

POSTER SESSION

- 1 Defining Complex Environments: Implications for Human Health and Performance, and a Multidisciplinary Research Approach**
Arian Anderson, MD (University of Colorado School of Medicine); Katya Arquilla, PhD (University of Colorado Boulder Smead Department of Aerospace Engineering Sciences);
- 2 Engineering Models of Early Lung Cancer Progression using Hydrogel-Embedded Precision-Cut Lung Slices**
Rachel Blomberg, Patrick S. Hume, Daniel T. Merrick, Meredith A. Tennis, Erin L. Schenk, Chelsea M. Magin
- 3 Spatiotemporal Toxicity of Fentanyl in Mice**
Jonathan W. Boyd, Tara Hendry-Hofer, Genna Nault, Mathew Palmer, Matthew Mackenzie Newman, Nabarun Chakraborty, Swapna Kannan, Aarti Gautum, Rasha Hammamieh, Linnzi Wright
- 4 Voice to Vital Signs: Exploring Ambient Dictation for Seamless Battlefield Medical Records**
LCDR Jacob Cole, MD; Rebekah Cole, PhD
- 5 Investigating Auditory Processing and Noise-Induced Irritability in Veterans with and without a history of mild traumatic brain injury – a work in progress report**
Kayla Crowder PT, DPT, NCS; Jessica McKinney Ketchum, PhD; Shaylin Schundler MS, CCC-SLP, CBIS; Charlene Hamrick MS, CCC-SLP, CBIS; Hilary Diefenbach MA, CCC-SLP, CBIST; Jeffrey Hebert PhD, PT
- 6 Association of Nontechnical Skills and Cognitive Load with Technical Performance During Simulated En Route Critical Care Missions**
Maj William T Davis, MD, MPH, FACEP; Roger D. Dias, MD, PhD, MBA; Steven Yule, PhD; Col Vikhyat S. Bebarta, MD; Elizabeth Mann-Salinas, PhD; Allyson A. Arana, PhD; Ryan E. Harari, PhD; Benjamin Easter, MD, MS, MBA, FACEP, FAsMA
- 7 Measuring Team Cognitive Load Through Physiological Synchronization During High-Volume En Route Critical Care Simulations**
Roger D. Dias, MD, PhD; Steven Yule, PhD; Sarah Michael, MD; Col Vikhyat S. Bebarta, MD; Rayan E. Harari, PhD; Lt Col (Ret) Lance J. McGinnis, RN; Maj Nina Hoskins, RN, PhD; Benjamin Easter, MD; Maj William T. Davis, MD; En route Care Research Center and Nursing Research, 59th Medical Wing, Science & Technology, Defense Health Agency; Department of Military and Emergency Medicine, Uniformed Services University; Department of Emergency Medicine, Mass General Brigham, Harvard Medical School; Department of Clinical Surgery, University of Edinburgh; Center for COMBAT Research, University of School of Medicine University of Colorado;
- 8 Assessing Performance of Chemical Exposure Management in the Arctic Environment**
James Eazor, MPH, Elan Small, MD, Anne Ritter, DrPH, Todd Getz, PhD, Arian Anderson, MD, Martin Musi, MD, Todd Miner, Ed.D, Sean Keenan, MD, Elaine Reno, MD, Gordon Giesbrecht, PhD, Charisse Comart, BS, Tessa Vallin, BS, Jay Lemery, MD
- 9 Usability of a New Freeze-Dried Plasma by Military Personnel**
Oliver Hegener PhD (1), Anthony E. Pusateri PhD (2), Adam Gerber MD, PhD (3), Andrea Heger PhD (4), Kata Calahan (3) and Vijayan Nair (3) (1) Octapharma AG, Lachen, Switzerland, (2) Department of Surgery, Uniformed Services University of Health Sciences, Bethesda, Maryland, USA; Medstar Health Research Institute, Washington, DC, USA, (3) Octapharma USA, Paramus, New Jersey, USA, (4) Octapharma PPGmbH, Vienna, Austria
- 10 Protecting the Warfighter from Nuclear Threats: Acute Radiation Syndrome and Radiation Polytrauma**
Tara B. Hendry-Hofer, MSN, RN, Nathan C. Wetmore, MS, Genna M. Nault, CVT, Todd Getz, PhD, Carter Severance, BS, Giana Schena, PhD, Emma Murray, PhD, Melissa LaRocca, PhD, Srinivas Atukuri, MS, Jack Mountney, MS, PhD, Spyridon Manganas, PhD, Spyridon Manganas, PhD, Muhammad Arjum, Muthukumaran Chandrasekaran, PhD, Dylan Falkowski, MS, Col Vikhyat S. Bebarta, MD
- 11 Smartphone-Based Gait Analysis: Dual-Task Spatiotemporal Gait Metrics are Associated with Military Status but not Concussion History**
Joshua Kniss, DPT1,2, Katherine Smulligan, PhD3, Mathew Wingerson, MS1,2, Anna Garcia, BBA4, Shelia Savell, PhD4, Patrick Carry, PhD1, Vipul Lugade, PhD5, William Davis, MD4, Julie Wilson, MD2,6, David Howell, PhD1,2, Department of Orthopedics, University of Colorado School of Medicine, 2 Sports Medicine Center, Children's Hospital of Colorado, 3 Boston Children's Hospital, Division of Sports Medicine, 4 En route Care Research Center, 59MDWVST, Joint Base San Antonio, 5 Motion Analysis Research Laboratory, SUNY Binghamton University, 6 Department of Pediatrics, University of Colorado School of Medicine
- 12 uSMET: Prototype of an Autonomous Robotic Casualty Evacuation Platform**
Sridhar Lakshmanan, PhD; Kevin R. Ward, MD; Florian F. Schmitzberger, MD, MS
- 13 A Systems Approach: Solutions for Effective Total Wound Management and Infection Control**
MSG(Ret) Dennis Lyons & COL(ret) Dr. Stuart Tyner
- 14 Validation of a Team Level Nontechnical Skills Assessment Tool for En Route Critical Care**
Sarah H Michael, DO, MS, FACEP; Emma Howie, MBChB; Brig. Gen. (Ret) Kathleen Flarity, PhD, DNP; Richard Skipworth, MBChB, MD; Steve Yule, PhD; Maj. William T Davis, MD
- 15 LUCID: A Therapeutic Device for Non-Invasive Mitochondrial Modulation in TBI Patients**
Florian Schmitzberger, MD, MS; Joseph Wider, PhD, Maik Hüttemann, PhD; Thomas Sanderson, PhD
- 16 Evaluation of the Performance of Medical Interventions in Simulated Arctic Conditions**
Elan Small, MD, James Eazor, MPH, Anne Ritter, DrPH, Todd Getz, PhD, Arian Anderson, MD, Martin Musi, MD, Todd Miner, Ed.D, Sean Keenan, MD, Elaine Reno, MD, Gordon Giesbrecht, PhD, Charisse Comart, BS, Tessa Vallin, BS, Jay Lemery, MD
- 17 Prochlorperazine Maleate versus Placebo for the Prophylaxis of Acute Mountain Sickness: a Randomized Controlled Trial**
Elan Small, MD, Harrison Steins, BS, Martin Musi, MD, Julia Perry, RN, Elizabeth Goldberg, MD, Mary Ryan, MD, Lake Crawford, MD, Brian Strickland, MD, Tiana Linkus, BS Caleb Phillips, PhD, Ryan Paterson, MD, Nathaniel Zona, BS, Max Smolkin, MD, Mia Derstine, MD, Jay Lemery, MD, Adit Ginde, MD MPH, Peter Hackett, MD, Linda E Keyes, MD
- 18 Ultrasound-Based Volume Blood Flow Index Monitoring for the Assessment of Cerebral Autoregulation**
J. Scott VanEpps, MD, PhD; Brian Fowlkes, PHD; Jonathan Rubin, MD; Florian Schmitzberger, MD; Kevin Ward, MD; Hakam Tiba, MD
- 19 Infection Prevention Technologies for Combat Casualty Care**
J. Scott VanEpps, MD, PhD and Kevin R. Ward, MD
- 20 Innovative Hemostasis Devices to manage Non-compressible Torso Hemorrhage**
J. Scott VanEpps, MD, PhD; Kevin R. Ward, MD; Hakam Tiba, MD; Florian Schmitzberger, MD