena Garner  
CSM Dena Garner, Nancey Tsai, MD  
Medical University of South Carolina, Charleston, SC

MHSRS-18-1608  POSTER SESSION 2 - #453  
Disconnection of the Executive Control Network is Associated with Chronic Symptom Status, Not Injury Severity, in Patients with Traumatic Brain Injury  
Presentation Author: Dr. Keith Main  
Keith Main, PhD1, Anna-Clare Milazzo, PhD2,3, Bernard Ng, PhD1, Salil Soman, MD, MS5, Jordan Nechvatal, PhD2,3, Jennifer Kong, MS2, Stephanie Kolakowsky-Hayner, PhD6, Ansgar Furst, PhD2,3, J. Wesson Ashford, MD, PhD2,3, Michael Greicius, PhD3, Maheen Adamson, PhD3,7  
1Defense & Veterans Brain Injury Center, Silver Spring, MD, 2War Related Illness & Injury Study Center, Palo Alto, CA, 3Stanford University School of Medicine, Stanford, CA, 4University of British Columbia, Vancouver, BC, Canada, 5Harvard Medical School, Boston, MA, 6Santa Clara Valley Medical Center, San Jose, CA, 7Defense & Veterans Brain Injury Center, Palo Alto, CA

MHSRS-18-1656  POSTER SESSION 2 - #454  
An Evidentiary Review of the Glasgow Outcome Scale - Extended: Is It Appropriate for Use in TBI Clinical Trials?  
Presentation Author: Dr. Andrea Christoforou  
Andrea Christoforou, PhD, PT1, Michael Bergin, PhD1, Melissa Armstrong, MD, MSc2, Ann Robbins, PhD3, Shannon Merilait, MLIS1, Patricia Erwin, MLS1, Thomas Getchius6, Michael McCrea, PhD, ABPP-CN7, Joseph Giacino, PhD1  
1Spaulding Rehabilitation Hospital & Harvard Medical School, Boston, MA, 2University of Florida, Gainesville, FL, 3Critical Path Institute, Tucson, AZ, 4American Academy of Neurology, Minneapolis, MN, 5Mayo Clinic, Rochester, MN, 6Heart Rhythm Society, Washington, DC, 7Medical College of Wisconsin, Milwaukee, WI
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

Poster Session II

MHSRS-18-1657 POSTER SESSION 2 - #455
The Validity of the Rivermead Post-Concussion Questionnaire in Detection & Monitoring of Post-Concussive Symptoms
Presentation Author: Dr. Andrea Christoforou
Andrea Christoforou, PhD, PT1, Stephanie Agtarap, PhD2, Shannon Merilliat, MLIS3, Patricia Erwin, MLS4, Murray Stein, MD2, Joseph Giacino, PhD1
1Spaulding Rehabilitation Hospital & Harvard Medical School, Boston, MA, 2University of California, San Diego, CA, 3American Academy of Neurology, Minneapolis, MN, 4Mayo Clinic, Rochester, MN

MHSRS-18-1681 POSTER SESSION 2 - #456
Sensorimotor Multi-Tasking Assessment in the Computer Assisted Rehabilitation Environment (CAREN): A Retrospective Study in Service Members with Traumatic Brain Injury & Co-Occurring Psychological Symptoms
Presentation Author: Ms. Sarah Kruger
Marie M. Onakomaiya, PhD, MPH1,5, Sarah E. Kruger, MS1, Krista B. Highland, PhD2,4,6, Marcy M. Pape, MPT1, Paula N. Kodosky, DPT1, Michael J. Roy, MD, MPH2,3
1Walter Reed National Military Medical Center, Bethesda, MD, 2Center for Neuroscience & Regenerative Medicine, Bethesda, MD, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4Defense & Veterans Center for Integrative Pain Management, Rockville, MD, 5Cherokee Nation Technology Solutions, Tulsa, OK, 6Henry M. Jackson Foundation, Bethesda, MD

MHSRS-18-1689 POSTER SESSION 2 - #457
Glasgow Outcome Scale Extended—Differences Counting Disability from Only Brain Injury versus Including Peripheral Injuries in Those with Glasgow Coma Scale 13-15: A TRACK-TBI Study
Presentation Author: Dr. Nancy Temkin
Nancy Temkin, PhD1, Evan Zahniser, MA1, Molly Rose Morrissey, BS2, Jason Barber, MS1, Joan Machamer, MA1, Geoffrey Manley, MD, PhD2, Sureyya Dikmen, PhD3
1University of Washington, Seattle, WA, 2University of California San Francisco, San Francisco, CA

MHSRS-18-1752 POSTER SESSION 2 - #458
A CAM Therapy Non-Invasive Sleep Aid for Chronic Post Traumatic Headache (PTH)
Presentation Author: Mr. Joe Meisch
Joe Meish, BA, Army veteran1, Molly Timmerman, DO2, Maheen M. Adamson, PhD3, Jordan Rine4 Temple Massager, Inc, 2Veterans Affairs Palo Alto Health Care System, 3Defense & Veterans Brain Injury Center, Palo Alto, California, 4Palo Alto University, Palo Alto, CA

MHSRS-18-1800 POSTER SESSION 2 - #459
Development of a Novel Center for Service Members & Dependents with Cognitive Complaints at a Military Treatment Facility, Rationale, Clinical Processes, & Progress
Presentation Author: Mrs. Katherine Sullivan
Katherine Sullivan, MS1,2, Wendy Law, PhD1,2, Laura Loyola, MS1,2, Martin Knoll, MS1,2, Alana Snelling, BA, BS1,2, Erin Hagen, BS1,2, Louis French, PsyD1,2
1National Intrepid Center of Excellence, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1804 POSTER SESSION 2 - #460
A Deep Dive into the Relationship between Computerized Neurocognitive Assessment Tools (NCATs) & Symptoms of Mild Traumatic Brain Injury
Presentation Author: Ms. Angelica Ahrens
Angelica P Ahrens, MBA1,2, Wesley R. Cole, PhD1,2, Alan G. Finkel, MD1,3, Karen A. Schwab, PhD4,5
1Defense & Veterans Brain Injury Center, Fort Bragg, NC, 2Womack Army Medical Center, Fort Bragg, NC, 3Carolina Headache Institute, Durham, NC, 4Defense & Veterans Brain Injury Center, Silver Spring, MD, 5Uniformed Services University of the Health Sciences, Bethesda, MD
MHSRS-18-1821 POSTER SESSION 2 - #461
Correcting the Uncorrected Reaction Time Measurement Error on the ANAM4 with an External Calibration Device
Presentation Author: Ms. Brittney Roberson
Brittny L. Roberson, MSW, Jacques P. Arrieux, MA, Katie N. Russell, NCPT, Wesley R. Cole, PhD
1Defense & Veterans Brain Injury Center, Fort Bragg, NC, 2General Dynamics Health Solutions, Fort Bragg, NC

MHSRS-18-1872 POSTER SESSION 2 - #462
RCT of CI Therapy for Rehabilitating Upper Extremity Motor Function after TBI: The BRAVE Project
Presentation Author: Dr. Edward Taub
Edward Taub, PhD, David Morris, PT, PhD, Victor W. Mark, MD, Wei Liu, PhD, Lisa Brenner, PhD, Treven Pickett, PsyD, Kelly Stearns-Yoder, BA, Staci Bishop-Mckay, BS, Andrea Taylor, BA, BS, MPH, Laura Reder, LPTA, Terrie Adams, MS, Jim Rimmer, PhD, Dustin Dew, MS, Jerzy Szafarski, MD, PhD, Marca S. Alexander, MD, Brent Womble, MS, Lillian Stevens, PhD, David Rothman, MS, Gitendra Uswatte, PhD
1University of Alabama at Birmingham, Birmingham, AL, 2Auburn University, Auburn, AL, 3National Intrepid Center of Excellence, Bethesda, MD, 4University of Colorado & Denver Veteran’s Medical Center, Denver, CO, 5Rocky Mountain MIRECC, Denver, CO, 6Birmingham Veteran’s Administration Medical Center, Birmingham, AL, 7Hunter Holmes McGuire VA Medical Center, Richmond, VA

MHSRS-18-1881 POSTER SESSION 2 - #463
Research Methods, Participant Demographics, & Tolerability of a Study of Bilateral Prefrontal Transcranial Magnetic Stimulation (TMS) to Treat the Symptoms of mTBI & PTSD
Presentation Author: Ms. Jerika Taylor
Jerika Taylor, Kyler Osborne, Lindsay Oberman, Ariana Gover-Chamlou, Nancy de Almeida, Emilia Jaskot, Paul Pasquina
1Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 2Center for Rehabilitation Sciences Research, Bethesda, MD, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4Walter Reed National Military Medical Center, Bethesda, MD, 5Center for Neuroscience & Regenerative Medicine, Bethesda, MD, 6Robert Wood Johnson Medical School, New Brunswick, NJ, 7The National Institutes of Health, Bethesda, MD

MHSRS-18-1882 POSTER SESSION 2 - #464
Measuring the Acute Effects on Sleep After Sport-Related Concussion Using Self-Report & Actigraph Measures
Presentation Author: Ms. Anna Klotz
Anna Klotz, LAT, Daniel Huber, Ciaran Considine, PhD, Michael McCrea, PhD, Lindsay Nelson, PhD
1Medical College of Wisconsin, Milwaukee, WI, 2Vanderbilt University, Nashville, TN

MHSRS-18-1924 POSTER SESSION 2 - #465
Neurocomputational Models of Static Balance & Dynamic Walking for mTBI Phenotyping
Presentation Author: Dr. Gregory Ciccarelli
Gregory Ciccarelli, PhD, Michael Nolan, Hrishikesh Rao, Anne O’Brien, Gloria Vergara-Diaz, Harvey Edwards, Jeffrey Palmer, Thomas Quatieri, Paolo Bonato, Ryan McKindles, Adam Lammert
1MIT Lincoln Laboratory, Lexington, MA, 2Spaulding Rehabilitation Hospital, Boston, MA

MHSRS-18-1949 POSTER SESSION 2 - #466
Longitudinal Evaluation of Resting-State Functional Connectivity After Sport-Related Concussion Using Large-Scale Network Analysis
Presentation Author: Dr. Timothy Meier
Mayank Kaushal, MD, MBA, Lezlie Y. España, BS, Andrew S. Nencka, PhD, Yang Wang, MD, PhD, Lindsay D. Nelson, PhD, Michael A. McCrea, PhD, Timothy B. Meier, PhD
Medical College of Wisconsin, Milwaukee, WI

MHSRS-18-1952 POSTER SESSION 2 - #467
Microstructural Changes After Brain Ablation with Focused Ultrasound
Presentation Author: Dr. Vibhor Krishna
Vibhor Krishna, MD, SM, Francesco Sammaretino, MD
Ohio State University, Columbus, OH
Assessment of Mild TBI Based on Cardiovascular Response to Posture Changes

Presentation Author: Dr. Kristin Gilchrist
Kristin H. Gilchrist¹, Derek D. Ramirez¹, Meghan Hegarty-Craver¹, Breda Munoz³, Erica L. Hirsch¹, Katie N. Russell², Jacques P Arrieux², Wesley R. Cole², Kristine Rae Olmsted¹ & Young S. Choi²
¹RTI International, Research Triangle Park, NC, ²Womack Army Medical Center, Fort Bragg, NC

Primary Care Practices in Care for Service Members with Acute Concussion: Changes Following an Educational Intervention on the DVBIC Progressive Return to Activity Clinical Recommendation

Presentation Author: Dr. Karen McCulloch
Karen L. McCulloch, PT, PhD, NCS¹,², Julianna Prim, MS¹,², Amy Cecchini, PT, DPT³, Taylor R. Andrews, BA²,⁴,⁵, Keith Stuessi, MD⁴,⁶,⁷, Emma Gregory, PhD⁴,⁷
¹University of North Carolina at Chapel Hill, Chapel Hill, NC, ²Venesco LLC, Chantilly, VA, ³Womack Army Medical Center, Fort Bragg, NC, ⁴Defense & Veterans Brain Injury Center, Silver Spring, MD, ⁵Naval Medical Center San Diego, San Diego, CA, ⁶Naval Hospital Camp Pendleton, Camp Pendleton, CA, ⁷General Dynamics Health Solutions, Silver Spring, MD

Composite Balance Score to Detect Sandbagging During Baseline Balance Tests

Presentation Author: Dr. Zachary Domire
Caitlin O’Connell, PhD, Gustavo Sandri Heidner, MS, J.C. Mizelle, PhD, Nicholas Murray, PhD, Patrick Rider, MS, Zachary Domire, PhD
East Carolina University, Greenville, NC

Subsensory Neuromodulation Improves Vestibular Function & Balance in Patients with Bilateral or Unilateral Hypofunction

Presentation Author: Dr. Jorge Serrador
Jorge Serrador, PhD¹,², Yoav Gimmon, PhD³, Scott Wood, PhD⁴, Paul Breen, PhD⁵, Michael Schubert, PhD³
¹Rutgers Biomedical Health Sciences, Newark, NJ, ²War Related Illness & Injury Study Center, Veterans Administration Health Care System, East Orange, NJ, ³Johns Hopkins School of Medicine, Baltimore, MD, ⁴Azusa Pacific University, Azusa, CA, ⁵Western Sydney University, Sydney, Australia

Impaired Postural CBF Regulation in Acute Concussion: A Point-of-Care Assessment on Field

Presentation Author: Dr. Jorge Serrador
Jie Liu, PhD¹, Michelle Favre, BS¹,², Allan Knox, PhD¹,², Kelly Brewer, MS¹,², Jenna Tosto, BA², Michael Falvo, PhD¹,², Jorge M. Serrador, PhD¹,²
¹Rutgers Biomedical Health Sciences, Newark, NJ, ²War Related Illness & Injury Study Center, Veterans Administration Health Care System, East Orange, NJ

The Cumulative Effect of Mild Traumatic Brain Injury on ImPACT® Performance in Collegiate Athletes

Presentation Author: Dr. Jacob Resch
Jacob Resch, PhD, Samuel Walton, MEd, Nicholas Erdman MS, Donna Broshek, PhD
University of Virginia, Charlottesville, VA
DEVELOPING INSIGHTS INTO RESPONSE TO NEUROTRAUMA SUSTAINED BY THE WARFIGHTER & DEVELOPMENT OF “OMIC” BASED PRECISION INTERVENTIONS

MHSRS-18-0134 POSTER SESSION 2 - #474
Blood Based Inflammatory Biomarkers for TBI in Rat
Presentation Author: Dr. Pushpa Sharma
Paul Young, MD1, Michael Hoerner, MD2, Graham Davis, MD3, Biswajit Saha, MD1, Pushpa Sharma, PhD1
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Virginia Commonwealth University School of Medicine, Richmond, VA, 3Drexel University College of Medicine, Philadelphia, PA

MHSRS-18-0568 POSTER SESSION 2 - #475
Focal & Diffuse Impacts of Mild vs. Moderate Traumatic Brain Injury (TBI): Temporal Assay of Hippocampal & Cerebellar Transcriptomics
Presentation Author: Mr. Nabarun Chakraborty
Nabarun Chakraborty, MS, MBA1, Rasha Hammamieh, PhD1, Aarti Gautam, PhD1, Stacy-Ann Miller, MS1, Michelle L. Condlin, PhD2, Marti Jett, PhD1, Andrei Loba, PhDn2, Angus G. Scrimgeour, PhD2
1US Army Center for Environmental Health Research, Fort Detrick, MD, 2US Army Research Institute of Environmental Medicine, Natick, MA

MHSRS-18-0764 POSTER SESSION 2 - #476
Pre-Injury Statin Use is Associated with Improved Survival in Patients with Isolated Severe Traumatic Brain Injury
Presentation Author: Capt Adil Lokhandwala
Capt Adil Lokhandwala, MD, Muhammad Zeeshan, MD, Lynn Gries, MD, Mohammad Hamidi, MD, Terence O’Keeffe, MD, El Rasheid Zakaria, MD, PhD, Narong Kulvatunyou, MD, Andrew Tang, MD, Bellal Joseph, MD
University of Arizona, Tucson, AZ

MHSRS-18-1725 POSTER SESSION 2 - #477
Longitudinal Changes in the White Matter Diffusion Tensor in Patients with Moderate Traumatic Brain Injury
Presentation Author: Dr. Rajiv Gupta
Maria G Longo, MD1,2, Suk-tak Chan, PhD1, Can Ozan Tan, PhD2,3, Jonathan Welt, BS2, Emad Ahmadi, MD2, Eva Ratai, PhD4, Anastasia Vendiki, PhD5, Jacqueline Namati, PhD2, Isabel Chico-Calero, PhD2, Blair A Parry, BA2, Michael Lev, MD2, Jarone Lee, MD2, Michael Hamblin, PhD2, Benjamin Vakoc, PhD2, Rajiv Gupta, MD2
1Massachusetts General Hospital, Charlestown, MA, 2Massachusetts General Hospital, Boston, MA, 3Spaulding Rehabilitation Hospital, Boston, MA

MHSRS-18-1746 POSTER SESSION 2 - #478
Longitudinal Changes of Functional & Structural Connectivity in Patients with Moderate Traumatic Brain Injury
Presentation Author: Dr. Rajiv Gupta
Suk-Tak Chan, PhD1, Maria Gabriela Longo, MD2, Jonathan Welt, BS2, Emad Ahmadi, MD2, Eva Ratai, PhD4, Anastasia Vendiki, PhD2, Jacqueline Namati, PhD2, Isabel Chico-Calero, PhD2, Blair Alden Parry, BA2, Michael Lev, MD2, Jarone Lee, MD2, Michael Hamblin, PhD2, Benjamin Vakoc, PhD2, Rajiv Gupta, MD2
1Massachusetts General Hospital, Charlestown, MA, 2Massachusetts General Hospital, Boston, MA
Poster Session II

MHSRS-18-1748 POSTER SESSION 2 - #479
Transient Neuronal Dysfunction Correlates with Hypo-Perfusion in Patients with Moderate Post-Traumatic Brain Injury
Presentation Author: Dr. Rajiv Gupta
Eva-Maria Ratai1,2, Suk-Tak Chan1,2, Maria Gabriela Longo1, Michael Wenke1, Termara Parker1, Jonathan Welt2,3, Emad Ahmadi1, Anastasia Yendiki1,2, Jacqueline Namati2,3, Isabel Chico-Calero1,4, Blair Parry1, Can Ozan Tan2,4, Michael Lev2,3, Jarone Leo2,3, Michael Hamblin2,3, Benjamin Vakoc2,3, Rajiv Gupta1,2
1Massachusetts General Hospital, Charlestown, MA, 2Harvard Medical School, Boston, MA, 3Massachusetts General Hospital, Boston, MA, 4Spaulding Rehabilitation, Charlestown, MA

MHSRS-18-1778 POSTER SESSION 2 - #480
Distinct Dimensions of Concussion Symptoms Revealed Through Bifactor Modeling
Presentation Author: Dr. Lindsay Nelson
Lindsay D. Nelson, PhD1, Mark D. Kramer, PhD2, Christopher J. Patrick3, Michael A. McCrea1
1Medical College of Wisconsin, Milwaukee, WI, 2University of Texas at Austin, Austin, TX, 3Florida State University, Tallahassee, FL

MHSRS-18-2081 POSTER SESSION 2 - #481
Traumatic Brain Injury (TBI) Alters the Metabolome 24 Hours After Injury
Presentation Author: Dr. Kalev Freeman
Kalev Freeman, MD, PhD1, Adrian Sackheim, BS1, Nuria Villalba, PhD1, Travis Nemkov, PhD2, Angelo D’Alessandro, PhD2, Anirban Banerjee, PhD2
1University of Vermont, Burlington, VT, 2University of Colorado, Denver, CO

MHSRS-18-0018 POSTER SESSION 2 - #482
Repurposing EXP-1601 for the Prevention of Brain Injury & Post-Traumatic Epilepsy
Presentation Author: Dr. Braxton Norwood
Braxton A Norwood, PhD, David Booth, BS
Expesicor Inc, Kalispell, MT

MHSRS-18-0020 POSTER SESSION 2 - #483
Presentation Author: CPT Grant Justin
CPT Grant A. Justin, MD1,2, Cameron J. Elward, BS1, Daniel I. Brooks, PhD3, Denise S. Ryan, MS4, Eric D. Weichel, MD5, Marcus H. Colyer, MD1,3
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Brooke Army Medical Center, San Antonio, TX, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Warfighter Refractive Eye Surgery Program & Research Center, Fort Belvoir, VA, 5National Intrepid Center of Excellence, Bethesda, MD

MHSRS-18-0092 POSTER SESSION 2 - #484
Neurobehavioral Outcome 10-Years Following Mild-Moderate Traumatic Brain Injury in US Military Service Members
Presentation Author: Dr. Rael Lange
Rael Lange, PhD1,2,3, Louis French, PsyD1,4, Sara Lippa, PhD1,2, Rachel Gartner, MS1,3, Angela Driscoll, MS1,3, Megan Wright, MA1,4, Janelle Cheselka, BS1,3, Paul Liddle, MA1,3, Milton Bowes, MA1,3, John Walker, BS1,3, Brian Brandler, BA1,3, Jennifer Freud, BA1,3, Ashley Schaper, MA1,3, Maryetta Reese, BS1,3, Elizabeth Barnhart, BS1,3, Kaitlyn Casey, BA1,3, Vanessa Ndege, MA1,3, Daniel Ramin, BA1,3, Yasmine Eshera, BS1,3, Gabrielle Robinson, BA1,3, Tracey Brickell, PsyD1,4
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada, 6Naval Hospital Camp Pendleton, Oceanside, CA
MHSRS-18-0093 POSTER SESSION 2 - #485
The Relationship Between Perceived Burden & Health-Related Quality of Life in Caregivers of Military Service Members & Veterans Following Traumatic Brain Injury
Presentation Author: Dr. Tracey Brickell
Tracey Brickell, PsyD, Noelle Carlozzi, PhD, Louis French, PsyD, Sara Lippa, PhD, Rael Lange, PhD
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada

MHSRS-18-0094 POSTER SESSION 2 - #486
Presentation Author: Dr. Tracey Brickell
Tracey Brickell, PsyD, Louis French, PsyD, Rachel Gartner, MS, Angela Driscoll, MS, Megan Wright, MA, Diana Nora, BA, Jamie Sullivan, BA, Sara Lippa, PhD, Nicole Varbedian, BS, Vanessa Camelo-Lopez, BS, Janelle Cheselka, BS, Paula Bellini, MA, Jayne Holzinger, MA, Hannah Walker, BS, Brian Brandler, MA, Jennifer Freud, BS, Ashley Schaper, MA, Maryetta Reese, BS, Elizabeth Barnhart, BS, Kaitlyn Casey, BA, Vanessa Ndege, MA, Daniel Ramen, BA, Yasmine Eshera, BS, Gabrielle Robinson, BA, Rael Lange, PhD
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada

MHSRS-18-0096 POSTER SESSION 2 - #487
Service Needs & Health Outcomes Among Caregivers of Service Members & Veterans Following Traumatic Brain Injury
Presentation Author: Dr. Tracey Brickell
Tracey Brickell, PsyD, Sara Lippa, PhD, Louis French, PsyD, Rachel Gartner, MS, Angela Driscoll, MS, Megan Wright, MA, Rael Lange, PhD
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada

MHSRS-18-0097 POSTER SESSION 2 - #488
The Influence of Caregiver Burden on Health Status & Appraisal of Caregiving Among Caregivers of US Military Service Members & Veterans Following Traumatic Brain Injury
Presentation Author: Dr. Tracey Brickell
Tracey Brickell, PsyD, Louis French, PsyD, Rachel Gartner, MS, Angela Driscoll, MS, Megan Wright, MA, Diana Nora, BA, Jamie Sullivan, BA, Sara Lippa, PhD, Nicole Varbedian, BS, Vanessa Camelo-Lopez, BS, Janelle Cheselka, BS, Paula Bellini, MA, Jayne Holzinger, MA, Hannah Walker, BS, Brian Brandler, MA, Jennifer Freud, BS, Ashley Schaper, MA, Maryetta Reese, BS, Elizabeth Barnhart, BS, Kaitlyn Casey, BA, Vanessa Ndege, MA, Daniel Ramen, BA, Yasmine Eshera, BS, Gabrielle Robinson, BA, Rael Lange, PhD
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada
MHSRS-18-0098 PAPER SESSION 2 - #489
A Cross-Sectional Perspective of Self-Reported Postconcussion Symptoms Across the First 10-Years of the Recovery Trajectory Following Mild-Moderate TBI
Presentation Author: Dr. Rael Lange
Rael Lange, PhD1-3, Louis French, PsyD1-4, Sara Lippa, PhD1-3, Rachel Gartner, MS1-3, Angela Driscoll, MS1-3, Megan Wright, MA1-3, Diana Nora, BS1-3, Jamie Sullivan, BA1-3, Jason Bailie, PhD1-6, Nicole Varbedian, BS1-3, Vanessa Camelo-Lopez, BS1-3, Janelle Cheselka, BS1-3, Paula Bellini, MA1-3, Jayne Holzinger, MA1-3, Hannah Walker, BS1-3, Brian Brandler, MA1-3, Jennifer Freud, BS1-3, Ashley Schaper, MA1-3, Maryetta Reese, BS1-3, Elizabeth Barnhart, BS1-3, Kaitlyn Casey, BA1-3, Vanessa Ndege, MA1-3, Daniel Ramen, BA1-3, Yasmine Eshera, BS1-3, Gabrielle Robinson, BA1-3, Tracey Brickell, PsyD1-4
1Defense & Veterans Brain Injury Center, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3National Intrepid Center of Excellence, Bethesda, MD, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5University of British Columbia, Vancouver, British Columbia, Canada, 6Naval Hospital Camp Pendleton, Oceanside, CA

MHSRS-18-0175 PAPER SESSION 2 - #490
Assessment of the Clinical Practice of Neuroendocrine Dysfunction Screening in an Active Duty Military Population with mTBI
Presentation Author: Dr. Christopher Strychacz
Christopher Strychacz, PhD1, Joseph Wood, MD, PhD2, Karen Coleman, PMP2, Scott Mooney, PhD1, John Rigg, MD1,2
1Defense & Veterans Brain Injury Center at Fort Gordon, Fort Gordon, GA, 2Eisenhower Army Medical Center, Fort Gordon, GA

MHSRS-18-0311 PAPER SESSION 2 - #491
Fiber Integrity & Cortical Thickness: Advanced Neuroimaging in Patients with Brain Injuries & Chronic Symptoms
Presentation Author: Dr. Maheen Mausoof Adamson
Defense & Veterans Brain Injury Center (DVBIC), VA Palo Alto Health Care System (PSC/117), Palo Alto, CA, Stanford School of Medicine, Stanford, CA

MHSRS-18-0327 PAPER SESSION 2 - #492
The Effects of Traumatic Brain Injury (TBI) on Cognitive Performance in a Sample of Active Duty US Military Servicemembers
Presentation Author: Dr. Valerie Rice
Valerie J. Rice, PhD1, Paul J. Schroeder, PhD2, Daniel Cassenti, PhD3, Gary L. Boykin, MS1
1Army Research Laboratory, San Antonio, TX, 2DCS Corp, Alexandria, VA, 3Army Research Laboratory, Aberdeen Proving Ground, MD

MHSRS-18-0339 PAPER SESSION 2 - #493
Pain Intensity Scale Reliability in Veterans & Service Members with Traumatic Brain Injuries Undergoing Inpatient Rehabilitation
Presentation Author: Dr. Michelle Hoot
Michelle Hoot, PhD1,2, Bilal Khokhar, PhD3, William Walker, MD1,2,4
1Hunter Holmes McGuire Veterans Affairs Medical Center, Richmond, VA, 2Defense & Veterans Brain Injury Center, Richmond, VA, 3General Dynamics Information Technology, Silver Spring, MD, 4Virginia Commonwealth University, Richmond, VA

MHSRS-18-0340 PAPER SESSION 2 - #494
Diffusion Properties Changes in Cortical Structures & Fiber Pathways for TBI Cases with Chronic Symptom
Presentation Author: Dr. Maheen Adamson
Maheen M. Adamson1-2, Keith L. Main1-3,4, Anna-Clare Milazzo3,4, Bernard Ng5, Salil Soman2,4,5, Jordan Nechohwa2,4, Jennifer Kong4, Stephanie Kolakowsky-Hayner6, Ansgar J. Furst2,4, J. Wesson Ashford2,4, Michael D. Greicius2, Xiaojian Kang1
1Defense & Veterans Brain Injury Center (DVBIC), Palo Alto, CA, 2Stanford University School of Medicine, Stanford, CA, 3Defense & Veterans Brain Injury, Silver Spring, MD, 4War Related Illness & Injury Study Center, Palo Alto, CA, 5Harvard Medical School, Boston, MA, 6Icahn School of Medicine, Mt. Sinai, NY
MHSRS-18-0343  POSTER SESSION 2 - #495
Cortical Structural Changes for the TBI Cases with Chronic Symptom
Presentation Author: Dr. Xiaojian Kang
Xiaojian Kang1, Keith L. Main1,2,3, Anna-Clare Milazzo2,3, Bernard Ng4, Salil Soman3,4,5, Jordan Nechvatal3,4, Jennifer Kong3, Stephanie Kolakowsky-Hayner6, Ansgar J. Furst3,4, J. Wesson Ashford3,4, Michael D. Greicius4, Maheen M. Adamson1,4
1Defense & Veterans Brain Injury Center (DVBIC), Palo Alto, CA, 2Defense & Veterans Brain Injury, Silver Spring, MD, 3War Related Illness & Injury Study Center, Palo Alto, CA, 4Stanford University School of Medicine, Stanford, CA, 5Harvard Medical School, Boston, MA, 6Icahn School of Medicine, Mt. Sinai, NY

MHSRS-18-0448  POSTER SESSION 2 - #496
Presentation Author: Dr. Michelle Hoot
Michelle Hoot, PhD1,2, Harvey Levin, PhD3,4, Austin Smith, BS1,2, Gary Goldberg, MD1,5, Elisabeth Wilde, PhD3,4, William Walker, MD1,2, Tracy Nolen, PhD6, Norma Pugh, MS6
1Hunter Holmes McGuire Veterans Affairs Medical Center, Richmond, VA, 2Defense & Veterans Brain Injury Center, Richmond, VA, 3Baylor College of Medicine, Houston, TX, 4Michael E. DeBakey Veterans Affairs Medical Center, Houston, TX, 5Virginia Commonwealth University, Richmond, VA, 6RTI International, Research Triangle Park, NC

MHSRS-18-0510  POSTER SESSION 2 - #497
A Point-of-Care Salivary Test for Neurological Emergencies & Traumatic Brain Injury
Presentation Author: Dr. Damir Janigro
Aaron Dadas, BEng

MHSRS-18-0544  POSTER SESSION 2 - #498
Cognitive Performance & mTBI Risk in US Army Soldiers: A Case Study on the Effect of Left Truncation & Left Censoring in a Military Cohort Study
Presentation Author: Ms. Caitlin Dillon
Caitlin Dillon, MPH1, Donna Merullo, BA1, Kristin Heaton, PhD1,2, Kathryn Taylor, DSc1,3, Susan Proctor, DSc1,2,4
1US Army Research Institute of Environmental Medicine, Natick, MA, 2Boston University School of Public Health, Boston, MA, 3Harvard T.H. Chan School of Public Health, Boston, MA, 4VA Boston Healthcare System, Boston, MA

MHSRS-18-0581  POSTER SESSION 2 - #499
Human Neural Stem Cells Engraftment Window in Penetrating Ballistic-Like Brain Injury in Rats
Presentation Author: Dr. Shyam Gajavelli
Shyam Gajavelli, Markus Spurlock, Zhen Hu, Stephanie W. Lee, Karla Rivera, Liz Quesada, Henry Powell, Anil Mahavadi, Ross Bullock
1University of Miami Miller School of Medicine, Miami, FL

MHSRS-18-0590  POSTER SESSION 2 - #500
Persistent Post-Concussive Symptom Endorsement Among Active Duty Military & Civilian Populations
Presentation Author: Dr. Robin Elisabeth Cornwell
R. Elisabeth Cornwell, PhD1, CB Eagy2, Candace Hill-Pearson, RN1, Alicia R. Souvignier, DPT1,3, Renee M. Pazdan, MD1,3, Jorge I. Arango, MD1
1Defense and Veterans Brain Injury Center, Fort Carson, CO, 2Craig Hospital, Englewood, CO, 3Evans Army Community Hospital, Fort Carson, CO

MHSRS-18-0593  POSTER SESSION 2 - #501
Interaction Between Psychiatric Symptoms & History of Mild TBI When Evaluating Postconcussion Syndrome in Veterans
Presentation Author: Dr. Joshua Hunt
Joshua C. Hunt1, Sadie E. Larsen1,2, Eric R. Larson1,2, William G. Lorber1,2, Terri A. deRoon-Cassini1
1Medical College of Wisconsin, Milwaukee, WI, 2Clement J Zablocki VA Medical Center, Milwaukee, WI
Cerium Oxide Nanoparticles Restore Biochemical Deficits Induced by Mild Blast Injury
Presentation Author: Dr. Beverly Rzigalinski
Beverly Rzigalinski, PhD, Zachary Bailey, PhD, John Sanderson, Pamela VanderVord PhD, Kevin Hockey
1Via College of Osteopathic Medicine, Virginia Campus, Blacksburg, VA, 2Virginia Polytechnic & State University, Blacksburg, VA

Primary Care Provider Practices in Management of Post-Traumatic Headache: A Qualitative Analysis
Presentation Author: Ms. Shandi Watts
1Defense & Veterans Brain Injury Center, Falls Church, VA, 2General Dynamics Health Solutions, Fairfax, VA, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4Ft Bliss Intrepid Spirit Center, 5Ft Hood Intrepid Spirit Center, 6Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 7US Army Medical Research & Materiel Command

Traumatic Brain Injuries: Underreported & Untreated?
Presentation Author: Dr. Sandra Escolas
Sandra Escolas, Shandi Watts, Marjorie Luton, Hamid Ferdosi, Scot Engel, Saafan Malik
1Defense & Veterans Brain Injury Center, Falls Church, VA, 2General Dynamics Health Solutions, Fairfax, VA, 3Fort Hood Intrepid Spirit Center

Reducing Recovery Times with Concussion Care Process Improvements During Basic Cadet Training at the United States Air Force Academy
Presentation Author: Dr. Joel Robb
Joel Robb, Jonathan Jackson, MD, Gerald McGinty, PT, Darren Campbell, MD, Bonita Anderson, ATC
1USAFA, Colorado Springs, CO, 2Intermountain Healthcare, Logan, UT

Reasons for Late Reporting: A Qualitative Analysis of Late Concussion Disclosure in a Military Academy Population
Presentation Author: Dr. Joel Robb
Joel Robb, PT, Christopher D’Lauro, PhD, Jonathan Jackson, MD, Gerald McGinty, PT, Matthew Weirath, DO, James Ayres, Bonita Anderson, ATC
USAFA, Colorado Springs, CO

Socioeconomic Status Influences Symptom Endorsement Following Mild Traumatic Brain Injury
Presentation Author: Dr. Matthew Reid
Matthew Reid, PhD, Lisa Lu, PhD, Douglas Cooper, PhD, Jan Kennedy, PhD
1Brooke Army Medical Center, San Antonio, TX, 2South Texas Veterans Health Care System, San Antonio, TX, 3University of Texas Health Science Center, San Antonio, TX

Assessment of Chronic mTBI Status in Veterans
Presentation Author: Dr. Elizabeth Brokaw
Elizabeth B. Brokaw, Michael S. Fine, Anthony Santiago II, Stacey Harris-Carriman
1The MITRE Corporation, McLean, VA, 2New Mexico VA Health Care System, Albuquerque, NM
MHSRS-18-0958  POSTER SESSION 2 - #509
Evolution & Findings of the CARE Consortium: A Pivot to Studying Cumulative & Persistent Effects of Concussion & Repetitive Head Impact Exposure
Presentation Author: Dr. Thomas McAllister
Thomas McAllister, MD1, Steven Broglio, PhD, ATC2, Michael McCrea, PhD, ABPP1, Paul F. Pasquina, MD4, Jody Harland, MS, CIP1, Ashley Rettmann, CCRP2, Melissa Koschmitzke, MA, CCRC3, CARE Consortium Investigators5
1Indiana University School of Medicine, Indianapolis, IN, 2University of Michigan, Ann Arbor, MI, 3Medical College of Wisconsin, Milwaukee, WI, 4Uniformed Services University of the Health Sciences, Bethesda, MD, 5CARE Consortium Performance Sites

MHSRS-18-0969  POSTER SESSION 2 - #510
Predictive Factors of Worse Neuropsychological Functioning Among Veterans with mTBI
Presentation Author: Mr. Clark Ryan-Gonzalez
Clark Ryan-Gonzalez1, Eric C. Meyer2,3,4, Bryann B. DeBeer2,3, Nathan A. Kimbrel5,6, Suzy B. Gulliver2,4, Sandra B. Morissette1
1The University of Texas at San Antonio, San Antonio, TX, 2Department of Veterans Affairs, Waco, TX, 3Texas A&M University Health Science Center, College Station, TX, 4Baylor, Scott & White Healthcare System, Waco, TX, 5VA Mid-Atlantic Mental Illness Research, Education, & Clinical Center, Durham, NC, 6Duke University School of Medicine, Durham, NC,

MHSRS-18-0992  POSTER SESSION 2 - #511
Weak Agreement Between Prospectively & Retrospectively Measured Posttraumatic Amnesia Duration in Veterans & Service Members with Traumatic Brain Injury: A VA TBI Model Systems Study
Presentation Author: Dr. Marc Silva
Marc A. Silva, PhD1,2, Erin M. Brennan, BA2, M. Brad Rechkmmer, MPH1, Risa Nakase-Richardson, PhD1,3
1James A. Haley Veterans’ Hospital, Tampa, FL, 2University of South Florida, Tampa, FL, 3Defense & Veterans Brain Injury Center, Tampa, FL

MHSRS-18-1000  POSTER SESSION 2 - #512
Longitudinal Health Outcomes of Combat Related Traumatic Brain Injuries
Presentation Author: Ms. Nytzia Licona
Nytzia E. Licona, MPH, CCTDM1, Maheen M. Adamson, PhD1, Rachel Santiago, BS2, Odette A. Harris, MD, MPH1,3
1Defense & Veterans Brain Injury Center, Palo Alto, CA, 2Veterans Affairs Palo Alto Health Care System, Palo Alto, CA, 3Stanford University School of Medicine, Palo Alto, CA

MHSRS-18-1043  POSTER SESSION 2 - #513
The Relationship Between Mild Traumatic Brain Injury & Neurobehavioral Symptoms Among Those Who Served in OEF/OIF/OND combat: A Chronic Effects of Neurotrauma Consortium Study
Presentation Author: Dr. Terri Pogoda
Terri K. Pogoda, PhD1,2, Heather G. Belanger, PhD1,4, Kathleen F. Carlson, PhD5,6, Harvey Levin, PhD7,8, Tracy L. Nolen, DrPh9, Kayla J. Nowak9, Maya E. O’Neil, PhD5,6, David F. Tate, PhD10, Elisabeth A. Wilde, PhD7,8,11, William C. Walker, MD12,13
1VA Boston Healthcare System, Boston, MA, 2Boston University School of Public Health, Boston, MA, 3James A. Haley Veterans Hospital, Tampa, FL, 4University of South Florida, Tampa, FL, 5VA Portland Healthcare System, Portland, OR, 6Oregon Health & Science University, Portland, OR, 7Michael E. DeBakey Veterans Affairs Medical Center, Houston, TX, 8Baylor College of Medicine, Houston, TX, 9RTI International, Research Triangle Park, NC, 10Missouri Institute of Mental Health, University of Missouri-St. Louis, St. Louis, MO, 11University of Utah, Salt Lake City, UT, 12Hunter Holmes McGuire VA Medical Center, Richmond VA, 13Virginia Commonwealth University, Richmond VA

MHSRS-18-1206  POSTER SESSION 2 - #514
Results from a Molecular Neuroimaging Pilot Study of Traumatic Brain Injury
Presentation Author: MAJ David Douglas
MAJ David Douglas, MD1, Jason Zhao, MD, PhD1, Steve Lewis, MD1, Jared Kirkland, MD1, Trevor Thompson, MD1, Brian McQuillan, MD1, Matthew Rodgers, MD, MS1, Tae Ro, MD1, Bennet Krawchuk, MS2, Josh Nielsen, BS1, Eric Kincaid, MD1, Trevor Thompson, MD, Brittany Ballen, D.O.2, John Muldermans, MD1, Kevin Grayson, DVM1, Ely Wolin, MD1, James Walroth, MD1, Austin Johnson, MD, PhD2
1David Grant Medical Center, Travis AFB, CA, 2University of California, Davis, CA
MHSRS-18-1241  POSTER SESSION 2 - #515

Individual Symptoms Classify Typical & Atypical Concussion Recovery Duration
Presentation Author: Kathryn O'Connor
Kathryn L. O'Connor, MS1, Kenneth L. Cameron, PhD, MPH, ATC, FNATA2, Colonel (Ret) Darren E. Campbell, MD3, Christopher D’Lauro, PhD4, Megan N. Houston, PhD, ATC5, Lieutenant Colonel Jonathan C. Jackson, MD6, Lieutenant Commander Brian R. Johnson, PhD7, Lieutenant Colonel (Ret) Gerald McGinty4, Lieutenant Commander Patrick G. O’Donnell, MHA8, Lieutenant Colonel Paul Pasquina, MD9, Karen Y. Peck, MEd, ATC, CCRP2, Colonel (Ret) Steven J. Svoboda, MD9, Thomas McAllister, MD8, Michael McCrea, PhD9, Steven P. Broglio, PhD, ATC2
1University of Michigan, Ann Arbor, MI, 2Keller Army Community Hospital, West Point, NY, 3Logan Regional Orthopedics, Logan, UT, 4United States Air Force Academy, Colorado Springs, CO, 5US Coast Guard Academy, New London, CT, 6Uniformed Services University of the Health Sciences, Bethesda, MD, 7MedStar Health, Washington, DC, 9Indiana University School of Medicine, Indianapolis, IN, 8Medical College of Wisconsin, Milwaukee, WI

OPEN  POSTER SESSION 2 - #516

MHSRS-18-1340  POSTER SESSION 2 - #517
Relationships Between Trauma Adversity, Resilience & Depression in US Service Members with a History of Mild Traumatic Brain Injury
Presentation Author: Dr. Jan Kennedy
Jan E. Kennedy, PhD1,2, Matthew W. Reid, PhD1,2, Lisa H. Lu, PhD1,2, Douglas B. Cooper, PhD1,3,4
1Defense & Veterans Brain Injury Center, San Antonio, TX, 2Brooke Army Medical Center, Ft Sam Houston, TX, 3South Texas Veterans Health Care System, San Antonio, TX, 4UT-Health San Antonio, San Antonio, TX

MHSRS-18-1371  POSTER SESSION 2 - #518
The Impact of Head Trauma History on Symptom Presentation in Deployed Settings after Acute Blast Injury
Presentation Author: Mr. Jose Lara-Ruiz
Jose Lara-Ruiz, MA1,2, Casey Straud, PsyD1, Willie Hale, PhD1,2, Hunter Hansen, PsyD1, Shah, Dhiya, PsyD1, Lt Col Monty T. Baker, PhD1,3, Stacey Young-McCaughan, RN, PhD1, Allison Hancock, PhD1, Jim Mintz, PhD1, Jeffrey A. Cigrang, PhD4, Alan L. Peterson, PhD1,2,5
1University of Texas Health Science Center at San Antonio, San Antonio, TX, 2University of Texas at San Antonio, San Antonio, TX, 3Wilford Hall Ambulatory Surgical Center, Lackland AFB, TX, 4Wright State University, Fairborn, OH, 5South Texas Veterans Health Care System, San Antonio, TX

MHSRS-18-1381  POSTER SESSION 2 - #519
TEAM-TBI: A Personalized Medicine TBI Research Trial
Presentation Author: Dr. David Okonkwo
David Okonkwo, MD, PhD1, Anthony Kontos, PhD2, Kathryn Edelman, MS3, Allison Borrasso, MS3, Jane Sharpless, MS3, Dana Williams, MS3, Dan Pultz, USMC1, Ava Puccio, RN, PhD1, Steven Benso, RN, BSN, CCRN1, Ryan Soose, MD1, Ron Poropatich, MD1, Sue Beers, PhD2, Nora Presson, PhD2, Anne Mucha, PT, DPT, MS, NCS2, CAPT Thomas Johnson, MD2, Walter Schneider, PhD2, & Michael Collins, PhD2
1University of Pittsburgh, Pittsburgh, PA, 2Intrepid Spirit Concussion Recovery Center, Camp Lejeune, NC

MHSRS-18-1427  POSTER SESSION 2 - #520
Methodology & Challenges in Implementing a Multi-Site Post-Traumatic Headache Study
Presentation Author: Ms. Rose Braue
Rose Braue1,2, Emma Gregory1,2, Shandi Watts1,2,5, Ann Marie Drennon1,7, Sandra Escolas1,2,5, Scot Engel5, Saafan Malik2, Sean Sebesta2, Daniel Beauchamp5, Conethra Burt-Kelley4,6, Adriana Rico4,8, Ann Scher1, Sidney R. Hinds II8
1Defense & Veterans Brain Injury Center, Silver Spring, MD, 2General Dynamics Health Solutions, Fairfax, VA, 3Uniformed Services University of the Health Sciences, Bethesda, MD, 4Fort Bliss Intrepid Spirit Center, Fort Bliss, TX, 5Fort Hood Intrepid Spirit Center, Fort Hood, TX, 6Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, 7Cherokee Nation Technology Solutions, Catoosa, OK, 8Department of Defense/United States Army Medical Research & Materiel Command, Fort Detrick, MD
MHSRS-18-1429  POSTER SESSION 2 - #521
Acute Cerebral Blood Flow Changes Reflect Microglial Activation & Inflammatory Signaling After Repetitive Mild TBI
Presentation Author: Dr. Levi Wood
Sitara Sankar1, Alyssa Pybus1, Amanda Liew2, Bharat Sanders1, Erin M. Buckley1,2, Levi Wood1
1Georgia Institute of Technology & Emory University, Atlanta, GA, 2Georgia Institute of Technology, Atlanta, GA

MHSRS-18-1531  POSTER SESSION 2 - #522
Serum Mass Profiling & Phenotype Monitoring of Traumatic Brain Injury (TBI) & Post-Concussion Sequelae Including Chronic Migraine (CM) Headache
Presentation Author: Dr. James Couch
JamesCouch, MD, PhD1,2, James Hocker, MS1, Megan Learner, MS1, Jay Hanas, PhD1
1Oklahoma University Health Sciences Center, Oklahoma City, OK, 2Oklahoma City Veterans Administration Hospital, Oklahoma City, OK

MHSRS-18-1575  POSTER SESSION 2 - #523
Characteristics Distinguishing Special Operational Forces (SOF) Personnel from Non-SOF Peers with Traumatic Brain Injury: Retrospective Analysis of Data from the VA TBI Model Systems
Presentation Author: Dr. Tracy Kretzmer
Tracy Kretzmer, PhD1-2, Laura Bajor, DO1-3, Marc A. Silva, PhD1-2, Blesson Eapen, MD4,5, Tamara McKenzie-Hartmann, PhD1, Heather G. Belanger, PhD1-2, Risa Nakase-Richardson, PhD1-3
1James A. Haley Veterans’ Hospital, Tampa, FL, 2University of South Florida, Tampa, FL, 3Harvard Medical School, Boston, MA, 4South Texas Veterans Health Care System, San Antonio, TX, 5University of Texas Health-San Antonio, San Antonio, TX

MHSRS-18-1648  POSTER SESSION 2 - #524
Progressive Return to Activity Following Concussion: The Influence of an Educational Intervention on Provider Practice & the Role of Patient Education on Outcomes
Presentation Author: Dr. Keith Stuessi
Keith A. Stuessi, MD1-3, Jason Bailie, PhD1-3, Rosemary Remiglio-Baker, PhD, MPH1-3, Emma Gregory, PhD1-2, Therese A. West, DNP4, Wes Cole, PhD1-5, Amy Cecchini, MS, DPT1-6, Marianna Jolly1-3, Taylor R. Andrews, BA1,8, Mark Ettenhofer, PhD1-2, Karen L. McCulloch, PT, PhD5,6, Felicia Qashu, PhD1, LCDR Lynita Mullins MC, USN1-8
1Defense & Veterans Brain Injury Center, Silver Spring, MD, 2General Dynamics Health Solutions, Silver Spring, MD, 3US Army Medical Research & Material Command, Fort Detrick, MD, 4The University of North Carolina at Chapel Hill, Chapel Hill, NC, 5Venesco LLC, Chantilly, VA, 6Womack Army Medical Center, Fort Bragg, NC, 7Naval Medical Center San Diego, San Diego, CA, 8National Institutes of Health, Bethesda, MD

MHSRS-18-1660  POSTER SESSION 2 - #525
Imaging Biomarkers for TBI Detection & Monitoring
Presentation Author: Dr. Matthew Downs
Matthew E. Downs1, Kathryn Keenan2, Stephen Russek3, Joseph Dagher1
1The MITRE Corporation, McLean, VA, 2National Institute of Standards & Technology, Gaithersburg, MD

MHSRS-18-1665  POSTER SESSION 2 - #526
Military-Specific Normative Data for Cognitive & Motor Single- & Dual-Task Assessment Modules for Use in Mild Traumatic Brain Injury Assessment
Presentation Author: Dr. Jay Alberts
Jay Alberts, PhD, Nicole Zimmerman, MS, Susan Linder, DPT
MHSRS-18-1685  POSTER SESSION 2 - #527
Post-Traumatic Neuroanatomical Changes Identified in Large Scale Image Analysis are Predictive of Patient Outcomes
Presentation Author: Dr. Jeffrey Cole
Santosh Srinivasaiah, Chandler Rhodes, PhD, Daniel Bryden, Jeffrey Cole
Booz Allen Hamilton, McLean, VA

MHSRS-18-1706  POSTER SESSION 2 - #528
Reaction Time Variability in Service Members With & Without Acute mTBI
Presentation Author: Mr. Jacques Arrieux
Jacques Arrieux, MA1-3, Katie Russell, MS1-3, F. Jay Haran, PhD4, Wesley Cole, PhD1-3
1Womack Army Medical Center, Fort Bragg, NC, 2Defense & Veterans Brain Injury Center, Fort Bragg, NC, 3General Dynamics Health Solutions, Fairfax, VA, 4Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1743  POSTER SESSION 2 - #529
Assessing Change in Neurobehavioral Symptoms Throughout Treatment at Intrepid Spirit Concussion Recovery Center Using Naval Medical Center Camp Lejeune’s Novel Clinical Research Database
Presentation Author: Mrs. Angela Sutherland
Angela Sutherland, MPH, Tabitha Alverio, MA, Dana Onifer, MD
Naval Medical Center, Camp Lejeune, NC

MHSRS-18-1780  POSTER SESSION 2 - #530
Hippocampal Volume & Executive Function in a Military & Civilian Population
Presentation Author: Ms. Zena Kirby
Zena Kirby1,3, Kerri Dunbar1,3, Annabel Lee Raboy1,2,4, Doren Walker1,2, Patricia Taylor1,2,4, Melissa Guerra, MD1,3, Michael J. Roy, MD, MPH1,4
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Henry M. Jackson Foundation, Bethesda, MD, 3National Intrepid Spirit, Fort Belvoir, VA, 4Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1802  POSTER SESSION 2 - #531
Service Academy Longitudinal TBI Outcome Study (SALTOS)
Presentation Author: Mr. Michael Mellinger
Joshua Jeffries, BS, William Roddy, BS, Justin Murphy, BA, Katherine Bach, BA, Paul Pasquina, MD

MHSRS-18-1806  POSTER SESSION 2 - #532
Symptoms in Healthy Controls May Impact Performance on Computerized Neurocognitive Assessment Tools (NCATs): Lessons Learned from Normative Data & What It Means for TBI Screening & Return to Duty Assessment
Presentation Author: Ms. Angelica Ahrens
Angelica P Ahrens, MBA1,2, Wesley R Cole, PhD1,2, Alan G Finkel, MD1,3, Karen A Schwab, PhD4,5
1Defense & Veterans Brain Injury Center, Ft. Bragg, NC, 2Womack Army Medical Center, Ft. Bragg, NC, 3Carolina Headache Institute, Durham, NC, 4Defense & Veterans Brain Injury Center, Silver Spring, MD, 5Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1809  POSTER SESSION 2 - #533
Improvements in PTS & Alcohol Consumption Profiles Following Targeted Intervention for Chronic Traumatic Brain Injury: A TEAM-TBI Study
Presentation Author: Ms. Allison Borrasso
Allison Borasso, MS, Kathryn Edelman, MS, Sue R. Beers, PhD, Yuefang Chang, PhD, Ava Puccio, PhD, Matthew Mesley, MD, Dan Pultz USMC, David Okonkwo, MD, PhD
University of Pittsburgh, Pittsburgh, PA
Design of a Novel Closed-Loop System to Deliver Neurostimulation During Clinical Rehabilitative Therapy After Brain Injury
Presentation Author: Dr. David Pruitt
Eric Meyers, PhD, Katy Millay, Michael Kilgard, PhD, Robert Rennaker, PhD, Seth Hays, PhD

Benzodiazepine Prescription Patterns After Mild Traumatic Brain Injury in US Military Service Members
Presentation Author: Ms. Lauren Earyes
Lauren Earyes, MPH, Yll Agimi, PhD, Katherine Stout, DPT
Defense & Veterans Brain Injury Center, Silver Spring, MD

Delayed & Incomplete Recovery After Concussion
Presentation Author: Dr. Thomas McAllister
TW McAllister¹, B Katz², M McCrea³, SP Broglio³
¹Indiana University School of Medicine, Indianapolis, IN, ²Medical College of Wisconsin, Milwaukee, WI, ³University of Michigan, Ann Arbor, MI

The Bethesda Eye & Attention Measure (BEAM) is More Sensitive than Traditional Neuropsychological Measures in Active Duty Patients with Mild or Moderate Traumatic Brain Injury
Presentation Author: Dr. Lars Hungerford
Lars Hungerford, PhD, Mark Ettenhofer, PhD, Vindhya Ekanayake, MS
Naval Medical Center San Diego, San Diego, CA

Decreased Exosomal MicroRNA-7844-5p as a Potential Biomarker of Repetitive Head Impact
Presentation Author: Mr. Eric Muñoz
Eric R. Munoz, MS¹, Carina M. Pautz, MS¹, Brittany E. Wilson, PhD¹, Carolina T. Caban, BS², John E. Jeka, PhD¹,
Joshua T. Selsby, PhD³, Matthew B. Hudson, PhD¹
¹University of Delaware, Newark, DE, ²Temple University, Philadelphia, PA, ³Iowa State University, Ames, IA

Portable Warrior Test of Tactical Agility – Validation with a ROTC Cadet Population
Presentation Author: Ms. Julianna Prim
Julianna Prim, MS¹, Karen L. McCulloch, PT, PhD, NCS¹, Oleg V. Favorov, PhD³, Olcay Kursun, PhD²
¹University of North Carolina at Chapel Hill, Chapel Hill, NC, ²University of Central Arkansas, Conway, AR

CT & MRI Prognostic Biomarkers for 3-Month Outcome in Mild Traumatic Brain Injury: A TRACK-TBI Study
Presentation Author: Dr. Esther Yuh
Esther L. Yuh, MD, PhD¹, Harvey S. Levin, PhD², Sabrina R. Taylor, PhD¹, Xiaoying Sun, MS³, Christine L. Mac Donald, PhD³,
Nancy R. Temkin, PhD³, Joseph T. Giacino, PhD⁴, Amy J. Markowitz, JD⁵, Pratik Mukherjee, MD, PhD³, Sureyya Dikmen, PhD⁴,
Sonia Jain, PhD³, Geoffrey T. Manley, MD, PhD¹, TRACK-TBI Investigators
¹University of California at San Francisco, San Francisco, CA, ²Baylor College of Medicine, Houston, TX, ³University of California at San Diego, La Jolla, CA, ⁴University of Washington, Seattle, WA, ⁵Harvard Medical School, Boston, MA
MHSRS-18-1964  POSTER SESSION 2 - #542
Diagnostic Utility of Plasma Glial Fibrillary Acidic Protein (GFAP) for Identification of Traumatic Brain Injury Patients with MRI Abnormalities Despite a Normal Head CT: A TRACK-TBI Study
Presentation Author: Mr. John Yue
John K. Yue, BA1,2, Frederick K. Korley, MD, PhD3, Winward Choy, MD1,2, Ross C. Puffer, MD4,5, Ethan A. Winkler, MD, PhD1,2, Hanso Deng, BA1,2, Sabrina R. Taylor, PhD, CCRP1,2, Adam R. Ferguson, PhD1,2, J. Russell Huie, PhD1,2, Xiaoying Sun, PhD6, Sonia Jain, PhD6, Esther L. Yuh, MD, PhD1,2, Pratik Mukherjee, MD, PhD1,2, Ava M. Puccio, RN, PhD7, Kevin K. W. Wang, PhD7, Ramon Diaz-Arrastia, MD, PhD8, David O. Okonkwo, MD, PhD5, Geoffrey T. Manley, MD, PhD1,2, TRACK-TBI Investigators
1University of California San Francisco, San Francisco, CA, 2Zuckerberg San Francisco General Hospital, San Francisco, CA, 3University of Michigan, Ann Arbor, MI, 4Mayo Clinic, Rochester, MN, 5University of Pittsburgh Medical Center, Pittsburgh, PA, 6University of California San Diego, San Diego, CA, 7University of Florida, Gainesville, FL, 8University of Pennsylvania, Philadelphia, PA

MHSRS-18-2004  POSTER SESSION 2 - #543
Mild Traumatic Brain Injury History Predicts Relationship Between Reduced Grey Matter Volume & Visual-Sensory Performance in Special Operations Forces Personnel
Presentation Author: Dr. Cassie Ford
Cassie B. Ford, PhD1, Michael J. Cools, MD1, LTC Stephen M. DeLellis, MPAS, PA-C2, CPT Marshall L. Healy, APA-C2, Robert H. Lutz, MD3, COL Shawn F. Kane, MD4, COL James H. Lynch, MD4, Jason P. Mihalik, PhD, CAT(C), ATC5
1University of North Carolina, Chapel Hill, NC, 2United States Army Special Operations Command, Fort Bragg, NC, 3Duke University, Durham, NC, 4United States Army Special Operations Command, Fort Bragg, NC

MHSRS-18-2046  POSTER SESSION 2 - #544
Computing Amount of Midline Shift in Traumatic Brain Injury
Presentation Author: Dr. Mohsen Hooshmand
SM Reza Soroushmehr1,2, Craig Williamson1, Jonathan Gryak1, Kayvan Najarian1,2
1University of Michigan, Ann Arbor, 2Michigan Center for Integrative Research in Critical Care

MHSRS-18-2049  POSTER SESSION 2 - #545
Gender-related Differences in Symptomatology & Healthcare Utilization by Active Duty Service Members with Comorbid mTBI & PTSD
Presentation Author: CDR Lalon Kasuske
CDR Lalon Kasuske, PhD1, Tim Wu, MD2, Jesus J. Caban, PhD2
1Naval Medical Center Portsmouth, Portsmouth, VA, 2Walter Reed National Military Medical Center Bethesda, MD

MHSRS-18-2109  POSTER SESSION 2 - #546
Automatic Quantification of TBI Related Tract Damage with High Definition Fiber Tracking (HDFT) in MRI Diffusion of Tracts in Blast & Civilian Trauma
Presentation Author: Dr. Walter Schneider
Kate Fissell1, Kristofer Pomickeo1, Rebecca Hachey1, Kelly Glavin1, Sudhir Pathak1, Sue Beers2, Cara Battistella, Allison Borraso, Ava Puccio, Kathryn Edelman, David Okonkwo, Walter Schneider1,2
1University of Pittsburgh, Pittsburgh PA, 2University of Pittsburgh Medical Center, Pittsburg PA

MHSRS-18-2111  POSTER SESSION 2 - #547
Identification of microRNA Biomarkers in Serum & Cerebrospinal Fluid After Traumatic Brain Injury & Correlation with Outcome of the Injury
Presentation Author: Dr. Manish Bhomia
Manish Bhomia, PhD1, Manoshi Gayen, PhD2, Zhao Zhang Li, MD1, Kevin K.W. Wang, PhD2, Barbara Knollmann-Ritschel, MD1
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2University of Florida, Gainesville, Florida
**MHSRS-18-2118**  **POSTER SESSION 2 - #548**

Deployment-related Traumatic Brain Injury & Behavioral Health in United States Marines

Presentation Author: Dr. Jessica Morgan
Jessica Kelley Morgan, PhD, Joel K Cartwright, MS, Alison Levin-Rector, MPH, Pamela K Lattimore, PhD
RTI International, Research Triangle Park, NC

**MHSRS-18-2127**  **POSTER SESSION 2 - #549**

Ground Truth Calibration of Diffusion Imaging for TBI - Assessment of Quantitative Magnetic Resonance Imaging Metrics in the Brain through the Use of a Novel Phantom

Presentation Author: Dr. Walter Schneider
Walter Schneider¹, Michael Boss², Elisabeth Wilde³, Brian Taylor⁴, James Provenzale⁵, Sudhir Pathak⁶, Anthony Zuccolotto⁷, David Okonkwo⁸
¹University of Pittsburgh, Pittsburgh, PA, ²National Institute of Standards & Technology, Boulder, CO, ³Michael E. DeBakey VA Medical Center, Houston, TX, University of Utah, ⁴Virginia Commonwealth University, Alexandria, VA, ⁵Duke University Medical Center, Durham, NC, ⁶Psychology Software Tools Inc, Pittsburgh, PA, ⁷University of Pittsburgh Medical Center, Pittsburgh, PA

**MHSRS-18-2146**  **POSTER SESSION 2 - #550**

Nonlinear Analysis Using Detrended Fluctuation Analysis of Heart-Rate Variability in Service Members with Post-Concussive Symptoms from Mild Traumatic Brain Injury (mTBI) treated with Hyperbaric Oxygen (HBO2)

Presentation Author: Dr. Susan Mirow PhD, MD
Susan Mirow, PhD, MD¹,², Olinio Linares, PhD³,⁴, Susan Churchill, APRn°, Lindell K. Weaver MD¹,⁴
¹University of Utah School of Medicine, Salt Lake City, UT, ²Lovelace, Albuquerque, NM, ³Avalon Data, LLC, McKinney, TX, ⁴Intermountain Medical Center, Murray, UT

**MHSRS-18-2173**  **POSTER SESSION 2 - #551**

Veterans with a History of mTBI Demonstrate Impaired Vestibular & Balance Function That Can Be Improved with Subsensory Neuromodulation

Presentation Author: Dr. Jorge Serrador
Jorge Serrador, PhD¹, Scott Wood, PhD², Kelly Brewer, MS¹, Paul Breen, PhD³, Michael Schubert, PhD⁴
¹Rutgers Biomedical Health Sciences, Newark, NJ & Dept of Veteran Affairs, East Orange, NJ, ²Azusa Pacific University, Azusa, CA, ³Western Sydney University, Sydney, Australia, ⁴Johns Hopkins School of Medicine, Baltimore, MD

**IMPROVING PRE-CLINICAL MODELS OF TRAUMATIC BRAIN INJURY**

**OPEN**  **POSTER SESSION 2 - #552**

**MHSRS-18-0518**  **POSTER SESSION 2 - #553**

DR 1-MOG-35-55 Treatment Reduces Lesion Volumes & Improves Neurological Deficits After Traumatic Brain Injury

Presentation Author: Dr. Arthur Vandenbark
Arthur Vandenbark, PhD¹, Halina Offner, DrMed⁴
¹VA Portland Health Care System, Portland, OR, ²Oregon Health & Science University, Portland, OR

**MHSRS-18-0529**  **POSTER SESSION 2 - #554**

High-Throughput Pharmacokinetic Modeling with Dynamic In Vitro Blood-Brain Barrier System & its Use in Traumatic Brain Injury

Presentation Author: Mr. Aaron Dadas
Aaron Dadas, Damir Janigro Flocel, Inc, Cleveland, OH
**MHSRS-18-0673**  **POSTER SESSION 2 - #555**  
Microbiome Signatures Associated with Rodent Model of Traumatic Brain Injury Versus Psychological Stress  
Presentation Author: Dr. Aarti Gautam  
Aarti Gautam¹, James C. DeMar², Nabarun Chakraborty¹, Raina Kumar¹, Allison Hoke¹, John G. Rosenberger², Andrew B. Batuure⁴, David J. Bloodgood², Donna M. Wilder², Venkatasivasaisujith Sajja², Rasha Hammamieh³, Marti Jett¹, Joseph B. Long²  
¹US Army Center for Environmental Health & Research, Frederick, MD, ²Walter Reed Army Institute of Research, Silver Spring, MD, ³The Geneva Foundation, US Army Center for Environmental Health & Research, Frederick, MD, ⁴Frederick National Lab for Cancer Research, Frederick, MD

**MHSRS-18-0798**  **POSTER SESSION 2 - #556**  
Chronic Mil Traumatic Brain Injury Altered Serum microRNAs & Their Association with Fear Behavior of Posttraumatic Stress Disorder  
Presentation Author: Dr. Nagaraja Sethuraman Balakathiresan  
Nagaraja S Balakathiresan¹, Manish Bhomia¹, Anna E. Tschiffely², Richard McCarron¹,², Stephen T Ahlers², Barbara Knollmann-Ritschel¹  
¹Uniformed Services University of the Health Sciences, Bethesda, MD, ²Naval Medical Research Center, Silver Spring, MD

**MHSRS-18-0867**  **POSTER SESSION 2 - #557**  
Designing a Fully Biomimetic 3D Organ Culture to Test the Preclinical Efficacy of Therapies for Blast Injury  
Presentation Author: Dr. Joseph Arboleda-Velasquez  
Joseph F. Arboleda-Velasquez, MD, PhD, Diana M. Sanchez-Palencia, PhD, Petr Baranov, MD, Magali Saint-Geniez, PhD  
Medical School, Boston, MA

**MHSRS-18-0890**  **POSTER SESSION 2 - #558**  
The Epigenetic Histone Deacetylase Inhibitor Sodium Butyrate Reduces Epileptogenesis & Mossy Fiber Sprouting After Traumatic Brain Injury in Mice  
Presentation Author: Dr. Samba Reddy  
Doodipala Samba Reddy, Victoria Golub  
Texas A&M University College of Medicine, Bryan, TX

**MHSRS-18-0892**  **POSTER SESSION 2 - #559**  
The Epigenetic Histone Deacetylase Inhibitor Sodium Butyrate Improves Long-Term Behavior & Neuropathology After Traumatic Brain Injury in Mice  
Presentation Author: Dr. Victoria Golub  
Victoria Golub, Doodipala Samba Reddy  
Texas A&M University College of Medicine, Bryan, TX

**MHSRS-18-1015**  **POSTER SESSION 2 - #560**  
Deleterious Effects of Hyperhomocysteinemia Induced Physiological Stress on Traumatic Brain Injury Neuropathology in a Rat Model of Controlled Cortical Impact  
Presentation Author: Dr. Flaubert Tchantchou  
Gary Fiskum, PhD¹, Catriona Miller, PhD², Molly Goodfellow, PhD²  
¹University of Maryland School of Medicine, Baltimore, MD, ²US Air Force c-STARS Baltimore, Baltimore, MD

**MHSRS-18-1036**  **POSTER SESSION 2 - #561**  
A Translational Animal Model Platform for the Preclinical Assessment of Therapeutics for Severe TBI  
Presentation Author: Dr. Lohitash Karumbaiah  
Lohitash Karumbaiah, PhD, Franklin D. West, PhD, Steven L. Stice, PhD  
University of Georgia, Athens, GA
MHSRS-18-1046  POSTER SESSION 2 - #562
Validation of Human Neurosensory Assessments of mTBI with a Neurophysiological Animal Model
Presentation Author: Dr. Oleg Favorov
Oleg V. Favorov, PhD1, Andrew P. Brna, PhD1, Timothy Challener, BS1, Eric Francisco, PhD2, Laila Zai PhD3, Mark Tommerdahl, PhD1,2
1University of North Carolina at Chapel Hill, Chapel Hill, NC, 2Cortical Metrics, LLC, Carrboro, NC, 3Applied Research Associates, Inc, Albuquerque, NM

MHSRS-18-1097  POSTER SESSION 2 - #563
A Novel Design of an Experimental Apparatus to Generate Dynamic Pressure Loading for Simulating Blast Exposure for a Brain Tissue Specimen
Presentation Author: Mr. Suhas Vidhate
Suhas Vidhate1, Atacan Yucesoy2, Thomas J. Pence, PhD1, Adam M. Willis, MD, PhD1,3 & Ricardo Mejia-Alvarez, PhD3
1Michigan State University, East Lansing, MI, 2San Antonio Military Medical Center, Fort Sam Houston, TX, 3University of Texas Southwestern, Dallas, TX

MHSRS-18-1110  POSTER SESSION 2 - #564
A Combat Relevant Model of Traumatic Brain Injury Due to Direct Blunt & Penetrating Trauma to the Head
Presentation Author: Dr. Jae Hyek Choi
Jae Hyek Choi, PhD, DVSc1, Alexander Dixon, BS1, Kyle Sieck, BS1, Teryn Roberts, MS1,2, George Harea, BS1, Vitali Karaliou, MD3, Daniel Wendorff, BS3, Brendan Beely, RRT3, Paul Attar, PhD3, Andry Batchinsky, MD1,2
1The Geneva Foundation, Tacoma, WA, 2Morsani College of Medicine, University of South Florida, Tampa, FL, 3Bridge Preclinical Testing Services, San Antonio, TX

MHSRS-18-1130  POSTER SESSION 2 - #565
Addressing Knowledge Gaps: A Cellular Model to Study TBI, Biomarkers of Injury, Mechanism of Repair, Interventions & Neurodegeneration
Presentation Author: Dr. Daryl Preece
Daryl Preece, PhD1, Veronica Gomez-Godinez, PhD1, L Shi, PhD1, N Wakida, PhD1, MW Berns1,2
1University California San Diego, La Jolla, CA, 2University California Irvine, Irvine, CA

MHSRS-18-1236  POSTER SESSION 2 - #566
High-Speed Biplane X-ray Head Impact Experiments in the Göttingen Minipig
Presentation Author: Dr. Elizabeth McNeil
Elizabeth McNeil, PhD1, Allison Guettler, MS1, Pamela VandeVord, PhD1,2, Warren Hardy, PhD1
1Virginia Tech Center for Injury Biomechanics, Blacksburg, VA, 2Salem VA Medical Center, Salem, VA

MHSRS-18-1305  POSTER SESSION 2 - #567
Blast-Induced Traumatic Brain Injury (TBI) Gives Rise to Early Seizures in Mice
Presentation Author: Dr. James Lechleiter
Eda Bozdemir, MD1, Vladislav Bugay, PhD1, Fabio Antonio Borges Vigil, PhD1, Sang H. Chun1, Deborah M. Holstein1, Rowe Elliott4, Cassie Sprague2, Gregory Rule3 Jose Cavazos, MD1, Theodore Liston, PhD4, Mark Shapiro, PhD1, Brian Lund, PhD1, Robert Brenner, PhD1, James Lechleiter, PhD1
1UT Health San Antonio, San Antonio, TX, 2US Army Institute of Surgical Research, Fort Sam Houston, San Antonio, TX, 3Applied Research Associates, San Antonio, TX, 4Astrocyte Pharmaceuticals, Cambridge, MA

MHSRS-18-1383  POSTER SESSION 2 - #568
Blast Traumatic Brain Injury: Developing Personalized 3D Computational Models for use in High-Fidelity Blast Physics Simulations using Human MRI Scans
Presentation Author: CAPT Paul Elsbernd
CAPT Paul M. Elsbernd, MD, MS1, Candice F. Cooper, MS2, Adam M. Willis, MD, PhD1,3,4
1San Antonio Military Medical Center, Fort Sam Houston, TX, 2Sandia National Laboratories, Albuquerque, NM, 3Michigan State University, East Lansing, MI, 4University of Texas Southwestern, Dallas, TX
MHSRS-18-1395  POSTER SESSION 2 - #569
Experimental Study of the Mechanics of Blast-Induced Traumatic Brain Injury
Presentation Author: Dr. Ricardo Mejia-Alvarez
Ricardo Mejia-Alvarez, PhD1, Joseph Kerwin1, Suhas Vidhate1, Faezeh Masoomi1, Michaelann Tartis, PhD2, Adam M. Willis, MD, PhD3
1Michigan State University, East Lansing, MI, 2New Mexico Institute of Mining & Technology, Socorro, NM, 3San Antonio Military Medical Center, Fort Sam Houston, TX, 4University of Texas Southwestern, Dallas, TX

MHSRS-18-1407  POSTER SESSION 2 - #570
Vascular Repair Through Angiogenesis is Evident Following Penetrating Type Brain Injury
Presentation Author: Dr. Sindhu Madathil
Sindhu Madathil, PhD, Bernard Wilfred, PhD, Savannah Barannikov, MS, Sarah Urankar, MS, Xiaofang Yang, MD, Janice Gilsdorf, PhD, Shear Deborah, PhD
Walter Reed Army Institute of Research, Silver Spring, Maryland

MHSRS-18-1473  POSTER SESSION 2 - #571
Augmenting KCNQ (Kv7) M-Current as a Preventative for Cerebral Damage & Cognitive Dysfunction After Traumatic Brain Injury
Presentation Author: Ms. Liliana Espinoza
Liliana Espinoza, Fabio A. Borges Vigil, PhD, Eda Bozdemir, MD, Rafael J. Veraza, MS, Sang H. Chun, Deborah M. Holstein, Isamar Sanchez, MaryAnn Hobbs, Vladislav Bugay, PhD, James D. Lechleiter, PhD, Robert Brenner, PhD, Mark S. Shapiro, PhD
UT Health San Antonio, San Antonio, TX

MHSRS-18-1498  POSTER SESSION 2 - #572
Role of Wnt/Beta-Catenin Signaling in the Injured Cerebral Vasculature After Traumatic Brain Injury
Presentation Author: Dr. Andre Obenaus
Andre Obenaus1-3, Arjang Salehi2, Amandine Jullienne2, Mary Hamer1,3
1University of California Irvine, Irvine, CA, 2University of California Riverside, Riverside, CA, 3Loma Linda University, Loma Linda, CA

MHSRS-18-1594  POSTER SESSION 2 - #573
Time-Course of Brain Mitochondrial Bioenergetics Dysfunction Following Penetrating Traumatic Brain Injury
Presentation Author: Dr. Jignesh Pandya
Jignesh D. Pandya, William Jesse Fierlage, Xiaofang Yang, Hye Mee Hwang, Ying Deng-Bryant, Lai Yee Leung, Deborah A. Shear
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1598  POSTER SESSION 2 - #574
Profile of Microglial Activation States Following Single or Repeated Closed-Head Concussive Impact Injury in Rats
Presentation Author: Dr. Bernard Srambical Wilfred
Bernard Wilfred, PhD, Sindhu Madathil, PhD, Sarah Urankar, MS, Weihong Yang, MD, Lai Yee Leung, PhD, Janice Gilsdorf, PhD, Shear Deborah, PhD
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1684  POSTER SESSION 2 - #575
The Effect of Specimen Location & Cross-Sectional Area on the Distribution of Surface Pressure Under Shock Wave Loading Conditions
Presentation Author: Dr. Maciej Skotak
Jose J. Rodriguez1, Eren Alay, MS1, Maciej Skotak, PhD1, James Q. Zheng, PhD2, Virginia Halls2, Namas Chandra, PhD1
1New Jersey Institute of Technology, Newark, NJ, 2United States Army, Fort Belvoir, VA
MHSRS-18-1749  POSTER SESSION 2 - #576
Topiramate Lowers Seizure Activities in a Rat Model
Presentation Author: Dr. Jenny Browning
Jenny Browning, Christopher Powels, Janice Gilsdorf, Deborah Shear, Xi-Chun Lu
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1788  POSTER SESSION 2 - #577
Frequent Projectile Concussive Impact Injuries Induce Behavioral & Cognitive Deficits
Presentation Author: Dr. Adem Can
Adem Can, Jignesh D. Pandya, Lai Yee Leung, Angela M. Bouthé, Weihong Yang, Deborah A. Shear
Walter Reed Army Institutes of Research, Silver Spring, MD

MHSRS-18-1845  POSTER SESSION 2 - #578
Ethosuximide & Gabapentin Combination Therapy Failed to Achieve Synergistic Effects against Post-Traumatic Non-Convulsive Seizures Induced by Penetrating Brain Injury in Rats
Presentation Author: Dr. Xi-Chun Lu
Xi-Chun M. Lu, Ying Cao, Zhilin Liao, Jenny Browning, Janice Gilsdorf, Deborah Shear
Walter Reed Army Institute of Research, Silver Spring, MD

MHSRS-18-1988  POSTER SESSION 2 - #579
Combined Computational & Experimental Methods to Understand Traumatic Brain Injury Mechanisms in Primary Blast Loading Conditions
Presentation Author: Dr. Molly Townsend
MT Townsend, PhD, E Alay, MS, M Skotak, PhD, N Chandra, PhD
New Jersey Institute of Technology, Newark, NJ

MHSRS-18-1998  POSTER SESSION 2 - #580
Synergistic Roles of Oxidative Stress & Blood-Brain Barrier Permeability as Potential injury Mechanisms in Blast-Induced Neurotrauma
Presentation Author: Mr. Matthew Kuriakose
Matthew Kuriakose, Kakulavarapu V. Rama Rao, Namas Chandra
New Jersey Institute of Technology, Newark, NJ

MHSRS-18-2001  POSTER SESSION 2 - #581
Microglia Interaction with the Blood Brain Barrier Following Blast TBI: Role of NLRP3 Inflammasome
Presentation Author: Mr. Daniel Younger
Daniel Younger, Kakulavarapu V. Rama Rao, Arun Reddy Ravula, Namas Chandra
New Jersey Institute of Technology, Newark, NJ

MHSRS-18-2048  POSTER SESSION 2 - #582
Nanoelectroporated Cells Mediate Brain Repair After Injury
Presentation Author: Dr. Natalia Higuita-Castro
Natalia Higuita-Castro, PhD, Jordan Moore, BS, Maria Balch, BS, Hallie N. Harris, BS, William Laurence, BS, Richard Steward, BS, Alec Sunyecz, BS, Chandan K. Sen, PhD, Savita Khanna, PhD, Cameron Rink, PhD, Daniel Gallego-Perez, PhD

MHSRS-18-2054  POSTER SESSION 2 - #583
Elovanoids are Neuroprotective in Experimental Ischemic Stroke & in Traumatic Brain Injury (TBI)
Presentation Author: Dr. Nicolas Bazan
Nicolas G. Bazan, MD, PhD, Sayantani Bhattacharjee, PhD, Jessica Heap, BS, Ludmila Belayev, MD, Nicolas Petasis, PhD
School of Medicine, LSU Health New Orleans, New Orleans, LA

OPEN  POSTER SESSION 2 - #584
**PRE-HOSPITAL EVALUATION & CARE of MODERATE/SEVERE TBI IN THE AUSTERE ENVIRONMENT**

**MHSRS-18-0152 POSTER SESSION 2 - #585**

Intranasal Cooler for Encephalopathy Prevention in Combat Casualties

Presentation Author: Dr. Ryan Myers

Ryan T. Myers, PhD, Ryan Binette, Ian Cohen, Gordon Hirschman

Vivonics, Inc, Bedford, MA

**MHSRS-18-0376 POSTER SESSION 2 - #586**

Acute Physiological Changes Following Neurotherapeutic Resuscitation in a Rat Model of Traumatic Brain Injury Combined with Hemorrhagic Shock

Presentation Author: Dr. Lai Yee Leung

Lai Yee Leung, PhD1,3, Katherine Cardiff, BS1, Xiaofang Yang, BS1, Janice Gilsdorf, PhD1, Deborah Shear, PhD1, Patrick M. Kochanek, MD2

1Walter Reed Army Institute of Research, Silver Spring, MD, 2University of Pittsburgh, Pittsburgh, PA, 3Uniformed Services University of the Health Sciences, Bethesda, MD

**MHSRS-18-0614 POSTER SESSION 2 - #587**

Monitoring Traumatic Brain Injury Patients Using Transocular Brain Impedance (TBI)

Presentation Author: Dr. M. Hakam Tiba

M. Hakam Tiba, MD, MS, Krishna Rajajee, MD, Craig Williamson, MD, Ashwin Belle, PhD, Sardar Ansari, PhD, Brandon Cummings, BS, Brendan McCracken, BS, Amanda Pennington, MS, Kevin Ward, MD University of Michigan, Ann Arbor, MI

**MHSRS-18-0630 POSTER SESSION 2 - #588**

Automated Eye Tracking for Detection of Blast Brain Injury After a Natural Gas Explosion

Presentation Author: Dr. Rosina Samadani

Rosina Samadani PhD1, Abdullah Bin Zahid MD2,3, Maxwell Thorpe2, Christina Smith2, Caleb Hoover2, Erik Warren2, Radhika Edpuganti2, Shivani Venkatesh2, Dylan Sturtevant2, Aliya Ahmadi2, Olivia Newgaard2, David Balser2, Rebekah Kroll2, Uzma Samadani MD PhD2,3

1Oculogica, Inc, New York, NY, 2Hennepin County Medical Center, Minneapolis, MN, 3University of Minnesota & Minneapolis VA Medical Center, Minneapolis, MN

**MHSRS-18-0734 POSTER SESSION 2 - #589**

A Signal Processing Approach for the Calculation of a Bioimpedance Index in the Assessment of Cerebrovascular Autoregulatory Status

Presentation Author: Mr. Brandon Cummings

Brandon Cummings, BS, Brendan McCracken, BS, Chandler Rygalski, BS, Ashwin Belle, PhD, Kevin Ward, MD, M. Hakam Tiba, MD, MS

University of Michigan - Ann Arbor & Michigan Center for Integrative Research in Critical Care, Ann Arbor, MI

**MHSRS-18-0991 POSTER SESSION 2 - #590**

Utilization of the Brainscope Ahead 300 in an Airborne Joint Forcible Entry Exercise

Presentation Author: MAJ James Falcon

MAJ James Falcon, MC, MAJ Jessica Homine, SP CPT Robert Meadows, SP CPT Christopher Grace, MC 1st Brigade Combat Team, 82nd Airborne, Fort Bragg, NC
MHSRS-18-1009  POSTER SESSION 2 - #591
Markers of Endothelial Dysfunction are Associated with Progression of Intracranial Hemorrhage after Traumatic Brain Injury
Presentation Author: Dr. Holly Hinson
Chinar Agarwal, MD, Loren Myers, BS, Holly E. Hinson, MD, MCR
Oregon Health & Science University, Portland, OR

MHSRS-18-1054  POSTER SESSION 2 - #592
Impact of Time to Transport on Clinical Outcomes of Patients with Traumatic Brain Injury (TBI) Following Evacuation from Theater via Critical Care Air Transport Teams (CCATT)
Presentation Author: Dr. Allyson Arana
Allyson A. Araña, PhD¹, Crystal A. Perez, BSN, RN¹, Lauren K. Reeves, MsPH¹, Alejandra G. Mora, MS², Shelia C. Savell, PhD, RN³, Kimberly L. Medellin, BSN, RN⁴, Jill D. Lear, BSN, RN⁴, Joni A. Paciocco, ADN, RN⁴, Capt William T Davis, MD², Capt William G. Holder, MD², Maj Joseph K. Maddry, MD¹,²
¹USAF En route Care Research Center, JBSA, TX, ²San Antonio Military Medical Center, San Antonio, TX

MHSRS-18-1151  POSTER SESSION 2 - #593
The Impact of Selective Beta-1 Adrenergic Blockade on Survival of Trauma Patients with Brain Injury
Presentation Author: Dr. Galinos Barmparas
Galinos Barmparas, MD¹, Navpreet K Dhillon, MD¹, Samuel D Leonard², Bryan A Cotton, MD, MPH², Kenji Inaba, MD³, Ali Salim, MD⁴, Sandro Rizoli, MD, PhD⁵, Eric J Ley, MD², AAST Beta Blockers & TBI Study Group
¹Cedars-Sinai Medical Center, Los Angeles, CA, ²University of Texas at Houston, Houston, TX, ³Los Angeles County & USC Medical Center, Los Angeles, CA, ⁴Brigham & Women’s Hospital, Boston, MA, ⁵St. Michael’s Hospital, Toronto, ON, Canada

MHSRS-18-1505  POSTER SESSION 2 - #594
Intracranial Hypertension Detection Using Machine Learning Classification of Non-Invasive Transcranial Doppler Waveforms
Presentation Author: Dr. Seth Wilk
Fabien Scalzo, PhD¹, Ryan M. Mercer, PhD¹, Seth Wilk, PhD², Robert Hamilton, PhD²
¹University of California Los Angeles, Los Angeles, California, ²Neural Analytics, Los Angeles, CA

MHSRS-18-1992 - POSTER SESSION 2 - #595
Development of a Point of Care Device to Assess Cerebral & Peripheral Health for Combat Casualty Care Using a Single Multi-sensing Forehead Sensor
Presentation Author: Dr. Walter Holbein
Walter Holbein, PhD, Marcus Kramer, PhD, Emily Barten, Aaron Lobbestael, MS, Gregory Rausch, MS Nonin Medical, Inc.

MHSRS-18-2098  POSTER SESSION 2 - #596
Presentation Author: Mr. Zachary Osborn
TRANSLATION OF MILITARY LESSONS IN BYSTANDER BLEEDING CONTROL TO THE CIVILIAN SECTOR

MHSRS-18-1859 POSTER SESSION 2 - #597
Using Mass Casualty Characterization to Inform Preparation with Tourniquets
Presentation Author: CDR Nicole Hurst
Nicole Hurst, MD, Craig Goolsby, MD
Uniformed Services University of the Health Sciences, Bethesda, MD

HEMORRHAGE CONTROL & RESUSCITATION

MHSRS-18-0022 POSTER SESSION 2 - #598
New & Established Models of Limb Tourniquet Compared in Simulated First Aid
Presentation Author: Dr. John F
Nicola J. Newton1, Andy R. Tan2, James K. Aden 3d, PhD2, Michael A. Dubick, PhD1
1US Army Institute of Surgical Research, JBSA, Fort Sam Houston, TX, 2Brooke Army Medical Center, JBSA, TX, 3US Military Academy, West Point, NY

MHSRS-18-0063 POSTER SESSION 2 - #599
Influence of Resuscitation Fluid Type with REBOA Use in a Swine Uncontrolled Hemorrhage Model
Presentation Author: Dr. Michael Dubick
Michael A. Dubick, PhD, R. De Guzman, I. Amy Polykratis, BA, M. Dale Prince, BA, SPC Jorhan Ocasio Rosa, SPC Jose Bernal, Bijan S Kheirabadi, PhD
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

MHSRS-18-0201 POSTER SESSION 2 - #600
Multiple Coagulation Test System for Rapid Response to Coagulopathy of Trauma
Presentation Author: Mr. Michael Kagan
Michael Kagan, BS1, Sheldon Goldstein, MD2
1Coagulation Sciences, Dover-Foxcroft, ME, 2Coagulation Sciences, Bronx, NY

MHSRS-18-0205 POSTER SESSION 2 - #601
Indices of Inflammation & Oxidant Stress in Tissues from Swine Subjected to Traumatic Hemorrhage & Treated with Small Volume Resuscitation Adjuncts
Presentation Author: Mr. Theo Thomas
Theo Thomas, BS, Wenjun Martini, PhD, Johnny Barr, MS, Michael Dubick, PhD
US Army Institute of Surgical Research, San Antonio, TX

MHSRS-18-0225 POSTER SESSION 2 - #602
Thromboelastography (TEG) Versus Conventional Clotting Tests, Which Technique Predicts Bleeding Risk in a Hemorrhage Resuscitation Model?
Presentation Author: Dr. Bijan Kheirabadi
Bijan S. Kheirabadi, PhD, Rodolfo De Guzman, MLT, Nahir Miranda, MS, Irasema B. Terrazas, MS, Amber N. Voelker, MS, Michael A. Dubick, PhD
US Army Institute of Surgical Research, San Antonio, TX
MHSRS-18-0230 POSTER SESSION 2 - #603
A Comparison Between Intravenous & Interosseous Blood Transfusion of Three Different Pediatric Pressure Transfusion Strategies in an Immature Swine (Sus scrofa) Model of Hemorrhagic Shock: A Pilot Study
Presentation Author: LtTWilliam Bianchi
LT William Bianchi, DO, USN, MC1, LT Taylor George, USN, MD, MC1, LT Christian McEvoy, USN, MD, MPH, MC1, Mark Piehl MD, MPH2, Ana Manzano, CCRP3, Mr. Michael Boboc4, Ramesh Natarajan, PhD4, CDR Jonathan Auten, USN, DO, MC5, LCDR Paul Roszko, USN, MD, MC1
1Naval Medical Center Portsmouth, Portsmouth, VA, 2410 Medical, Inc, Durham, NC

MHSRS-18-0256 POSTER SESSION 2 - #604
Pre-clinical Evaluation of SynthoPlate as an Intravenous Hemostatic Nanotechnology for Hemorrhage Control & Survival Benefit in Military-Relevant Trauma Models
Presentation Author: Dr. Anirban Sen Gupta
Anirban Sen Gupta, PhD1, DaShawn A. Hickman, MS1, Norman Fluc1, Andrew J. Shevitz, MS1, Christa L. Pawlowski, PhD1, Ann Kim, MD1, Mitchell Dyer, MD2, Vikram S. Kashyap, MD2, Matthew D Neal2
1Case Western Reserve University, Cleveland, OH, 2University of Pittsburgh Medical Center, Pittsburgh, PA

MHSRS-18-0289 POSTER SESSION 2 - #605
The Effect of Prolonged Hypothermia on Extremity Ischemia in a Porcine Model (Sus scrofa) of Hemorrhage
Presentation Author: CAPT Harris Kashtan
CAPT Harris Kashtan, MD1, Meryl Simon, MD1, Carl Beyer, MD1, Andrew Wishy, MD1, Guillaume Hoareau, DVM, PhD1, M. Austin Johnson, MD, PhD1,2
1David Grant Medical Center, Travis Air Force Base, Fairfield, CA, 2University of California at Davis Medical Center, Sacramento, CA

MHSRS-18-0359 POSTER SESSION 2 - #606
Physiological Monitoring & Intervention Setup for Experimental Hemorrhagic Shock Model for Trauma- & Immune-Related Preclinical Research
Presentation Author: Dr. Zhuowei Li
Zhuowei Li, PhD1, John Parker, BS2 Jessica Muniga, DVM3, Barbara St. Pierre Schneider, PhD, RN1
1University of Nevada Las Vegas, Las Vegas, NV, 2University of California Los Angeles, Los Angeles, CA

MHSRS-18-0365 POSTER SESSION 2 - #607
Comparative Study of Submerged Hemostatic Agents Using Thromboelastography (TEG) - an In Vitro Study
Presentation Author: LT Matthew Jordan
LT Matthew Jordan, USN, MD, MC, LT William Bianchi, USN, DO, MC, LT Taylor George, USN, MD, MC, Mr. Michael Boboc, Ms. Alexandra Walchak, Donna Wolf, PhD, Ramesh Natarajan, PhD, LCDR Paul Roszko, USN, MD, MC
Naval Medical Center Portsmouth, Portsmouth, VA

MHSRS-18-0390 POSTER SESSION 2 - #608
Pre-hospital Low Titer Cold Stored Whole Blood: Philosophy for Ubiquitous Utilization of O Positive Product for Emergency Use in Hemorrhage Due to Injury
Presentation Author: Ms. Caroline Zhu
Ashley McGinity, MD1, Caroline Zhu2, Leslie Greebon, MD1, Elly Xenakis, MD1, Elizabeth Waltman, MBA3, Eric Epley, NREMT-P, CEM4, Danielle Cobb, MD5, Rachelle Jonas, RN4, Susannah Nicholson, MD1, Brian Eastridge, MD1, Ronald Stewart, MD1, Donald Jenkins, MD
1University of Texas Health Science Center at San Antonio, San Antonio, TX, 2University of Texas at San Antonio, San Antonio, TX, 3The Blood & Tissue Center, San Antonio, TX, 4South Texas Regional Advisory Council, San Antonio, TX, 5Louisiana State University School of Medicine, New Orleans, LA
MHSRS-18-0411  POSTER SESSION 2 - #609
A Study of Three Pressurized Intraosseous Blood Transfusion Strategies
Presentation Author: LT Eric Sulava
Naval Medical Center Portsmouth, Portsmouth, VA

MHSRS-18-0416  POSTER SESSION 2 - #610
Evaluation of Invertebrate Hemoglobins as Novel Blood Substitutes
Presentation Author: Dr. Jacob Elmer
Jacob Elmer, PhD, Osheiza Abdulmalik, DVM, Devon Zimmerman, PhD, Kyle Spivack, Matthew Tucker
1Villanova University, Villanova, PA, 2Children's Hospital of Philadelphia, Philadelphia, PA

MHSRS-18-0469  POSTER SESSION 2 - #611
Systemic & Microvascular Comparison of Lactated Ringers Solution, Vir-IV1, & Alpha Alpha Crosslinked Hemoglobin in a Rat 10% Topload Model
Presentation Author: Dr. Bjorn Song
1Song Biotechnologies LLC, Baltimore, MD 2VirTech Bio, Inc, Natick, MA

MHSRS-18-0470  POSTER SESSION 2 - #612
Systemic & Microcirculatory Assessment of Severe Hemorrhagic Shock & Resuscitation Using SANGUINATE®
Presentation Author: Dr. Bjorn Song
Bjorn K. Song, Forest Sheppard, MD, Ramon F. Cestero, MD, Pete Buontempo, MS, Ronald Jubin, PhD, Abe Abuchowski, PhD, William H. Nugent, PhD
1Song Biotechnologies, Baltimore, MD, 2Maine Medical Center, Portland, ME, 3University of Texas Health Science Center at San Antonio, San Antonio, TX, 4Prolong Pharmaceuticals, South Plainfield, NJ

MHSRS-18-0511  POSTER SESSION 2 - #613
Safe Balloon Occlusion Pressures & Volumes for Resuscitative Endovascular Balloon Occlusion of the Thoracic & Abdominal Aorta
Presentation Author: Dr. Alexey Kamenskiy
Kaspars Maleckis, PhD, Paul Deegan, MS, Thomas Kailil, BS, Jason MacTaggart, MD, Alexey Kamenskiy, PhD
University of Nebraska Medical Center, Omaha, NE

MHSRS-18-0512  POSTER SESSION 2 - #614
Effects of Belly Curvature on the Accuracy of Simulated Fluoroscopy-Free Endovascular Navigation
Presentation Author: Dr. Jason MacTaggart
Christian Sanderfer, BS, Blake Marmie, BS, Jonathan Fuchs, BS, Miles Tommeraasen, BS, Margarita Pipinos, Paul Aylward, MD, Alexey Kamenskiy, PhD, Jason MacTaggart, MD
1University of Nebraska Medical Center, Omaha, NE, 2Saint Louis University, St. Louis, MO

MHSRS-18-0597  POSTER SESSION 2 - #615
Effect of Diastolic Dysfunction on Volume Responsiveness with an Intrathoracic Pressure Regulator
Presentation Author: Mr. Mike Salter
Mike Salter, MS, Nicole Ribeiro Marques, MD, Muzna Khan, MS, Jordan Wolfe, BS, George Kramer, PhD, Michael Kinsky, MD
University of Texas Medical Branch, Galveston, TX
MHSRS-18-0642  POSTER SESSION 2 - #616
Normal Values for Rotational Viscoelastometry Evaluated Via ROTEM® in the Pig (Sus scrofa) & Effects of Pre-Analytical Sample Agitation on ROTEM® Results
Presentation Author: Dr. Guillaume Hoareau
Guillaume Hoareau, PhD, DVM, Kevin Grayson, PhD, DVM
David Grant USAF Medical Center, Travis AFB, CA

MHSRS-18-0693  POSTER SESSION 2 - #617
Bacterial Thioredoxin Exacerbates Sepsis Induced Coagulopathy
Presentation Author: Dr. Patrick Ketter
Patrick Ketter1, Bernard Arulanandam2, Andrew Cap1
1US Army Institute of Surgical Research, JBSA-Fort Sam Houston, TX, 2University of Texas at San Antonio, Biology Department, San Antonio, TX

MHSRS-18-0698  POSTER SESSION 2 - #618
Pre-Hospital Vital Signs Thresholds for Prediction of Emergency Blood Transfusion in < 55 year Old Versus Older Trauma Patients
Presentation Author: Dr. Peter Hu
Peter Hu, PhD,1 Yao Li, PhD,1 Colin F. Mackenzie, MD,1 Shiming Yang, PhD1, Catriona Miller, PhD2, Peter Rock, MD1.
1University of Maryland School of Medicine, Baltimore, MD 2USAF Center for the Sustainment of Trauma & Readiness Skills, Baltimore, MD

MHSRS-18-0701  POSTER SESSION 2 - #619
Effect of Perfluorocarbon Emulsion Infusion on Platelet Activation Observed by Scanning Electron Microscopy in Normal & Hemorrhagic Sheep
Presentation Author: Dr. Jiepei Zhu
Jiepei Zhu, PhD2, J. Mark Hylton, Jr, MD1, Evan Kraus, MD1, Travis Parsons, PhD2, Bruce Spiess, MD, FAHA2
1School of Medicine, Virginia Commonwealth University, Richmond, VA, 2University of Florida College of Medicine, Gainesville, FL

MHSRS-18-0705  POSTER SESSION 2 - #620
Direct Peritoneal Resuscitation Improves Survival in A Murine Model of Combined Burn & Hemorrhage
Presentation Author: Dr. Andrew Jung
Andrew D Jung, MD1, Lou Ann Friend, RVT1, Sabre Stevens-Topie1, Michael DGoodman, MD1, Jason Smith, MD, PhD2, Charles C. Caldwell, PhD1, Timothy A. Pritts, MD, PhD1
1University of Cincinnati, Cincinnati, OH, 2University of Louisville, Louisville, KY

MHSRS-18-0768  POSTER SESSION 2 - #621
Non-Invasive Automated Evaluation of Muscle Blood Flow & Oxygenation in a Rat Model of Trauma & Prolonged Hemorrhagic Shock
Presentation Author: Dr. Ivo Torres Filho
Ivo P Torres Filho, David Barraza, Charnae E. Williams, Kim Hildreth, Michael A. Dubick
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

MHSRS-18-0873  POSTER SESSION 2 - #622
Resuscitation from Hemorrhagic Shock with High Molecular Weight Polymerized Hemoglobin
Presentation Author: Mr. Alexander Williams
Alexander T. Williams1, Andre Palmer, PhD2, Pedro Cabrales, PhD1
1UC San Diego, La Jolla, CA, 2The Ohio State University, Columbus, OH
MHSRS-18-0880  POSTER SESSION 2 - #623
Complement Activation During Blood Clotting & Shock Mediate Neutrophil Priming, ROS-Dependent Coagulopathy, & Organ Damage in Traumatic Injury
Presentation Author: Dr. Christopher Barrett
Christopher D. Barrett, MD, Albert T. Hsu, MD, Christian D. Ellson, MD, Byron Y. Miyazawa, BS, Yi-Wen Kong, PhD, James D. Greenwood, MD, Sanjeev Dhara, BS, Matthew D. Neal, MD, Jason L. Sperry, MD, Myung S. Park, MD, Mitchell J. Cohen, MD, Brian S. Zuckerbraun, MD, & COL Michael B. Yaffe, MD, PhD
1Massachusetts Institute of Technology, Cambridge, MA, 2Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, 3University of California at San Francisco, San Francisco, CA, 4University of Pittsburgh, Pittsburgh, PA, 5Mayo Clinic, Rochester, MN, 6Denver Health Medical Center, Denver, CO

MHSRS-18-0905  POSTER SESSION 2 - #624
Pre-Hospital Whole Blood Does Not Attenuate Inflammation & Organ Injury Compared to Hextend® in a Non-Human Primate Model of Poly-Trauma
Presentation Author: Dr. Leslie Neidert
Leslie E. Neidert, PhD, Alexander Burdette, PhD, Michelle E. Thompson, DVM, Forest R. Sheppard, MD, Jacob J. Glaser, CDR
1Naval Medical Research Unit San Antonio, JBSA Fort Sam Houston, TX, 2Air Force Material Command 711th Human Performance Wing, JBSA-Ft. Sam Houston, TX

MHSRS-18-0906  POSTER SESSION 2 - #625
Pre-Hospital Whole Blood Does Not Attenuate Acute Lung Injury Compared to Hextend® in a Poly-Traumatic Non-Human Primate Model
Presentation Author: Dr. Leslie Neidert
Leslie E. Neidert, PhD, Alexander Burdette, PhD, Michelle E. Thompson, DVM, Forest R. Sheppard, MD, Jacob J. Glaser, CDR
1Naval Medical Research Unit San Antonio, JBSA Fort Sam Houston, TX, 2Air Force Material Command 711th Human Performance Wing, JBSA-Ft. Sam Houston, TX

MHSRS-18-0926  POSTER SESSION 2 - #626
A Microfluidic Dielectric Sensor for Point-of-Injury Assessment of Hemostatic Dysfunction
Presentation Author: Dr. Michael Suster
Michael Suster, PhD, Debnath Maji, M. Tech, Ujjal Sekhon, BE, Evi Stavrou, MD, Anirban Sen Gupta, PhD, Pedram Mohseni, PhD
1Case Western Reserve University, Cleveland, OH, 2Louis Stokes Cleveland VA Medical Center, Cleveland, OH

MHSRS-18-0936  POSTER SESSION 2 - #627
Electrokinetic & Thromboelastographic Analysis Demonstrates that Retention of Cotton Cuticle Components Promotes Hemostasis in Hydroentangled Nonwoven Blends
Presentation Author: Dr. Judson Edwards
J. Vincent Edwards, PhD, Elena Graves, PhD, Dorne Yager, PhD, Hazaifah Qureshi, Joseph Dacorta, Lawson Gary, Michael Reynolds, Brian Condon, PhD
1Southern Regional Research Center, New Orleans, LA, 2H&H Medical Corporation, Williamburg, VA, 3Virginia Medical College, Richmond, VA, 4TJ Beall, Greenwood, MS

MHSRS-18-0940  POSTER SESSION 2 - #628
Detection of Internal Bleeding Through Autofluorescence of Heme Breakdown Products
Presentation Author: Dr. Judith Runnels
Judith M. Runnels, PhD, Clemens Alt, PhD, Juwell W. Wu, PhD, Charles P. Lin, PhD Massachusetts General Hospital, Harvard Medical School, Boston, MA
MHSRS-18-1016  POSTER SESSION 2 - #629
Assessment of End-Organ Damage After Short Term Deployment of REBOA in a Model of Hemorrhagic Cardiac Arrest
Presentation Author: Dr. Jae Hyek Choi
Jae Hyek Choi1,2, Corina Necsoiu1, Bryan Jordan1, Alexander Dixon1,2, Mark Espinoza1, Sungmin Ko1,2, Andriy Batchinsky1,2, Leopoldo Cancio1
1The Geneva Foundation, Tacoma WA, 2US Army Institute of Surgical Research, JBSA Ft. Sam Houston, TX, 3Republic of Korea Army, Republic of Korea

MHSRS-18-1084  POSTER SESSION 2 - #630
Prehospital Hemostatic Dressings for Trauma: A Systematic Review
Presentation Author: Dr. Adam Boulton
Adam J. Boulton, MBChB, Christopher T. Lewis, MBChB, David N. Naumann, MRCS, Mark J. Midwinter, FRCS
1University Hospitals Coventry & Warwickshire NHS Trust, Coventry, UK, 2NHS Highland, Raigmore Hospital, Inverness, UK, 3NIHR Surgical Reconstruction & Microbiology Research Centre, Birmingham, UK, 4School of Biomedical Sciences, University of Queensland, Brisbane, Australia

MHSRS-18-1094  POSTER SESSION 2 - #631
Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) Alters Intracranial Pressure & Brain Tissue Oxygen Tension Following Traumatic Brain Injury
Presentation Author: Dr. Zachary Bailey
Zachary Bailey1, Katherine Cardiff1, Xiaofang Yang1, Janice Gilsdorf1, Deborah Shear1, Todd Rasmussen1, Lai Yee Leung1,2
1Walter Reed Army Institute of Research, Silver Spring, MD, 2Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1104  POSTER SESSION 2 - #632
Development of Devices to Enable REBOA in Prolonged Field Care
Presentation Author: Mr. Curtis Franklin
Curtis J. Franklin1, MS, Col Todd E. Rasmussen2, John B. Holcomb, MD, David G. Baer, PhD
1Prytime Medical Devices, Boerne, TX, 2Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1176  POSTER SESSION 2 - #633
Effects of Fibrinogen Concentrate on Brain Blood Flow During Damage Control Resuscitation in a Polytrauma Model
Presentation Author: Dr. Nathan White
Nathan White, MD, Alexander St. John, MD, Xu Wang, MD, Susan Stern, MD University of Washington, Seattle, WA

MHSRS-18-1210  POSTER SESSION 2 - #634
A “Human-Proof Pointy-End” for a Potential Trauma Pod Effector: Technical Notes on Robotic Hemostatic Clamp for Care-Under-Fire. An Update
Presentation Author: MAJ Andrew Kirkpatrick
Major Andrew W. Kirkpatrick, CD, MD, MHS, FRCSC, FACS, MSc, PhD, Jessica L. Mckee, BA, MSc, Ian A. Mckee, PTO, Paul McBeth, MD, MSc, FRCSC, FACS, FACS, FACS, FACS, FACS, PhD, Chad G. Ball, MD, MSc, FRCSC, FACS, LCol N. (Ret) Naisan Garraway, CD, MD, FRCSC, FACS, David J. Schneider, 18D, ATP, EMT-P, ISRM, Timothy J. Broderick, MD, FACS
1University of Calgary, Calgary, AB, Canada, 2Foothills Medical Centre, Calgary, AB, Canada, 3Canadian Forces Health Services, Canada, 4City of Edmonton, Edmonton, AB, Canada, 5Vancouver General Hospital, Vancouver, BC, Canada, 6US Department of State, Directorate of Operational Medicine, Washington, DC, 7University of Cincinnati, Cincinnati, OH
MHSRS-18-1216  POSTER SESSION 2 - #635
The Efficacy of Platelet Substitutes, H12(ADP)Liposomes, for the Treatment of Hemorrhagic Shock Caused by Mesenteric Injury in Rabbits with Trauma-Induced Coagulopathy
Presentation Author: Dr. Manabu Kinoshita
Manabu Kinoshita, MD, PhD1, Kosuke Hagisawa, MD, PhD1, Shinji Takeoka, PhD2, Nariyoshi Shinomiya, MD, PhD1, Shuhji Seki, MD, PhD1
1National Defense Medical College, Japan, 2Graduate School of Advanced Science & Engineering, Waseda University, Japan

MHSRS-18-1219  POSTER SESSION 2 - #636
Efficacy of Intraosseous Transfusion of Hemoglobin Vesicles for the Resuscitation of Hemorrhagic Shock Rabbits
Presentation Author: Dr. Kosuke Hagisawa
Kosuke Hagisawa, MD, PhD1, Manabu Kinoshita, MD, PhD1, Nariyoshi Shinomiya, MD, PhD1, Hiromi Sakai, PhD2
1National Defense Medical College, Japan, 2Nara Prefectural Medical University, Japan

MHSRS-18-1221  POSTER SESSION 2 - #637
Just Pack It! Maybe Not As Easy As It Sounds Without Remote Guidance
Presentation Author: Ms. Jessica Mckee
Jessica L. Mckee, BA MSc1, Major Andrew W. Kirkpatrick, CD, MD, MHSc, FRCSC, FACS1-3, Ian A. Mckee, TI4, Paul McBeth, MD, MASC, FRCS(C), P Eng1,2, Chad G. Ball, MD MSc FRSCC, FACS1,2
1University of Calgary, Calgary, AB, Canada, 2Alberta Health Services, Foothills Medical Centre, Calgary, AB, Canada, 3Canadian Forces Health Services Canada, 4City of Edmonton, Edmonton, AB, Canada

MHSRS-18-1258  POSTER SESSION 2 - #638
Investigational French Freeze Dried Plasma Use by US Special Operations Command (USSOCOM): “A New Era of DoD & FDA collaboration”
Presentation Author: Mr. Danny Hassan
Danny Hassan1, Rodney Saunders2, Eric Green3, Ryan Meskiman4, William “Bill” Barnes5

MHSRS-18-1318  POSTER SESSION 2 - #639
A Matter of Fluids: Relationship Between Platelet Dysfunction & Resuscitative Crystalloids
Presentation Author: Ms. Leasha Stygler
Leasha Schaub, MS1, Forest Sheppard, MD, FACS1, Hunter Moore, MD, PhD2, Ernest Moore, MD2, Viviana Moreno, BS1, Mary Salas, MS1, CDR Jacob Glaser, MD, FACS1
1Naval Medical Research Unit-San Antonio, Ft. Sam Houston, TX, 2University of Colorado & Denver Health Medical Center, Denver, CO

MHSRS-18-1324  POSTER SESSION 2 - #640
Hextend is Equivalent to Whole Blood for Short Term Prehospital Resuscitation, but Creates a Life Threatening Coagulopathy in Non-Human Primate Poly-Traumatic Hemorrhagic Shock Model
Presentation Author: Ms. Kassandra Ozuna
Leasha Schaub, MS1, Doug Tadaki, PhD2, Kassandra Ozuna, MBA1, Darren Fryer, BS1, COL Andre Cap, MD, PhD2, Forest Sheppard, MD, FACS1,3, CDR Jacob Glaser, MD, FACS1
1Naval Medical Research Unit-San Antonio, JBSA-Ft. Sam Houston, TX, 2US Army Institute of Surgical Research, JBSA-Ft. Sam Houston, TX, 3Maine Medical Center, Portland, ME

OPEN  POSTER SESSION 2 - #641
**MHSRS-18-1342**  **POSTER SESSION 2 - #642**
The Effect of Ethynylestradiol-3-sulfate (EE-3-S) on Blood Volume & Organ Function in Pigs with Severe Traumatic Hemorrhage
Presentation Author: Dr. Wenjun Martini

**MHSRS-18-1366**  **POSTER SESSION 2 - #643**
Development of an Oxygen Carrier Solution (VIR-XV1) for Ex Vivo & In Vivo Applications
Presentation Author: Dr. William Light
W. Richard Light, PhD1, Kim Vandegriff, PhD1, William Light1, Andres Benitez, PhD1, Joe Tucker, PHD1, William H. Nugent, PhD2, Bjorn K. Song, PhD2, Ashok Malavalli, MA1
1VirTech Bio, Natick, MA, 2Song Biotechnologies, Baltimore, MD

**MHSRS-18-1451**  **POSTER SESSION 2 - #644**
Fast Onset Abdominal Management (F.O.A.M.)™: Intra-Abdominal Noncompressible Hemorrhage Hemostasis Technology
Presentation Author: Dr. Ross Donaldson
Ross Donaldson, MD1, Timothy Fisher, MBChB2, Oliver Buchanan, BSc1, John Cambridge, PhD2, Jonathan Armstrong, PhD2, James Ross, PhD2
1Critical Innovations, Los Angeles, CA, 2NeoMatRx, Los Angeles, CA, 3Oregon Health & Science University School of Medicine, Portland, OH

**MHSRS-18-1502**  **POSTER SESSION 2 - #645**
PolySTAT, a Fibrin-Crosslinking Intravenous Hemostat, Shows Clinical Relevance as a Hemorrhage Treatment
Presentation Author: Dr. Nathan White
Nathan White, MD1, Robert Lamm, BS2, Leslie Chan, PhD1, Xu Wang, MD1, Suzie Pun PhD1
1University of Washington, Seattle, WA

**MHSRS-18-1515 - POSTER SESSION 2 - #646**
Transfusion of Anaerobically Stored RBCs Improves Recovery from Hemorrhagic Shock in Rats
Presentation Author: Mr. Alexander Williams
Alexander T. Williams1, Tatsuro Yoshida, PhD2, Andrew Dunham, PhD3, Pedro Cabrales, PhD1
1UC San Diego, La Jolla, CA, 2Hemanext, Lexington, MA

**MHSRS-18-1535**  **POSTER SESSION 2 - #647**
Self-Assembling Peptide Nanofibers for Rapid Hemostasis
Presentation Author: Mr. Colin Bittner
Colin Bittner, BS1, Michael Dubick, PhD2, Paula Hammond, PhD1
1Massachusetts Institute of Technology, Cambridge, MA, 2US Army Institute of Surgical Research, Ft. Sam Houston, TX

**MHSRS-18-1676**  **POSTER SESSION 2 - #648**
The Endovascular Variable Arterial Control (EVAC) Pump- Next Generation REBOA for En Route Combat Casualty Care
Presentation Author: Dr. Lucas Neff
Timothy K. Williams MD1,2, Lucas P. Neff MD2,4, Meryl A. Simon MD2,3, Anders J. Davidson MD2,3, Erik S. DeSoucy DO2,3, E. Robert Faulconer MBBS3, J. Kevin Grayson DVM, PhD3, M. Austin Johnson MD, PhD2,3
1Wake Forest Baptist Medical Center, Winston-Salem, NC, 2University of California Davis Medical Center, Sacramento, CA, 3David Grant USAF Medical Center, Travis Air Force Base, CA, 4Emory University Hospital, Atlanta, GA
Poster Session II

MHSRS-18-1702  POSTER SESSION 2 - #649
In Vitro Evaluation of a Novel Hemostatic Dressing That Uses Low Electrical Current to Induce Coagulation
Presentation Author: MAJ Dean Nachman
John Smith, PhD¹, John Doe, MS², Jane Doe, MD¹, MAJ Dean Nachman, MD¹,², Noy Mark³, Rafi Gerass³, Sagie Meshulam³, Lin Wagnert Avraham, PhD¹, Chen Orenstein¹, Arik Eisenkraft, MD¹
¹The Hebrew University Medical School, Jerusalem, Israel, ²Hadassah Hospital Ein Kerem, Jerusalem, Israel, ³Surgeon General Headquarters, IDF

MHSRS-18-1722  POSTER SESSION 2 - #650
Predicting Acute Traumatic Coagulopathy Outcomes Using Machine Learning
Presentation Author: Dr. Sanket Tavarageri
Sanket Tavarageri, PhD, Nag Mani, Anand Ramasubramanian, PhD, Kiran Kalsi San Jose State University, San Jose, CA

MHSRS-18-1728  POSTER SESSION 2 - #651
Evaluation of Trauma-Induced Coagulopathy in the FiRST Trial
Presentation Author: Dr. Henry Peng
Henry Peng, PhD¹, Barto Nascimento, MD², Wentao Cui, BSc¹, Shawn G. Rhind, PhD², Andrew Beckett, MD³
¹Toronto Research Centre, Toronto, ON, Canada, ²Sunnybrook Health Sciences Centre, Toronto, ON, Canada, ³Royal Canadian Medical Services, Ottawa, QC, Canada

MHSRS-18-1756  POSTER SESSION 2 - #652
Platelet Transfusion for Correction of Platelet Inhibition in Moderate to Severe TBI is Not Associated with Decreased Mortality in the Younger Patient Population
Presentation Author: Dr. Andrew Sorah
Andrew Sorah, MD, Susan Evans, MD, Kyle Cunningham, MD, Colleen Karvetski, PhD, Michael Ekaney, PhD, Rita Brintzenhoff, MD
Carolina Medical Center, Charlotte, NC

MHSRS-18-1758  POSTER SESSION 2 - #653
A Pilot Observational Cohort Study of Endothelial Glycocalyx Shedding in Severe Trauma Patients
Presentation Author: MAJ Elissa Milford
MAJ Elissa Milford, MBBS¹,², David Liu, PhD²,³, Jeffrey Lipman, PhD²,³, John-Paul Tung, PhD⁴, James Winears, MBBS⁵, Martin Wullschleger, PhD², Michael Reade, DPhil¹,²,³
¹Australian Defence Force, ²University of Queensland, Queensland, Australia, ³Royal Brisbane & Women’s Hospital, Queensland, Australia, ⁴Australian Red Cross Blood Service, Queensland, Australia, ⁵Gold Coast University Hospital, Queensland, Australia

MHSRS-18-1763  POSTER SESSION 2 - #654
Self-Propelling Particles Increase the Efficacy of Hemostatic Agents in Traumatic & Surgical Bleeding
Presentation Author: Mr. James Baylis
James R. Baylis, BSc¹, Alexander E. St. John, MD², Andres Finkelstein-Kulka, MD³, Xu Wang, MD², Mike M. Lee, BSc¹, Luis Macias-Valle, MD³, Jamil Manji, MSc⁵, Matthew Statz, BS², Esther B. Lim, BSc⁵, Diana Chien, BSc⁵, Eric Christopher Okpaleke, MPH³, Salahuddin Al-Salihi, MD³, Susan A. Stern, PhD⁶, Amin Javer, MD³, Nathan J. White, MD², Christian J. Kastrup, PhD³
¹University of British Columbia, Vancouver, BC, Canada, ²University of Washington, Seattle, WA, ³St. Paul’s Hospital Sinus Centre, Vancouver, BC, Canada

MHSRS-18-1794  POSTER SESSION 2 - #655
Development of a cGMP-Compliant Process to Manufacture Human Platelet Releasate (hPR) - A Xeno-Free Serum Supplement for Large-Scale Cell Expansion
Presentation Author: Dr. Anand Srinivasan
Anand Srinivasan, PhD¹,², Corrine Avila³, Elizabeth Serrano³, Jane Ladet⁴, James Bynum, PhD², COL Andrew P. Cap, MD, PhD², Scott Jones, PhD¹, Ward Carter, BS¹, Becky Cap, MBA¹
¹BioBridge Global, San Antonio, TX, ²US Army Institute of Surgical Research, Fort Sam Houston, TX
MHSRS-18-1892  POSTER SESSION 2 - #656
Novel Injectable Oxygen Microsensors Reveal Hind Limb Tissue Hypoxia After REBOA Use in a Swine Hemorrhage Model
Presentation Author: Dr. Scott Nichols
Scott P. Nichols, PhD¹, Malcom D. Prince², I. Amy Polykratis², Rodolfo De Guzman², Dylan Li³, Natalie A. Wisniewski, PhD⁴, Michael A. Dubick²
¹Profusa Inc, South San Francisco, CA, ²US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

MHSRS-18-1996  POSTER SESSION 2 - #657
Early Thrombin Generation in Thermally-Injured Patients
Presentation Author: Dr. Robert Ball
Robert Ball, MD¹,², Jeffrey Shupp, MD¹,³, Maria Bravo, PhD³, Thomas Orfeo, PhD³, Melissa McLawhorn, RN³, Lauren Moffatt, PhD¹,³, Kathleen Brummel-Ziedins, PhD⁴
¹MedStar Health Research Institute, Washington, DC, ²MedStar Washington Hospital Center, Washington, DC, ³Georgetown University School of Medicine, Washington, DC, ⁴University of Vermont Larner College of Medicine, Burlington, VT

MHSRS-18-2009  POSTER SESSION 2 - #658
Meizothrombin Generation in Thermally-Injured Patients
Presentation Author: Dr. Robert Ball
Robert Ball, MD¹,², Maria Bravo, PhD³, Kathleen Brummel-Ziedins, PhD³, Thomas Orfeo, PhD³, Melissa McLawhorn, RN³, Lauren Moffatt, PhD¹,³, Jeffrey Shupp, MD¹,²,⁴
¹MedStar Health Research Institute, Washington, DC, ²MedStar Washington Hospital Center, Washington, DC, ³University of Vermont Larner College of Medicine, Burlington, VT, ⁴Georgetown University School of Medicine, Washington, DC

MHSRS-18-2042  POSTER SESSION 2 - #659
Hemostatic Properties of Acellular Fish Skin Graft & a Gelatin Sponge Evaluated in an Acute Porcine Liver Square Lesion Model
Presentation Author: Dr. Hilmar Kjartansson
Hilmar Kjartansson, MD¹,², Baldur Tumi Baldursson MD, PhD¹,², Skuli Magnusson, BSc², G. Fertram Sigurjonsson, MEng²
¹Landspitali - The National University Hospital of Iceland, Reykjavik, Iceland, ²Kerecis, Reykjavik, Iceland

MHSRS-18-2074  POSTER SESSION 2 - #660
Increased Thrombin Generation & Abnormal Clot Structure in Trauma Patients with Fibrinolysis Shutdown
Presentation Author: Dr. Kalev Freeman
Kalev Freeman, MD, PhD, Nathan Dow, BS, Nuria Villalba, PhD, Alex Olson, BS, Shannon Prior, BS, Saulius Butenas, PhD
University of Vermont, Burlington, VT

BLOOD PRODUCTS & MILITARY BLOOD BANKING

MHSRS-18-0120  POSTER SESSION 2 - #661
Airdrop Blood Supply in the French Army
Presentation Author: CDR Olivier Javaudin
CDR Olivier Javaudin, PharmD¹, Arthur Baillon, PharmD², Nicolas Varin³, Christophe Martinaud, MD, PhD, Prof², Thomas Pouget, MD¹, Corinne Cividaler, PharmD¹, Benoit Clavier, MD¹, Anne Sailliol, MD¹
¹Centre De Transfusion Sanguine Des Armées, Clamart, France, ²Ecole De Santé Des Armées, Bron, France, ³Section Technique De L’armée De Terre, Cugnaux, France
Poster Session II

**MHSRS-18-0200**  
**POSTER SESSION 2 - #662**  
Assessment of Cryoprecipitate Produced from Mirasol-Treated Plasma  
Presentation Author: Dr. Susan Yonemura  
Susan Yonemura, PhD\(^1\), Marley Shipps, BS\(^1\), Marcia Cardoso, PhD\(^2\), Susanne Marschner, PhD\(^1\)  
\(^1\)Terumo BCT, Lakewood, CO, \(^2\)Terumo BCT Europe NV, Zaventem, Belgium

**MHSRS-18-0237**  
**POSTER SESSION 2 - #663**  
Hemoglobin San Diego: An Uncommon Cause of Hereditary Erythrocytosis Discovered Incidentally in a Military Trainee  
Presentation Author: CPT Joshua Boster  
CPT Joshua Boster, MD, Joseph Howells, DO, Ryan Devine, DO  
Brooke Army Medical Center, Fort Sam Houston, TX

**MHSRS-18-0245**  
**POSTER SESSION 2 - #664**  
Purine Nucleoside Levels are Maintained in Cold-Stored Platelets  
Presentation Author: Mrs. Christi Salgado  
Christi Salgado, Kristin Reddoch-Cardenas, Umang Sharma, Daniel Darlington, Andrew Cap  
US Army Institute of Surgical Research, Fort Sam Houston, TX

**MHSRS-18-0433**  
**POSTER SESSION 2 - #665**  
High Sensitivity Multiplex Detection of Tick Borne Infections Using a Combination of Nanotechnology & Mass Spectrometry  
Presentation Author: Dr. Robert Molestina  
Ruben Magni\(^1\), Alessandra Luchini\(^1\), Lance Liotta\(^1\), Robert E. Molestina\(^2\)  
\(^1\)George Mason University, Manassas, VA, \(^2\)Protistology Laboratory, American Type Culture Collection, Manassas, VA

**MHSRS-18-0485**  
**POSTER SESSION 2 - #666**  
Tranexamic Acid Mediates Pro- & Anti-Inflammatory Signaling via Complement C5a Regulation in a Plasminogen Activator-Dependent Manner  
Presentation Author: Dr. Christopher Barrett  
Christopher D. Barrett, MD\(^1,2\), Hunter B. Moore MD, PhD\(^3\), Dan C. Lim, PhD\(^2\), Michael P. Chapman, MD\(^3\), Ernest E. Moore, MD\(^1,4\), COL Michael B. Yaffe, MD, PhD\(^1,2\)  
\(^1\)Harvard Medical School, Boston, MA, \(^2\)Massachusetts Institute of Technology, Cambridge, MA, \(^3\)University of Colorado Denver, Denver, CO, \(^4\)Denver Health Medical Center, Denver, CO

**MHSRS-18-0505**  
**POSTER SESSION 2 - #667**  
Specialized Proresolving Mediators (SPMs) Help to Alleviate the Cold Platelet Storage Lesion  
Presentation Author: Dr. Kristin Reddoch-Cardenas  
Kristin Reddoch-Cardenas, PhD\(^1\), Umang Sharma, BS\(^1\), Christi Salgado, BS\(^1\), Carolina Canto, MS\(^1\), Heather Pidcocke, MD, PhD\(^2\), Andrew Cap, MD, PhD\(^1\)  
\(^1\)US Army Institute of Surgical Research, JBSA-Fort Sam Houston, TX, \(^2\)Cellphire, Rockville, MD

**MHSRS-18-0520**  
**POSTER SESSION 2 - #668**  
The Homogeneity & Functionality of Exosomes Isolated from Different Preparations  
Presentation Author: Ms. Tiffani Chance  
Tiffani Chance, MS\(^1,2\), Christopher R. Rathbone, PhD\(^1\), Barbara A. Christy, PhD\(^2\), Larry E. Estlack, BS\(^2\), Christopher Delevan, MS\(^2\), Andrew P. Cap, MD, PhD\(^2\), James A. Bynum, PhD\(^2\)  
\(^1\)The University of Texas at San Antonio, San Antonio, TX, \(^2\)The United States Army Institute of Surgical Research, San Antonio, TX
MHSRS-18-0522  POSTER SESSION 2 - #669
In Vitro Production of Platelets for Far-Forward Military Settings & Countermeasure Transfusion Needs
Presentation Author: Dr. Jonathan Thon
Jonathan N. Thon, PhD 1,2, Bradford Dykstra, PhD 1, Jorge Valdez, PhD 1, Christian G. Peters, PhD 1, Lea M. Beaulieu, PhD 1
1Platelet BioGenesis, Cambridge, MA, 2Brigham & Women’s Hospital, Boston, MA

MHSRS-18-0530  POSTER SESSION 2 - #670
Cellular Therapy Products Enhance Angiogenic Potential of Human Umbilical Vein Endothelial Cells
Presentation Author: Dr. Barbara Christy
Larry E. Estlack, BS, Christopher Delavan, MS, Maryanne C. Herzig, PhD, Barbara A. Christy, PhD, James A. Bynum, PhD, Andrew P. Cap, MD, PhD
The University of Texas Health Science Center at San Antonio, San Antonio, TX

MHSRS-18-0538  POSTER SESSION 2 - #671
Prolonged Prothrombin Time in Acquired Coagulopathies: Contributions of Excess Thrombin & Fibrinogen Degradation Products
Presentation Author: Dr. Michael Meledeo
Michael Meledeo, PhD, Prajeeda Nair, PhD, Grantham Peltier, MS, Ashley Taylor, BA, James Bynum, PhD, Andrew Cap, MD, PhD
USAISR, JBSA-Fort Sam Houston, TX

MHSRS-18-0550  POSTER SESSION 2 - #672
Stability of French Lyophilized Plasma Following Accidental Temperature Excursion During Shipping
Presentation Author: Dr. Michael Meledeo
Michael Meledeo, PhD 1, Grantham Peltier, MS 1, Colby McIntosh, BS 1, William Barnes, MS 2, James Bynum, PhD 1, Andrew Cap 1
1USAISR, JBSA-Fort Sam Houston, TX, 2AFSOC, Hurlburt Field, FL

MHSRS-18-0562  POSTER SESSION 2 - #673
Impact of a -80oC Cold Chain Environment on Supply, Transport & Storage of DMSO Cryopreserved Platelets in a Veterinary Clinical Trial
Presentation Author: Dr. Anne Hale
Anne S. Hale, DVM 1, G. Michael Fitzpatrick, PhD 2
1BodeVet Inc, Rockville, MD, 2Cellphire Inc, Rockville, MD

MHSRS-18-0589  POSTER SESSION 2 - #674
Comparison of Direct vs. Transwell MLR Assays for Evaluation of Human Mesenchymal Stromal Cell Immunomodulation Activity
Presentation Author: Mr. Christopher Delavan
Christopher Delavan, MS, Robbie Montgomery, MS, Maryanne Herzig, PhD, Barbara Christy, PhD, James Bynum, PhD, COL Andrew Cap, MD, PhD
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX

MHSRS-18-0609  POSTER SESSION 2 - #675
Adenosine Changes cAMP in Platelets by Affecting Adenylyl Cyclase & Phosphodiesterase-3
Presentation Author: Dr. Daniel Darlington
Bunyen Teng, PhD 1, Daniel N. Darlington, PhD 1, Xiaowu Wu 1,2, MD, Andrew P. Cap, MD, PhD 1,2
1US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX, 2University of Texas Health Science System, San Antonio, TX
MHSRS-18-0612  POSTER SESSION 2 - #676
Interaction of Prostaglandin I2 & Agonists of Platelet Aggregation
Presentation Author: Dr. Daniel Darlington
Daniel N. Darlington, PhD, Xiaowu Wu, MD, Andrew P Cap, MD, PHD
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX, University of Texas Health Science System, San Antonio, TX

MHSRS-18-0622  POSTER SESSION 2 - #677
Trauma Causes a Fall in Intracellular ATP in Platelets that May Lead to Platelet Dysfunction
Presentation Author: Dr. Daniel Darlington
Jeffrey Keesee, BS1, Daniel N. Darlington, PHD1,2, Xiaowu Wu, MD1,2, Andrew P Cap, MD, PHD1,2
1US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX, 2University of Texas Health Science System, San Antonio TX

MHSRS-18-0625  POSTER SESSION 2 - #678
Trauma-Induced Decrease in Platelet Aggregation is Likely Due to Rise in Intracellular cAMP
Presentation Author: Dr. Daniel Darlington
Daniel N. Darlington, PhD, Xiaowu Wu, MD, Andrew P Cap, MD, PHD
US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX & University of Texas Health Science System, San Antonio TX

MHSRS-18-0629  POSTER SESSION 2 - #679
Can Kunicki Morphology Scoring be a Cost-Effective Alternative to Flow Cytometry for Platelet Activation Quantification?
Presentation Author: Mr. Umang Sharma
Umang Sharma, BS, Kristin Reddoch-Cardenas, PhD, Christi Salgado, BS, Carolina C. Cantu-Garza, MS, Andrew Cap, MD, PhD
US Army Institute of Surgical Research, Fort Sam Houston JBSA, TX

MHSRS-18-0644  POSTER SESSION 2 - #680
In Vitro Quality of Freeze-Dried Plasma
Presentation Author: Dr. Lina Dimberg
Lina Dimberg, PhD, Ashley Parr, BS, MPH, Terry Khat, BS, Ryan Bates, MS, Nick Hovenga, BS, Nate Johnson, MS, Susanne Marschner, PhD
Terumo BCT, Lakewood, CO

MHSRS-18-0647  POSTER SESSION 2 - #681
Dry-Preserved Red Blood Cells for Transfusions in Far-Forward Settings
Presentation Author: Mr. Brett Janis
Brett R. Janis, BA, Mariah C. Priddy, BS, Jonathan A. Kopechek, PhD, Michael A. Menze, PhD
University of Louisville, Louisville, KY

MHSRS-18-0702  POSTER SESSION 2 - #682
Cerium Oxide Nanoparticles May Improve Lifespan of Stored Blood
Presentation Author: Dr. Beverly Rzigalinski
Beverly Rzigalinski, PhD
Via College of Osteopathic Medicine, Blacksburg, VA

MHSRS-18-0706  POSTER SESSION 2 - #683
Cold-Stored Whole Blood Performs Comparably to Fresh Whole Blood in Resuscitation of Acute Traumatic Coagulopathy
Presentation Author: Dr. Xiaowu Wu
Xiaowu Wu, MD1,2, Daniel N. Darlington, PhD1,2, Jacob Chen, MD3, Robbie K. Montgomery, MS1, Bin Liu, BS1, Jeffrey D. Keesee, BS1, Andrew P Cap, MD, PHD1,2
1US Army Institute of Surgical Research, Fort Sam Houston, TX, 2University of Texas Health Science Center, San Antonio, TX, 3Israeli Defense Force, Israel
MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

**POSTER SESSION II**

**MHSRS-18-0757**
**POSTER SESSION 2 - #684**
**Tranexamic Acid Improves the Outcome of Trauma by Attenuation of Fibrinolytic Activity & Reduction of Vascular Permeability**

Presentation Author: Dr. Xiaowu Wu
Xiaowu Wu, MD\(^1\), Daniel N. Darlington, PhD\(^2\,^3\), Avi Benov, MD\(^3\), Jeffrey Keesee, BS\(^1\), Bin Liu, BS\(^1\), Andrew P Cap, MD, PhD\(^1\)
\(^1\)US Army Institute of Surgical Research, Fort Sam Houston, TX, \(^2\)University of Texas Health Science Center, San Antonio, TX, \(^3\)Israeli Defense Force, Israel

**MHSRS-18-0761**
**POSTER SESSION 2 - #685**
**Treatment of Acute Traumatic Coagulopathy with Serine Protease Inhibitor (Serp-1)**

Presentation Author: Dr. Xiaowu Wu
Xiaowu Wu, MD\(^1\,^2\), Daniel N. Darlington, PhD\(^1\,^2\), Jeffery D. Keesee, BS\(^1\), Bin Liu, BS\(^1\), Andrew P Cap, MD, PhD\(^1\,^2\)
\(^1\)US Army Institute of Surgical Research, Fort Sam Houston, TX, \(^2\)University of Texas Health Science Center, San Antonio, TX

**MHSRS-18-0781**
**POSTER SESSION 2 - #686**
**Urine Based Gene Expression Panels with Focus on Prostate Cancer in African Americans**

Presentation Author: Dr. Indu Kohaar
Indu Kohaar, PhD\(^1\), Sreedatta Banerjee, BS\(^1\), Yongmei Chen, MS\(^1\), Amina Ali, MS\(^1\), Jacob Kagan, PhD\(^2\), Sudhir Srivastava, PhD\(^2\), Albert Dobi, PhD\(^1\,^3\), Jennifer Cullen, PhD\(^1\), Inger L. Rosner, MD\(^1\,^3\), Shiv Srivastava, PhD\(^1\,^3\), Gyorgy Petrovics, PhD\(^3\)
\(^1\)Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda, MD, \(^2\)National Cancer Institute, Bethesda, MD, \(^3\)Walter Reed National Military Medical Center, Bethesda, MD

**MHSRS-18-0897**
**POSTER SESSION 2 - #687**
**Whole Blood Leukoreduction with Platelet Sparing Technology: Modified for Far Forward Operations**

Presentation Author: Mr. Dario Rodriguez
Einar K. Kristoffersen, MD\(^1\), Warren C. Dorlac, MD\(^2\), Philip C. Spinella, MD\(^3\), James Lehman, BS\(^4\), Dario Rodriquez, MSc\(^4\)
\(^1\)Haukeland University Hospital, Bergen, Norway, \(^2\)University of Colorado Health, Loveland, CO, \(^3\)Washington University in St Louis School of Medicine, St Louis, MO, \(^4\)USAF School of Aerospace Medicine, Wright Patterson AFB, OH

**MHSRS-18-0948**
**POSTER SESSION 2 - #688**
**Screening of Donated Blood Products for Zika Virus in US Armed Services Blood Program Donors**

Presentation Author: COL Andrew Cap
Chriselda Fedyk, MS, COL Andrew Cap, MD, PhD
US Army Institute of Surgical Research, Fort Sam Houston, TX

**MHSRS-18-1023**
**POSTER SESSION 2 - #689**
**Transfusion of Blood Products Among US Military Casualties Injured in Theater between 2003 & 2016**

Presentation Author: Ms. Laura Scott
Laura L.F. Scott, MPH, MS\(^4\), Andrew P. Cap, MD, PhD\(^2\), Beatrice T. Stephens, RN, MA\(^4\), Jennifer M. Gurney, MD\(^4\), Stacy A. Shackelford, MD\(^1\), Zsolt T. Stockinger, MD\(^1\)
\(^1\)Joint Trauma System, JBSA–Fort Sam Houston, Texas, \(^2\)US Army Institute of Surgical Research, JBSA–Fort Sam Houston, Texas

**MHSRS-18-1074**
**POSTER SESSION 2 - #690**
**Assessing Prothrombotic Risk in Spray-Dried, Solvent/Detergent-Treated Plasma**

Presentation Author: Mr. Michael Galiger
Michael Galiger\(^1\), Phil Spinella, MD, FCCM\(^2\), Taegen Sullivan\(^1\)
\(^1\)Entegrion Inc, Durham, NC, \(^2\)Washington University in St. Louis, St. Louis, MO
MHSRS-18-1107 | POSTER SESSION 2 - #691
Analysis of the Interactions of Human Mesenchymal Stem Cells with Peripheral Blood Mononuclear Cells in a Mixed Lymphocyte Reaction (MLR) Assay
Presentation Author: Dr. Maryanne Herzig
Maryanne C. Herzig, PhD, Barbara A. Christy, PhD, Robbie K. Montgomery, MS, Christopher P. Delavan, MS, Larry E. Estlack, Katherine J. Jensen, Sarah Lovelace, Carolina Cantu, MS, Christi L. Salgado, James A. Bynum, PhD, Andrew P. Cap, MD, PhD
University of Texas Health Science Center at San Antonio, San Antonio, TX

MHSRS-18-1132 | POSTER SESSION 2 - #692
Autoantibodies as Diagnostic & Prognostic Biomarkers in Prostate Cancer Using Liquid Biopsy: Evaluation of Secreted Protein Acidic & Rich in Cysteine (SPARC) & Fetuin-A Autoantibodies in Sera of Prostate Cancer Patients
Presentation Author: Dr. Alagarsamy Srinivasan
Shyh-Han Tan, PhD1, Andy Martinez, MD3, Anshu Rastogi, PhD1, Wei Huang, MBBS1, Sreedatta Banerjee, MS1, Amina Ali, MS1, Jennifer Cullen, PhD1, Yongmei Chen, MS1, Gyorgy Petrovics, PhD1, Albert Dobi, PhD1, Lakshmi Ravindranath, BS2, Denise Young, BS2, Isabelle A. Sesterhenn, MD1, Jacob Kagan, PhD2, Sudhir Srivastava, PhD2, David G. McLeod, MD3, Inger L. Rosner, MD3, Shiv Srivastava, PhD1, Alagarsamy Srinivasan, PhD1
1Uniformed Services University of the Health Sciences & the Walter Reed National Military Medical Center, Bethesda, MD, 2National Cancer Institute, Bethesda, MD, 3Walter Reed National Military Medical Center, Bethesda, MD

MHSRS-18-1134 | POSTER SESSION 2 - #693
Annexin A2 Expression Level Correlates with Adverse Pathology & Disease Progression in Prostate Cancer
Presentation Author: Dr. Shyh-Han Tan
Shyh−Han Tan, PhD1, Denise Young, BS2, Wei Huang, MBBS2, Amina Ali, MS1, Lakshmi Ravindranath, BS1, Anshu Rastogi, PhD1, Kurt Christen, BS1, Kevin Babcock, BS1, Piyush Pillarisetti1, Huai-Ching Kuo, MS1, Yongmei Chen, MS3, Jacob Kagan, PhD2, Sudhir Srivastava, PhD2, Albert Dob, PhD1, Srinivasan Alagarsamy, PhD1, Gyorgy Petrovics, PhD1, David G. McLeod, MD3, Jennifer Cullen, PhD1, Inger L. Rosner, MD3, Isabelle A. Sesterhenn, MD4, Shiv Srivastava, PhD5
1Uniformed Services University of the Health Sciences & the Walter Reed National Military Medical Center (WRNMMC), Bethesda, MD, 2National Cancer Institute, Bethesda, MD, 3WRNMMC, Bethesda, MD, 4Joint Pathology Center, Silver Spring, MD

MHSRS-18-1300 | POSTER SESSION 2 - #694
Cold-Storage of Platelets Preserves Structural Integrity During Clot Retraction to Offer Better Hemostasis Compared to Room Temperature Storage
Presentation Author: Prajeeda Nair
Prajeeda M. Nair, PhD1, Xiaowu Wu, MD, PhD2, Adrienne R. Wells, PhD2, Bin Liu, BS1, Kai P. Leung, PhD2, Anand K. Ramasubramanian, PhD3, Andrew P Cap, MD, PhD1
1Blood Research Program, UW-Madison School of Medicine and Public Health, Madison, WI, 2US Army Institute of Surgical Research, Fort Sam Houston, TX, 3San José State University, San José, CA

MHSRS-18-1346 | POSTER SESSION 2 - #695
Extended Cold-Storage of Apheresis Platelets in Plasma
Presentation Author: Dr. Moritz Stolla
Moritz Stolla, MD1,2, Lynda Fitzpatrick, RN3, Irena Gettinger, BS1, Shawn L. Bailey, BS1, Esther Pellham, BS1, Todd Christoffel, BS1
1Bloodworks Northwest Research Institute, Seattle, WA, 2University of Washington School of Medicine, Seattle, WA

MHSRS-18-1348 | POSTER SESSION 2 - #696
A Portable Platelet Apheresis System Using Inertial Microfluidics
Presentation Author: Dr. Ketan Bhatt
Ketan Bhatt, PhD, Hongjun Song, PhD, Dustin Haithcock, BS, Prabhakar Pandian, PhD, Kapil Pant, PhD
CFD Research Corporation, Huntsville, AL
OPEN POSTER SESSION 2 - #697

MHSRS-18-1576 POSTER SESSION 2 - #698
Walking Blood Bank Training Program
Presentation Author: CPT Jacquelyn Messenger
CPT Jacquelyn Messenger, MS\(^1\), Sarah Matthews, MS\(^2\)
\(^1\)USAISR, San Antonio, TX, \(^2\)MAMC, JBLM, WA

MHSRS-18-1592 POSTER SESSION 2 - #699
ROTEM Analysis of Whole Blood Collected & Stored in CPDA-1 with UV Light & Riboflavin Treatment
Presentation Author: Mr. Nick Hovenga
Nick Hovenga, BS, Jane Gosney, BS, Melissa Tran, BS, Suzann Doane, BS, Susan Yonemura, PhD, Susanne Marschner, PhD
Terumo BCT, Lakewood, CO

MHSRS-18-1619 POSTER SESSION 2 - #700
Computational & Experimental Tools for Optimization of Military Platelet Banking with Prolonged Shelf Life
Presentation Author: Dr. Andrzej Przekwas
Andrzej J. Przekwas, PhD\(^1\), Mahadevabharaith R. Somayaji, PhD\(^1\), Debarun Das, MSc\(^1\), Zhijian J. Chen, PhD\(^1\), Frank J. Lebeda, PhD\(^2\), Anthony E. Pusateri, PhD\(^3\), Ranjan K. Dash, PhD\(^4\), Anand K. Ramasubramanian, PhD\(^5\)
\(^1\)CFD Research Corporation, Huntsville, AL, \(^2\)US Army MRC, Fort Detrick, MD, \(^3\)US Army Institute of Surgical Research, Fort Sam Houston, TX, \(^4\)Medical College of Wisconsin (MCW), Milwaukee, WI, \(^5\)San Jose State University (SJSU), San Jose, CA

OPEN POSTER SESSION 2 - #701

MHSRS-18-1854 POSTER SESSION 2 - #702
“Blood Typing Kits: An Extreme Environmental Comparison Study for Military Application”
Presentation Author: Mr. Wilbur Malloy
1LT Jessica A. Bradley, BS, MLS (ASCP), SBB\(^1\), LTC (Ret) Wilbur W. Malloy, MA, MLS (ASCP-SBB)\(^2\), COL Clayton D. Simon, MC\(^3\)
\(^1\)Keesler Medical Center, Keesler AFB, MS, \(^2\)Congressionally Directed Medical Research Program, Ft Detrick, MD, \(^3\)Joint Pathology Center, National Capital Region, Silver Spring, MD

MHSRS-18-1896 POSTER SESSION 2 - #703
Impact of Rapid Transfusion Devices on Whole Blood Platelet count, Platelet Function, & Hemostatic Potential
Presentation Author: Dr. Bryan Cotton
Mouayyad Zaza, MD, Yao-Wei Wang, MD, Mitchell George, MD, Charles E. Wade, PhD, Jessica C. Cardenas, PhD, Bryan A. Cotton, MD, MPH
The University of Texas Health Science Center, Houston, TX

MHSRS-18-2040 POSTER SESSION 2 - #705
Emergency Fresh Whole Blood Collection for Combat Casualty Care in the Pre-hospital Setting: Implementation of the Walking Blood Bank Training Program
Presentation Author: CPT Jacquelyn Messenger
CPT Jacquelyn Messenger, MS\(^1\), Sarah Matthews, MS\(^2\), Jason Corley, MS\(^1,3\), Ronnie Hill, MS\(^4\)
\(^1\)Army Blood Program, San Antonio, TX, \(^2\)Madigan Army Medical Center, Tacoma, WA, \(^3\)Brooke Army Medical Center, San Antonio, TX, \(^4\)US Central Command, Qatar
MILITARY WOMEN’S HEALTH

MHSRS-18-0008  POSTER SESSION 2 - #706
Antimicrobial Blue Light Inactivation of Neisseria Gonorrhoeae: Implications for the Treatment of Multidrug-Resistant Gonococcal Infections
Presentation Author: Dr. Tianhong Dai
Ying Wang, MD, PhD1,2, Raquel Ferrer-Espada, PhD1, Xueping S. Goh, BS1, Clinton K. Murray, MD3, Tianhong Dai, PhD1
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2Chinese PLA General Hospital, Beijing, China, 31st Area Medical Laboratory, US Army, Aberdeen, MD

MHSRS-18-0012  POSTER SESSION 2 - #707
Antimicrobial Blue Light Therapy for Urinary Tract Infections: Effectiveness & Safety
Presentation Author: Dr. Raquel Ferrer-Espada
Raquel Ferrer-Espada, PhD1, Yanyan Fang, PhD1, Ying Wang, MD, PhD1, Soroush Shabahang, PhD1, Daisaku Yoshida, PhD1, Kathryn D. Held, MD, PhD1, Clinton K. Murray, MD2, Tianhong Dai, PhD1
1Massachusetts General Hospital, Harvard Medical School, Boston, MA, 21st Area Medical Laboratory, US Army, Aberdeen, MD

MHSRS-18-0049  POSTER SESSION 2 - #708
Engineering of Volumetric Skeletal Muscle Tissue for Accelerated Restoration of Pelvic Floor Muscle Function
Presentation Author: Dr. Ji Hyun Kim
Ji Hyun Kim, PhD, In Kap Ko, PhD, Myung Jae Jeon, MD, PhD, Ickhee Kim, MD, PhD, Sang Jin Lee, PhD, Anthony Atala, MD, James J. Yoo, MD, PhD
Wake Forest School of Medicine, Winston-Salem, NC

MHSRS-18-0108  POSTER SESSION 2 - #709
Cost for Breast Cancer Care & Clinical Outcomes in the US Military Health System: An Analysis by Care Source
Presentation Author: Dr. Yvonne Eaglehouse
Yvonne L. Eaglehouse, PhD, MPH1,2, Matthew W. Georg, MPH1, Patrick Richard, PhD, MA2, COL Craig D. Shriver, USA, MC1,2, Kangmin Zhu, MD, PhD1,2
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center, Bethesda, MD, 2USUHS, Bethesda, MD

MHSRS-18-0111  POSTER SESSION 2 - #710
Costs for Breast Cancer Care in the US Military Health System: An Analysis by Benefit Type & Care Source
Presentation Author: Dr. Yvonne Eaglehouse
Yvonne L. Eaglehouse, PhD, MPH1,2, Janna Manjelievksaia, PhD, MPH1, Stephanie Shao, MPH1, Derek Brown, MS1, Keith Hofmann, BS3, Patrick Richard, PhD, MA2, COL Craig D. Shriver, USA, MC1,2, Kangmin Zhu, MD, PhD1,2
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center, Bethesda, MD, 2USUHS, Bethesda, MD, 3Kennell & Associates Inc, Falls Church, VA

MHSRS-18-0112  POSTER SESSION 2 - #711
Time to Surgery & Overall Survival: Comparison of Black & White Women Diagnosed with Breast Cancer in the US Military Health System
Presentation Author: Dr. Yvonne Eaglehouse
Yvonne L. Eaglehouse, PhD, MPH1,2, Matthew W. Georg, MPH1, COL Craig D. Shriver, USA, MC1,2, Kangmin Zhu, MD, PhD1,2
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center, Bethesda, MD, 2USUHS, Bethesda, MD
**MHSRS-18-0124**  
**POSTER SESSION 2 - #712**  
Inadvertent Vaccination in Pregnancy: National Smallpox Vaccine in Pregnancy Registry & BioThrax® (Anthrax) Vaccine in Pregnancy Registry  
Presentation Author: Ms. Katherine Snell  
Katherine J. Snell¹, Ava Marie S. Conlin, DO, MPH¹, Gia R. Gumbs, MPH¹, Anna T. Bukowinski, MPH¹, Zeina Khodr, PhD¹, Susan C. Farrish, MD, MPH²  
¹Henry M. Jackson Foundation for the Advancement of Military Medicine Inc, Bethesda, MD, ²Naval Health Research Center, San Diego, CA

**MHSRS-18-0188**  
**POSTER SESSION 2 - #713**  
New Paradigm in the Genesis of Ovarian Cancer & its Clinical Potential  
Presentation Author: Dr. Ie-Ming Shih  
Ie-Ming Shih, MD, PhD¹, Douglas Levine, MD,², Kala Visvanathan, MD,³, Patricia Shaw, MD,³, Tian-Li Wang, PhD¹  
¹Johns Hopkins Medical Institution, Baltimore, MD, ²New York University Hospital, New York, NY, ³University of Toronto Health System, Toronto, Canada

**MHSRS-18-0319**  
**POSTER SESSION 2 - #714**  
Implementation of Venous Thromboembolism Prophylaxis After Cesarean at a  
Presentation Author: CAPT Barbara Saber  
Capt Barbara Saber, USAF, MC, MD, LCDR Aaron Poole, USN, MC  
Naval Medical Center Portsmouth, Portsmouth, VA

**MHSRS-18-0393**  
**POSTER SESSION 2 - #715**  
Integrated Proteogenomic Analysis of Laser Microdissected Primary Breast Tumors Define Proteome Clusters  
Presentation Author: Dr. Praveen-Kumar Raj-Kumar  
Praveen-Kumar Raj-Kumar, PhD¹, Tao Liu¹, Lori A. Sturtz², Albert J. Kovatich³, Marina A. Gritsenko², Vladislav A. Petyuk², Brenda Deyarmin³, Viswanadham Sridhara¹, James Craig¹, Jason E. McDermott², Anil K. Shukla², Ronald J. Moore³, Matthew E. Monroe², Bobbie-Jo M. Webb-Robertson², Jeffrey A. Hooke³, Leigh Fantacone-Campbell³, Leonid Kvecher¹, Jianfang Liu¹, Jennifer Kane¹, Jennifer Melley¹, Stella Somiari², Stephen C. Benz¹, Justin Golovato⁴, Shahrooz Rabizadeh³, Patrick Soon-Shiong⁵, Richard D. Smith¹, Richard J. Mural¹, Karin D. Rodland², Craig D. Shriver¹, Hai Hu¹  
¹Chan Soon-Shiong Institute of Molecular Medicine at Windber, Windber, PA, ²Pacific Northwest National Laboratory, Richland, WA, ³Uniformed Services University/Walter Reed National Military Medical Center, Bethesda, MD, ⁴NantOmics, Culver City, CA, ⁵NantWorks, Culver City, CA

**MHSRS-18-0459**  
**POSTER SESSION 2 - #716**  
Polycystic Ovary Syndrome in Active Duty Service Women  
Presentation Author: Lt Col Kim Hopkins

**MHSRS-18-0488**  
**POSTER SESSION 2 - #717**  
Improved Understanding of the Etiology of Breast Cancer in Young Women Through Evaluation of the Genomic Landscape  
Presentation Author: Dr. Rachel Ellsworth  
Matthew D. Wilkerson¹, Clifton L. Dalgard¹, Craig D. Shriver¹,², Rachel E. Ellsworth²  
¹Uniformed Services University, Bethesda, MD, ²Walter Reed National Military Medical Center, Bethesda, MD
MHSRS-18-0766  POSTER SESSION 2 - #718
Proteomic Profiling of Chemotherapy Naive Versus Neoadjuvant Treated Ovarian Tumors
Presentation Author: MAJ Emily Penick
MAJ Emily Penick, MD, Paulette Mhawech-Fauceglia, MD, Kelly Conrads, PhD, Nicholas Bateman, PhD, Guisong Wang, MS, Niyati Parikh, PhD, Brian Hood, PhD, Kathleen M. Darcy, PhD, Yovanni Casablanca, MD, Chad A. Hamilton, MD, G. Larry Maxwell, MD, Thomas P. Conrads, MD
1Uniformed Services University of the Health Sciences & Walter Reed National Medical Center, Bethesda, MD, 2USUHS, Bethesda, MD, 3University of Southern California, Los Angeles, CA, 4Inova Fairfax Medical Campus, Falls Church, VA, 5Inova Center for Personalized Health, Fairfax, VA

MHSRS-18-0774  POSTER SESSION 2 - #719
Quantitative Proteomic Analyses of Uterine Leiomyomas from Hereditary Leiomyomatosis & Renal Cell Cancer Patients
Presentation Author: Dr. Nicholas Bateman
Nicholas Bateman, PhD, Christopher Tarney, MD, Niyati Parikh, PhD, Ming Zhou, PhD, Kelly Conrads, PhD, James Segars, MD, Paul Driggers, PhD, Kathleen M. Darcy, PhD, Yovanni Casablanca, MD, Chad A. Hamilton, MD, G. Larry Maxwell, MD, Thomas Conrads, PhD
1Uniformed Services University of the Health Sciences & Walter Reed National Medical Center, Bethesda, MD, 2USUHS, Bethesda, MD, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Inova Center for Personalized Health, Fairfax, VA, 5Johns Hopkins University Medical Center, Baltimore, MD, 6Inova Fairfax Medical Campus, Falls Church, VA

MHSRS-18-0785  POSTER SESSION 2 - #720
Differential Proteomic Analysis of Metformin Response in a Preoperative Window Clinical Trial for Endometrial Cancer
Presentation Author: Dr. Thomas Conrads
Thomas P. Conrads, PhD, Erica Hope, MD, Christopher M. Tarney, MD, Nicholas W. Bateman, PhD, Brian L. Hood, PhD, Kathleen M. Darcy, PhD, Yovanni Casablanca, MD, Chad A. Hamilton, MD, G. Larry Maxwell, MD, Victoria Bae-Jump, MD, PhD
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center (WRNMMC), Annandale, VA, 2USUHS, Bethesda, MD, 3Walter Reed National Military Medical Center, Bethesda, MD, 4Inova Fairfax Medical Campus, Falls Church, VA, 5WRNMMC, Bethesda, MD

MHSRS-18-0793  POSTER SESSION 2 - #721
Proteomic Analysis of Uterine Leiomyomas in African Americans & Caucasians: Insight into this Profound Health Disparity
Presentation Author: Dr. Larry Maxwell
G. Larry Maxwell, MD, Christopher M. Tarney, MD, Nicholas W. Bateman, PhD, Kathleen M. Darcy, PhD, Chad A. Hamilton, MD, Yovanni Casablanca, MD, Thomas P. Conrads, PhD
1Uniformed Services University of the Health Sciences (USUHS) & Walter Reed National Military Medical Center (WRNMMC), Annandale, VA, 2USUHS, Bethesda, MD, 3Inova Fairfax Medical Campus, Falls Church, VA, 4WRNMMC, Bethesda, MD

OPEN  POSTER SESSION 2 - #722

MHSRS-18-0931  POSTER SESSION 2 - #723
Simvastatin Regulates Proliferation & Extracellular Matrix Production in Uterine Leiomyoma
Presentation Author: MAJ Justin Pilgrim
Minnie Malik, PhD, Joy Britten, MD, Terrence Lewis, MD, MAJ Justin Pilgrim, MD, Toral Parikh, MD, Jasmin Aly, MD, Jacquel Arismendi, PhD, James Segars, MD, Mostafa A. Bohray, MD, William H Catherino, MD, PhD
1Uniformed Services University of the Health Sciences, Bethesda, MD, 2Walter Reed National Military Medical Center, Bethesda, MD, 3John Hopkins University, Baltimore, MD
MHSRS-18-0934  POSTER SESSION 2 - #724
Yellow Fever Vaccination in Relation to Pregnancy Among US Active Duty Military Women
Presentation Author: Mr. Richard Chang
Richard N. Chang, MPH¹, Anna T. Bukowinski, MPH², Zeina G. Khodr, PhD³, Gia R. Gumbs, MPH³, Ava Marie S. Conlin, DO, MPH³, Susan C. Farrish, MD, MPH³
¹The Henry M. Jackson Foundation for the Advancement of Military Medicine Inc, Bethesda, MD, ²Naval Health Research Center, San Diego, CA

MHSRS-18-0937  POSTER SESSION 2 - #725
Japanese Encephalitis Vaccination in Pregnancy Among US Active Duty Military Women
Presentation Author: Mr. Richard Chang
Richard N. Chang, MPH¹, Zeina G. Khodr, PhD³, Anna T. Bukowinski, MPH², Gia R. Gumbs, MPH³, Susan C. Farrish, MD, MPH³, Ava Marie S. Conlin, DO, MPH³
¹The Henry M. Jackson Foundation for the Advancement of Military Medicine Inc, Bethesda, MD, ²Naval Health Research Center, San Diego, CA

MHSRS-18-0957  POSTER SESSION 2 - #726
Development of a Comprehensive, Immersive Reality-Based Health Tool to Engage Women in Breast Health Education
Presentation Author: Dr. Jessica Olson
Jessica Olson, PhD, MPH, Sailaja Kamaraju, MD, MS, Melissa DeNomie, Melinda Stolley, PhD
Medical College of Wisconsin, Milwaukee, WI

MHSRS-18-0984  POSTER SESSION 2 - #727
Advancing Translation of Disparities in Survivorship in Breast & Gynecologic Cancer by Marital Status
Presentation Author: Dr. Kathleen Darcy
Neil Phippen, MD¹, Eva K. Welch, MD², Chunqiao Tian, PhD³, Guisong Wang, MS⁴, Ying Huang, MD⁵, William J. Lowery, MD⁴, Nicholas W. Bateman, PhD³, Thomas P. Conrads PhD³, Chad A. Hamilton, MD⁵, Yovanni Casablanca, MD⁵, G. Larry Maxwell, MD¹, Kathleen M. Darcy, PhD³
¹Brooke Army Medical Center, Fort Sam Houston, TX, ²Inova Fairfax Medical Campus, Falls Church, VA, ³Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda MD, ⁴Inova Center for Personalized Health, Falls Church, VA

MHSRS-18-1131  POSTER SESSION 2 - #728
Clinical Decision Support in Uncontrolled Hypertension: Male Versus Female Outcomes in Military Beneficiaries
Presentation Author: LTC Leilani Siaki
LTC Leilani A. Siaki, PhD, NP-BC, FAANP¹, Sem Chan¹, CDR Victor S. Lin, MD², Robert Marshall, MD, MPH, MISM, FAAFP¹, Robert D. Higley, MD, MPH, FACC, RWJCS², MAJ Andrew J. Holdaway, MD³, COL Neris Nieves-Robbins, MD³, Mr. Keith Solveson, MS¹
¹Madigan Army Medical Center, Tacoma, WA, ²Analytics4Medicine, Kirkland, WA, ³Defense Health Headquarters, Falls Church, VA

MHSRS-18-1142  POSTER SESSION 2 - #729
Molecular Assessments of Residual Disease Status, Suboptimal Debulking & Poor Prognosis in Women with Serous Ovarian Cancer
Presentation Author: Dr. Kathleen Darcy
Neil Phippen, MD¹, Guisong Wang, MS³, Chunqiao Tian, PhD¹, Ying Huang, MD⁴, Charbel Awad, MD³, Nicholas W. Bateman, PhD³, Chad A. Hamilton, MD⁵, Yovanni Casablanca, MD³, Thomas P. Conrads, PhD³, G. Larry Maxwell, MD¹, Kathleen M. Darcy, PhD³
¹Uniformed Services University of the Health Sciences & Walter Reed National Military Medical Center, Bethesda MD, ²Brooke Army Medical Center, Fort Sam Houston, TX, ³Inova Fairfax Hospital, Falls Church, VA, ⁴Inova Center for Personalized Health, Falls Church, VA
MHSRS-18-1288  PAPER SESSION 2 - #730
rs11670527 Upstream of ZNF264 was Associated with Body Mass Index in the Coriell Personalized Medicine Collaborative
Presentation Author: Dr. Dara Kusic
Dara M. Kusic¹, Wendy N. Roberts¹, Stefan C. Zajic¹, Joseph P. Jarvis¹, Pan Zhang¹, Kaveri D. Rajula¹, Ruth Brenner², Michael P. Dempsey³, Michael F. Christman³
¹Coriell Institute for Medical Research, Camden, NJ, ²Air Force Medical Support Agency, Falls Church, VA, ³Defense Threat Reduction Agency, Fort Belvoir, VA

MHSRS-18-1297  PAPER SESSION 2 - #731
Analysis of Breast Cancer Recurrences Applying an Aptamer-Based Technology Using Plasma Samples
Presentation Author: Mrs. Anupama Praveen Kumar
Anupama Praveen Kumar¹, Albert J Kovatich², Angélique Biancotto³, Foo Cheung³, Jan K. Davidson-Moncada³, Leonid Kvecher³, Jianfang Liu¹, Yuanbin Ru¹, Audrey W. Kovatich⁴, Brenda Deyarmin⁵, Jamie Leigh Fantacone-Campbell⁵, Jeffrey A Hooke³, Praveen Kumar Raj Kumar¹, Hallgeir Rui⁶, Hai Hu¹, Craig D. Shriver²
¹Chan Soon-Shiong Institute of Molecular medicine at Windber, Windber, PA, ²Uniformed Services University / Walter Reed National Military Medical Center, Bethesda, MD, ³National Institutes of Health, Bethesda, MD, ⁴MacroGenics Inc, Rockville, MD, ⁵MDR Global Systems, Windber, PA, ⁶Medical College of Wisconsin, Milwaukee, WI

MHSRS-18-1359  PAPER SESSION 2 - #732
Effects of Concussion History on Center of Mass Motion During Modified Balance Error Scoring System (BESS) Testing in Women
Presentation Author: Dr. Stephen Glass
Stephen Glass, PhD, Alessandro Napoli, PhD, Iyad Obeid, PhD, Carole Tucker, PT, PhD
Temple University, Philadelphia, PA

MHSRS-18-1441  PAPER SESSION 2 - #733
Knowledge Assessment of United States Army Combat Medics in the Management of Postpartum Hemorrhage
Presentation Author: CPT Joshua Monson
CPT Joshua W. Monson, DO, Tremaine Winstead, MA, Cristobal S Berry-Caban, PhD Womack Army Medical Center, Fort Bragg, NC

MHSRS-18-1482  PAPER SESSION 2 - #734
Portable Iron Screening System for Point-of-Care Iron Status Determination
Presentation Author: Dr. Ketan Bhatt
Ketan Bhatt, PhD, Hongjun Song, PhD, Mary Arugula, PhD, Dustin Haithcock, BS, Prabhakar Pandian, PhD, Kapil Pant, PhD
CFD Research Corporation, Huntsville, AL

MHSRS-18-1584  PAPER SESSION 2 - #735
Characterization of Male & Female C57BL/6 Mouse Models for Use in Humanized-Gut Microbiome Studies
Presentation Author: Ms. Lindy Caffo
Lindy M. Caffo, MS¹, Matthew G. Permenter, MS¹, Joshua B. Richardson, PhD¹, Deborah Sadler¹, Jason M. Koontz, PhD¹, Blair C. R. Dancy, PhD¹, John A. Lewis, PhD¹, Valerie Trabosh DiVito, PhD¹
¹US Army Center for Environmental Health Research, Fort Detrick, MD, ²Excet Inc, Fort Detrick, MD, ³Oak Ridge Institute for Science & Education, Fort Detrick, MD
FROM BENCH TO BATTLEFIELD: TRANSLATING PROMISING RESEARCH INTO FIELDED CAPABILITIES

MHSRS-18-0165 POSTER SESSION 2 - #736
PROJECT MANAGEMENT & RESOURCE ESTIMATION TO DRIVE IMPACT
Presentation Author: Mr. Peter Kelley
Peter Kelley, Shannon Gatewood, MPH

MHSRS-18-0684 POSTER SESSION 2 - #737
Leveraging the Synergistic Power of Team Science: Lessons Learned from DoD-Funded Research Consortia
Presentation Author: Dr. Alan Peterson
Alan Peterson, PhD1-3, David X. Cifu, MD4, Thomas E. Joiner, PhD5, Rick L. Williams, PhD6, Terence M. Keane, PhD7,8, Sidney R. Hinds II, MD9, Peter M. Gutierrez, PhD10, Thomas R. Kosten, MD11
1University of Texas Health Science Center at San Antonio, San Antonio, TX, 2South Texas Veterans Health Care System, San Antonio, TX, 3University of Texas at San Antonio, San Antonio, TX, 4Virginia Commonwealth University School of Medicine, Richmond, VA, 5Florida State University, Tallahassee, FL, 6RTI International, Research Triangle Park, NC, 7VA Boston Healthcare System, Boston, MA, 8Boston University, Boston, MA, 9US Army Medical Research & Material Command, Fort Detrick, MD, 10VA Rocky Mountain MIRECC for Veteran Suicide Prevention, Denver, CO, 11Baylor College of Medicine, Houston, TX

MHSRS-18-0775 POSTER SESSION 2 - #738
An Overview of the CIMIT Guidance & Impact Tracing System (GAITS) to Support Teams in Speeding Dual-Benefit Healthcare Innovations into Practice
Presentation Author: Dr. John Collins
John Collins, PhD, Mike Dempsey, Steven Schachter, MD, John Parrish, MD CIMIT, Boston, MA

MHSRS-18-1063 POSTER SESSION 2 - #739
Regulatory Implications of User Needs & Environment in Medical Device Development
Presentation Author: Dr. Chandar Thakur
Chandar Thakur, PhD, Lisa Borek, RAC, Shree Koushik, PhD, Noel Laing, BS, Monika Lunn, MS
Office of Regulated Activities, Fort Detrick, MD

MHSRS-18-1082 POSTER SESSION 2 - #740
Translating Advances in Hemorrhage Control Devices from the Military Bench to the Battlefield: Building on a Successful Partnership Between the Military, Industry, & Academia in Advanced Product Development
Presentation Author: Dr. David Baer
David G. Baer, PhD1, Curtis J. Franklin1, BSE, Col Todd E. Rasmussen, MD2
1Prytime Medical Devices, Boerne, TX, 2Uniformed Services University of the Health Sciences, Bethesda, MD

MHSRS-18-1093 POSTER SESSION 2 - #741
Bridging the Gap: Optimizing Research-Practice Integration to Improve Health & Readiness
Presentation Author: Dr. Richard Stoltz
Richard Stoltz, PhD Defense Health Agency, Fall Church, VA

MHSRS-18-1099 POSTER SESSION 2 - #742
Follow-On to CRADAs to Conduct End-User Feedback Sessions for Iterative Product Development
Presentation Author: Christine Wasner
Christine Wasner, Nicolle Thompson, Brian Dacanay, Edward Brown, John Miller
USAMMA, Fort Detrick, MD
FUTURE NEEDS FOR DoD MEDICAL ACQUISITION PROGRAMS

MHSRS-18-0868 POSTER SESSION 2 - #743
Technology Transfer at DHA Supports DoD Acquisition Programs by Identifying & Transitioning New & Enhanced Capabilities
Presentation Author: CAPT Sally Hu
CAPT Sally Hu, PhD, MBA, Jane Tang, PhD
Defense Health Agency, Falls Church, VA

MHSRS-18-2072 POSTER SESSION 2 - #744
Noncompressible Hemorrhage Control in the Pre-Medical Treatment Facility Environment
Presentation Author: Ms. Caitlyn Felkoski

MHSRS-18-2076 POSTER SESSION 2 - #745
Temporary Corneal Repair Product Development
Presentation Author: Ms. Leigh Alexander

MANUFACTURING INNOVATION

MHSRS-18-0215 POSTER SESSION 2 - #746
Developments of Integrated, Multi-Functional Biofabrication Systems for Regenerative Medicine & Biological Screening
Presentation Author: Dr. Yunzhi Yang
Yunzhi Yang, PhD, Chi-chun Pan, MS, Arnaud Bruyas, PhD
Stanford University, Stanford, CA

MHSRS-18-0777 POSTER SESSION 2 - #747
Development of a Universal Biolink Platform Technology for Cross-Platform Compatibility Across Bioprinter Hardware & Support of Multiple Tissue Construct Types
Presentation Author: Dr. Aleksander Skardal
Richard Connor Huntwork1, Andrea R. Mazzocchi1, Hema Sivakumar1, Casey C. Clark1, Julio Aleman2, Mahesh Devarasetty2, Aleksander Skardal1,2
1Wake Forest School of Medicine, Winston Salem, NC, 2Comprehensive Cancer Center at Wake Forest Baptist Medical, Winston Salem, NC

MHSRS-18-1124 POSTER SESSION 2 - #748
Tissue Biofabrication of Cardiovascular Devices Using Nanotechnology Platforms in Military Personnel
Presentation Author: Dr. Brandon Tefft
Brandon Tefft, PhD, Susheil Uthamaraj, MS, Joshua Choe1, Kent Carlson, PhD, Gurpreet Sandhu, MD, PhD, Dan Dragomir-Daescu, PhD
Mayo Clinic, Rochester, MN

MHSRS-18-1609 POSTER SESSION 2 - #749
Nondestructive Inspection of Complex Drug Products
Presentation Author: Dr. Bruce Yu
Bruce Yu, PhD, Marc Taraban, PhD, Katharine Briggs, PhD
University of Maryland School of Pharmacy, Baltimore, MD

MHSRS-18-1997 POSTER SESSION 2 - #750
A Chemically-Defined, & Xeno-Free Cell Culture Medium for Clinical Manufacturing
Presentation Author: Dr. Ronald Nelson Jr.
Wake Forest Institute for Regenerative Medicine, Winston Salem, NC