

AUSA ILW HOT TOPICS
ARMY MEDICAL

Army Medicine Enabling Army Readiness Today & Tomorrow

FINAL AGENDA



22 SEPTEMBER 2016
AUSA Conference & Event Center
Arlington, VA



**The Association of the United States Army's Institute of Land Warfare
Hot Topic: Army Medical
A Professional Development Forum**

“Army Medicine Enabling Army Readiness Today & Tomorrow”

22 September 2016
AUSA Conference and Event Center
Arlington, VA

NOTE: All participants/speakers are on an invited basis only and subject to change

0700 – 1610 REGISTRATION

0700 – 0800 COFFEE SERVICE

0800 – 0805 SYMPOSIUM ADMINISTRATION, SAFETY, SECURITY

Mr. Alex Brody

Assistant Director, Industry Affairs
Association of the United States Army

0805 – 0815 INTRODUCTION

GEN Carter F. Ham

United States Army Retired
President
Association of the United States Army

0815 - 0830 OPENING REMARKS

LTG Nadja Y. West

Commanding General
United States Army Medical Command
The Surgeon General
United States Army

0830 - 0945 PANEL DISCUSSION

“Responsive Army Medicine Support to Global Operations”

Panel Moderator:

BG Peter “Pete” Palmer

United States Army Retired
Director EDGE Innovation Network
General Dynamics Mission Systems

Panel Chair:

MG Joseph Carvalho, Jr., M.D.

Joint Staff Surgeon
The Joint Staff

Panel Members:

Frederick Gerber

Senior Director of International Operations
Artus Global Solutions, LLC

COL Jim Czarnik

United States Medical Liaison to the United Kingdom Ministry of Defence
United States Army Surgeon General Consultant for Operational
Medicine
United States Army

COL Kirby Gross, M.D.

Incoming Director
Defense Medical Readiness Training Institute

SFC Paul Loos

NCOIC Surgery/Anesthesia - SFMS Course
Special Warfare Medical Group (A)
United States Army

CSM Gerald C. Ecker

Command Sergeant Major
United States Army Medical Command
Senior Enlisted Advisor to the Army Surgeon General

0945 - 1005 REFRESHMENT BREAK

1005 – 1050 KEYNOTE SPEAKER
The Honorable Patrick J. Murphy
Under Secretary of the Army
United States Army

1050 - 1100 TECH TEN PRESENTATION
Matthew G. Hackett
United States Army Research, Development and Engineering Command

1100 - 1220 PANEL DISCUSSION
“Optimizing Medical Readiness of the Total Army”

Panel Moderator & Chair:

LTG Eric B. Schoomaker, M.D., Ph.D.

United States Army Retired
Professor and Vice-Chair for Leadership, Centers and Programs
Uniformed Services University of the Health Sciences

Panel Members:

Anne Germain, Ph.D.

Associate Professor of Psychiatry, Psychology, and Clinical and
Translational Science
Director, Sleep and Chronobiology Laboratory
University of Pittsburgh School of Medicine

Tracy W. Gaudet, M.D.

Executive Director
Office of the Patient Centered Care and Cultural Transformation
Veterans Affairs

COL Matthew Hepburn, M.D.

Program Manager
Biological Technologies Office
Medical Corps
United States Army

BG Michael J. Talley

Command Surgeon
United States Army Forces Command

BG Jill K. Faris

Assistant Surgeon General for Mobilization, Readiness
and National Guard Affairs
Medical Services Corps

1220 - 1320 LUNCH (On Own)

1320 - 1440 PANEL DISCUSSION

“Innovating Delivery Models to Sustain the Total Force”

Panel Moderator/Chair:

MG Patrick D. Sargent, FACHE

Deputy Commanding General – Operations
18th Chief of the Medical Service Corps
United States Army Medical Command

Panel Members:

Mr. Alex Hurd

Senior Director Health and Wellness Transformation
Walmart

Randall S. Moore, M.D., MBA

President
Mercy Virtual

Juli McGinnis, MSN, RN-BC

Regional Director, Professional Nursing Practice
Southern California, Patient Care Services
Kaiser Permanente

BG Lisa Doumont

Assistant Surgeon General for Mobilization, Readiness
and Army Reserve Affairs Office, the Surgeon General and
Deputy Commander
Army Reserve Medical Command

Colleen Rye, Ph.D.

Chief, Virtual Health
United States Army Medical Command
Office of the Surgeon General

1440 - 1500 REFRESHMENT BREAK

1500 - 1510 TECH TEN PRESENTATION

Jeremy Salesin
Vice President
Intellectual Ventures

1510 - 1630 PANEL DISCUSSION

“Future Medical Capabilities in Support of Army 2025”

Panel Moderator:

BG James “Jamey” R. Moran
United States Army Retired
Vice President, Army Systems
The Boeing Company

Panel Chair:

MG Brian C. Lein
Commanding General
United States Army Medical Department Center
and School of Health Readiness Center of Excellence

Panel Members:

George V. Ludwig, Ph. D.
Acting Principal Assistant for Research and Technology
United States Army Medical Research and Materiel Command

MG Jeffrey Clark
Director, Healthcare Operations
Defense Health Agency

MG Stephen Jones
United States Army Retired

Mr. Thomas P. Low
Director, Medical Systems and Telerobotics
Robotics Program
SRI International

Shawn Levy, Ph.D.
Faculty Investigator
Director, Genomic Services Laboratory
HudsonAlpha Institute for Biotechnology

1630 - 1645 CLOSING REMARKS

LTG Nadja Y. West
Commanding General
United States Army Medical Command
The Surgeon General
United States Army

1645 - 1700 **LTG Guy C. Swan, III**
United States Army Retired
Vice President, Education
Association of the United States Army

1700 DEPARTURE

Lt. Gen. Nadja Y. West



Surgeon General of the U.S. Army and Commanding General, U.S. Army Medical Command

LTG Nadja Y. West is the 44th Surgeon General of the United States Army and Commanding General, US Army Medical Command.

LTG West is a graduate of the United States Military Academy with a Bachelor of Science Degree in Engineering. She earned a Doctorate of Medicine Degree from George Washington University School of Medicine in Washington, DC.

She completed her internship and residency in Family Medicine at Martin Army Hospital, Fort Benning, GA. During this assignment, she deployed to Operation Desert Shield with the 197th Infantry BDE, 24th ID, and was attached to the 2/69th Armor BN during Desert Storm. She then served at Blanchfield Army Hospital, Fort Campbell, KY as a staff family physician and then Officer in Charge of the Aviation Medicine Clinic. She also participated in a medical mission with the 5th Special Forces Group (Airborne).

LTG West completed a second residency in dermatology at Fitzsimons Army Medical Center and University of Colorado Medical Center in Denver, CO. She then served as Chief, Dermatology Service at Heidelberg Army Hospital, Germany. LTG West then served as Division Surgeon of the 1st AD, Bad Kreuznach, Germany; deploying to the former Yugoslavian Republic of Macedonia and Kosovo as Deputy Task Force Surgeon.

LTG West served as Chief, Department of Medicine and Dermatology Service at 121st General Hospital in Seoul, Republic of Korea. LTG West then commanded McDonald Army Community Hospital, Fort Eustis, VA. After command she served as Deputy Commander for Integration at the National Naval Medical Center, Bethesda, MD. She then served as J-3, Director of Operations, Joint Task Force National Capital Regional Medical. Next, she commanded Womack Army Medical Center, Fort Bragg and went on to serve as Commanding General, Europe Regional Medical Command.

LTG West served as Deputy Chief of Staff, G1/4/6, Office of the Surgeon General, Falls Church, VA. Her most recent assignment was Joint Staff Surgeon at the Pentagon. As Joint Staff Surgeon she served as chief medical advisor to the Chairman of the Joint Chiefs of Staff and coordinated all Health Services issues related to include operational medicine, force health protection, and readiness within the US military.

LTG West completed the Army Medical Department Officer Basic and Advanced Courses, and also graduated from the Army Command and General Staff College and the National War College.

Her awards and decorations include the Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit with three Oak Leaf Clusters, Defense Meritorious Service Medal, Meritorious Service Medal with two Oak Leaf Clusters, Army Commendation Medal, Army Achievement Medal with two Oak



Pete Palmer, BG USA (Ret.)
Director, EDGE® Innovation Network
(www.EDGE-Innovation.com)

As director of the EDGE Innovation Network, Pete is responsible for leading the EDGE Innovation Network Enterprise and is a key contributor to new project development within the EDGE. He is also develops long-range strategy objectives to ensure continued growth of the EDGE network.

Prior to joining General Dynamics Mission Systems, Pete performed over 32 years of active service as a commissioned officer in the United States Army, retiring in 2009 as a Brigadier General. His experience in the Army includes a wide range of assignments in the Infantry, both stateside and abroad.

His Joint and Coalition experiences include four tours in NATO (Germany), SHAPE during Kosovo conflict, Dpty Commander TF Falcon in KOSOVO, Commander the Battle Command Training Program (BCTP) at the Combined Arms Center at Fort Leavenworth, Kan. BCTP is a simulation based virtual training environment focusing on training Brigade, Division and Army Commanders and Staff in Joint and Coalition mission command, C4ISR systems and processes. His most recent Joint and Coalition experience was in 2004-5 as Brigadier General, serving as deputy chief of staff for strategic plans and later as deputy Chief of staff for operations for the Multi-national Force in Operation Iraqi Freedom. As deputy Chief of staff for operations he served under MG Molan, Australian Army.

In 2005, Pete was assigned to serve as the Director of Accelerated Capabilities Development for the Army Capabilities Integration Center (ARCIC) at Fort Monroe, Va. He managed a broad capabilities development portfolio with responsibility for the development and integration of Department of the Army future and current fight capabilities documents as well as Science and Technology capability documents for the Army and Joint and Multi-National forces.

Pete was also instrumental in championing the Army's recent push into understanding and improving the relationship between the Soldier and technology. This is one aspect of the Human Dimension (HD) capabilities development initiative that encompasses the moral, physical, and cognitive components of Soldier development and performance.

Pete's experience as a thought leader in Human Dimension has kept him at the forefront of technology discovery and allowed him to interact with the Defense Advanced Research Projects Agency (DARPA), industry and academia. He is applying this experience to move the EDGE Innovation Network to the next level, keeping it at the forefront of understanding the technology gaps warfighters face and developing new ways for the warfighter to assess and manage information.

Pete received his bachelors of science in electrical engineering and computer science from the United States Military Academy and a masters of arts in National Securities studies from the University of California San Bernardino. He also has two masters of military arts and science in operation and operational art from the US Army Command and General Staff College in Fort Leavenworth, Kan.

Pete is based in Scottsdale, Ariz.

Maj. Gen. (Dr.) Joseph Carvalho, Jr. Joint Staff Surgeon



Maj. Gen. (Dr.) Joseph Carvalho, Jr.
Joint Staff Surgeon

Major General (Doctor) Joseph Carvalho is the Joint Staff Surgeon at the Pentagon, Washington, D.C. He serves as the chief medical advisor to the Chairman of the Joint Chiefs of Staff, providing advice to the Chairman, the Joint Staff, and the Combatant Commanders. He coordinates all issues related to Health Services to include operational medicine, force health protection, and readiness among the Combatant Commands, the Office of the Secretary of Defense, and the Services.

Major General Carvalho graduated in 1979 with a BA in Mathematics from Gonzaga University in Spokane, Wash. He was commissioned a second lieutenant through the Army ROTC Program. In 1983, he graduated with a Medical Doctorate from the Uniformed Services University of the Health Sciences School of Medicine, and was commissioned a captain in the Medical Corps.








Clinically, Carvalho held positions as a staff internist, nuclear medicine physician, and cardiologist. He served as Chief of Cardiology at Tripler Army Medical Center, Honolulu, Hawaii, and as Deputy Commander for Clinical Services at Womack AMC, Fort Bragg, N.C. His operational medical experience includes assignments as Surgeon, 1st Battalion, 1st Special Forces Group (Airborne), Okinawa, Japan; Physician Augmentee, Joint Special Operations Command, Fort Bragg; Surgeon, 75th Ranger Regiment, Fort Benning, Ga.; Deputy Chief of Staff, Surgeon, U.S. Army Special Operations Command, Fort Bragg; and as the Assistant Chief of Staff, Health Affairs, XVIII Airborne Corps, Fort Bragg. He also commanded the 28th Combat Support Hospital and the 44th Medical Command (Rear) (Provisional), both at Fort Bragg. He has two deployments in support of Operation Iraqi Freedom, most recently serving as the Surgeon for both Multi-National Force-Iraq and Multi-National Corps-Iraq. He then served in succession as the commanding general for Southern Regional Medical Command and Brooke AMC; Northern RMC; and the Army Medical Research and Materiel Command and Fort Detrick, MD. His most recent positions before becoming the Joint Staff Surgeon were as the Army Deputy Surgeon General and Deputy Commanding General (Support) of the US Army Medical Command.

Major General Carvalho is a graduate of the Command and General Staff College and the Army War College. He earned the Special Forces and Ranger tabs and was awarded the Expert Field Medical Badge. He completed the Army Airborne and Flight Surgeon schools, as well as the Navy Dive Medical Officer and SCUBA courses. He holds current certification in nuclear cardiology, and he is a Certified Physician Executive. His military awards include the Distinguished Service Medal with two Oak Leaf Clusters (2 OLC), Legion of Merit (OLC), Bronze Star Medal, Defense Meritorious Service Medal, Army Meritorious Service Medal (6 OLC), Joint and Army Commendation Medals, and the Army Achievement Medal (3 OLC). He is also a member of the Order of Military Medical Merit.

FREDERICK E. GERBER

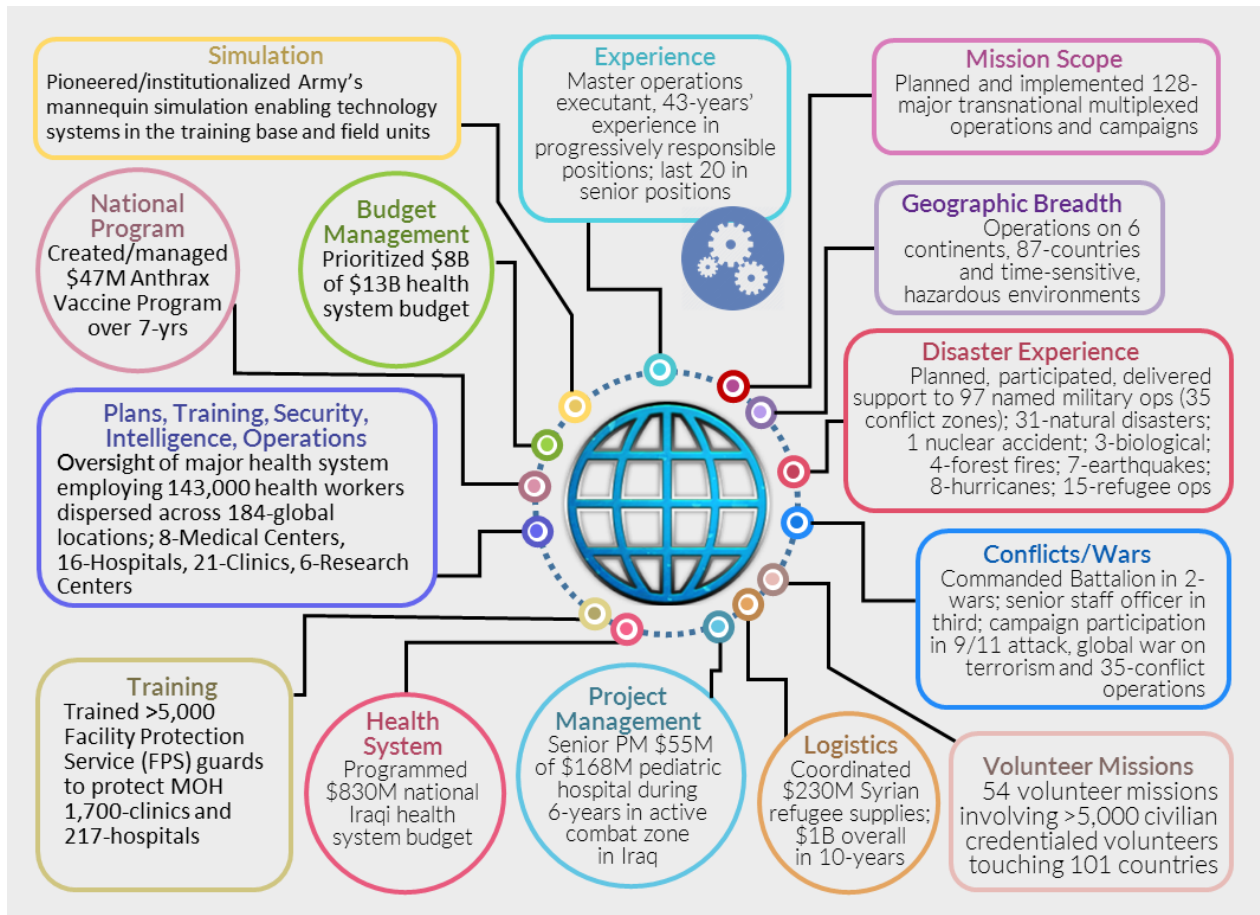
1020 Pennsylvania Avenue SE
Unit 204
Washington, D.C. 20003 USA

+1.202.677.9218
frederick.gerber@gmail.com

- Named Operation ●
 - Refugee Operation **R**
 - Hurricane 
 - Earthquake 
 - War Zone 
 - Forest Fire 
 - Biological 
 - Tsunami 
 - Radiological 
- 128** SUMMARY



I am a Master Operations Executant with 30+ years' experience in executing complex missions with high levels of responsibility. I planned and implemented over 128 major large-scale transnational multiplexed operations in 6 continents/87 countries and often time sensitive, hazardous environments. Performed lead emergency manager role in 97 named military operations (35 of them in conflict zones). Delivered humanitarian assistance to 31 natural disasters within 54 volunteer missions. COO oversight of a major health system employing 143,000 health workers dispersed across 184-global locations and a \$13B annual budget. Led successful national-level vaccine program and credentialed volunteer program.





COL James E. Czarnik graduated from Ripon College, Ripon, Wisconsin in 1989 receiving a BA in Philosophy and Biochemistry. In 1993 he received his Doctorate in Medicine from the Uniformed Services University for the Health Sciences, Bethesda, MD and was commissioned into the Regular Army as a medical corps officer. He completed a Transitional Internship at Tripler Army Medical Center in 1994 and an Emergency Medicine Residency from 1997-2000 at Brooke Army Medical Center/Wilford Hall Medical Center, San Antonio, Texas. COL Czarnik received certification from the American Board of Emergency Medicine in 2001, recertified in emergency medicine in 2011. He has co-authored publications for multiple journals and has presented at numerous national and international conferences on operational medicine and special operations.

His military education includes being a Senior Service College-Select, United States Army Command and Staff College, Medical Officer Basic and Advanced Courses, Medical Deep Sea Diving Officer Course, Army Flight Surgeon Course, Advance and US Army Ranger Course.

COL Czarnik is presently the US medical liaison officer to the British Army. Prior to his post in the UK, he served as the command surgeon for US Army Africa (USARAF), where among other activities, he served as the medical lead for Operation United Assistance, the DoD response to Ebola in Liberia. He previously served as the commander of the Supreme Headquarters Allied Powers Europe (SHAPE) healthcare facility where he worked closely with the NATO Special Operation Forces Headquarters. He has also served as the Deputy Command Surgeon and later the Command Surgeon for the Joint Special Operations Command, Fort Bragg, North Carolina. COL Czarnik served for many years on a classified Special Operations medical contingency force, conducting worldwide missions in support of U.S. Counterterrorism operations. His previous appointments include Chief of Medical Training at the U.S. Army Special Operations Command, 3rd Special Forces Group (Airborne) Surgeon/Combines Joint Special Operations Task Force-Afghanistan Surgeon, Staff Emergency Physician at Womack Army Medical Center, Battalion Surgeon for the 1st Battalion/75th Ranger Regiment, and General Medical Officer at Tuttle Army Health Clinic.

COL Czarnik is a master parachutist and master flight surgeon. In addition to these badges he has earned the combat and expert field medical badges, combat parachutist badge with bronze star, Ranger tab, and scuba badge. His awards and decorations include the Legion of Merit, the Defense Superior Service Medal, the Bronze Star Medal (1 Oak Leaf Clusters), the Defense Meritorious Service Medal, Meritorious Service Medal (1 Oak Leaf Clusters), Air Medal, Joint Service Commendation Medal (2 Oak Leaf Clusters), Army Commendation Medal, Joint Service Achievement Medal (1 Oak Leaf Clusters), Army Achievement Medal (1 Oak Leaf Clusters), Joint Meritorious Unit Award, Army Superior Unit Award, National Defense Service Medal with two bronze stars, Afghanistan Campaign Medal, Iraq Campaign Medal, Global War on Terrorism Expeditionary Medal, Global War on Terrorism Service Medal, Army Service Ribbon and Overseas Service Ribbon.

He is blissfully married to Dr. Katherine Linnen Czarnik and has four strong young daughters, Sasha (19), Maddie (17), Paige (14), and Isabella (12).



Command Sergeant Major Gerald C. Ecker

Command Sergeant Major, U.S. Army Medical Command

Command Sergeant Major Gerald C. Ecker entered active military service as an Army Combat Medic. CSM Ecker's previous assignments include Platoon Aidman, Company Senior Medic and Battalion Senior Treatment NCO, 3rd Battalion, 505th Parachute Infantry Regiment, 82nd Airborne Division, (ODS/DS-Saudi Arabia/Iraq) Ft. Bragg, NC; Medical Platoon Sergeant and Senior Medic, 5th Ranger Training Battalion, Camp Frank D. Merrill,

Dahlonaga, GA; Observer Controller, Combat Maneuver Training Center, Hohenfels, Germany; Chief Medical NCO, AMEDD Lessons Learned Office (Project Warrior), Ft. Sam Houston, TX; First Sergeant, E Co. (MED), 15th Forward Support Battalion, 1st Cavalry Division, (OIF-Iraq) Ft. Hood, TX; Sergeant Major, Division Surgeon's Office, 101st Airborne Division (AASLT), (OIF-Iraq) Ft. Campbell, KY. His Command Sergeant Major assignments include the 52nd Medical Battalion, Republic of Korea; 121st Combat Support Hospital / Brian Allgood Army Community Hospital and USAMEDDAC-K, Republic of Korea; Task Force 21st Combat Support Hospital, (OIF/OND-Iraq) Ft. Hood, TX; U.S. Army Public Health Command, Aberdeen Proving Ground, MD; and the U.S. Army Medical Department Center & School JBSA Ft. Sam Houston, TX.

CSM Ecker holds a Bachelor of Science with honors from Excelsior College, Albany, NY. He is a graduate of numerous emergency medical courses to include EMT – Paramedic. His military education includes PLDC, BNCOC (Commandants List and Leadership Award), ANCO (Commandants List, Leadership, and PT Awards), Battle Staff NCO Course (Commandants List), Resident Sergeants Major Course (Commandants List, Excellence in Writing, and PT Awards), Command Sergeants Major Course, Sergeants Major Force Management Course, Legal Orientation Course, War College – Senior Leader Seminar, National Defense University – Keystone Course Airborne Course, Air Assault Course, Jumpmaster Course, Drop Zone Safety Team Leader Course, Instructor Trainer Course, Tactical Certification Course, Observer Controller Course, NBC Casualty Care Course, Jungle Warfare, and Ranger School.

CSM Ecker's awards and decorations include the Legion of Merit (2nd OLC), Bronze Star Medal (1st OLC), Meritorious Service Medal (Silver OLC), Army Commendation Medal (3rd OLC), Army Achievement Medal (Silver OLC), Navy Unit Commendation, Meritorious Unit Commendation (1st OLC), Combat Medical Badge (2nd Award), Expert Field Medical Badge, Master Parachutist Badge, German Parachutist Badge, Air Assault Badge, Ranger Tab, and various other decorations and foreign awards. He is a member of the Sergeant Audie Murphy Club, and was the 1995 recipient of the "Society of the 173rd Airborne Brigade (SEP), 'Sigholtz' Leadership Award". Also In 1995, representing 'Team 82nd Airborne' then SSG Ecker, along with partner SGT Todd Barrager, were named the Army's Best Medics, by winning the 2nd Annual Competition, then called the "Expert Field Medical Badge Challenge." CSM Ecker is a member of the 1st Cavalry Division – Order of the Combat Spur and recipient of the Army Medical Department – Order of Military Medical Merit.

Mr. Patrick J. Murphy was appointed as the 32nd Under Secretary of the Army and Chief Management Officer (CMO) by President Obama on Jan. 4, 2016. Mr. Murphy assumed duties as the Acting Secretary of the Army three days after being sworn-in and remained in the position until May 18, 2016. He leads the management and operation of the Army, which would rank as a Fortune 10 company if it was a public company. His focus is on dynamic and efficient business operations, transforming the Army to be more innovative and responsive, expanding the Soldier for Life initiative, public-private partnerships, and aggressively utilizing social media to tell the Army story to new audiences in a more compelling way.

Prior to his confirmation, Mr. Murphy was a litigation partner and served as an outside general counsel for small businesses at a national law firm. Previously he served as a Special Assistant for the Southern District of New York.

From 2011-2015, Mr. Murphy was a television anchor and contributor to NBC Universal and executive producer for MSNBC's "Taking the Hill," a national security policy show which specialized in breaking down the civil- military divide that's occurred with an all-volunteer force.

From 2007-2011, Mr. Murphy served as the first Iraq War Veteran elected to the U.S. Congress, representing the Eighth Congressional District of Pennsylvania. He served on the Armed Services, Select Intelligence, and Appropriations committees, responsible for the \$3.4 trillion budget. He co-authored several initiatives including the 21st Century GI Bill, the Repeal of Don't Ask Don't Tell, and Hire Our Heroes legislation. In 2008, he was instrumental in establishing the Washington Crossing National Veterans Cemetery for over 300,000 veterans. He also authored the Improper Payments Bill, which has saved the American taxpayer tens of billions of dollars.

Mr. Murphy, a third generation veteran, was commissioned as a second lieutenant and later served in the U.S. Army Judge Advocate General's Corps as a criminal prosecutor and as an assistant professor in the Department of Law at the U.S. Military Academy at West Point, NY. Following 9/11, he served two overseas deployments-Tuzla, Bosnia in 2002 and Baghdad, Iraq in 2003-04. While serving in Iraq with the 82nd Airborne Division, he led a Brigade Operational Law Team (BOLT) and earned a Bronze Star for his service. Overseeing the justice system for the 1.5 million Iraqis in south central Baghdad, he prosecuted two high-level terrorists in Iraq's highest court.

A former collegiate hockey player, Mr. Murphy is a graduate of King's College, the University of Scranton ROTC program, and the Widener University Commonwealth School of Law. Besides teaching at West Point, he has lectured at Harvard, Stanford, University of Chicago, University of Pennsylvania, the U.S. Air Force Academy and his alma maters.

He is married and has two children.

Biography | **Matthew Hackett** **Science and Technology Manager** **Medical Simulation Research Branch**

Matthew Hackett is a science and technology manager for the Medical Simulation and Performance Branch of the Army Research Laboratory, Simulation and Training Technology Center. He manages a variety of research projects including medical holograms, virtual patients, novel interfaces, and serious games for medical training.

Prior to his work with ARL, Mr. Hackett trained as a government engineer as an engineering intern at the Program Executive Office for Simulation, Training and Instrumentation and worked within PM Training Devices.

Mr. Hackett received his Bachelor of Science in Computer Engineering from the University of Central Florida and his Masters of Science in Biomedical Engineering from the University of Florida. During his time at the University of Florida, he was a research assistant in the computational neuroscience laboratory, studying the functionality of neurons and how the brain creates neuronal networks. Mr. Hackett received his Masters of Science in Modeling and Simulation and is currently pursuing his Ph.D. in Modeling and Simulation at the University of Central Florida.



Publications:

- Hackett, M. "Medical Holography for Basic Anatomy Training". The Interservice/Industry Training, Simulation & Education Conference (I/ITSEC). National Training Systems Association, 2013. *Best Paper Winner*
- Hackett, M. Mall, H. "The Use of the Kinect in a Medical Serious Game". The Interservice/Industry Training, Simulation & Education Conference (I/ITSEC). National Training Systems Association, 2013.
- Guerra, Christopher J., et al. "Real-Time Passive Tracking for Multi-Touch Medical Modeling and Simulation." *Medicine Meets Virtual Reality 21: NextMed/MMVR21* 196, 2014.
- Hackett, M. Fefferman, K. "Comparative Analysis of Holographic Display and Three-Dimensional Television". The Interservice/Industry Training, Simulation & Education Conference (I/ITSEC). National Training Systems Association, 2014.
- VanVoorst, Brian R., et al. "Fusion of LIDAR and video cameras to augment medical training and assessment." *IEEE Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI)*, 2015.
- Hackett, M. Proctor, M. "Three-Dimensional Display Technologies for Anatomical Education: A Literature Review". *Journal of Science Education and Technology*. 2016.
- Milham, L. Phillips, H. Ross, W. Townsend, L. Riddle, D. Smith, K. Butler, P. Wolf, R. Irizarry, D. Hackett, M. Johnston, H. Squad Level Training for Tactical Combat Casualty Care: Instructional Approach and Technology Assessment. *Journal of Defense Modeling and Simulation*. In Print.
- Sottolare, B. Hackett, M. Pike, B. LaViola, J. Adaptive Instruction for Medical Training in the Psychomotor Domain. *Journal of Defense Modeling and Simulation*. In Print.



Eric B. Schoomaker, MD, PhD

Lieutenant General, U.S. Army (Retired)
Professor and Vice-Chair for Leadership, Centers & Programs
Department of Military and Emergency Medicine, F. Edward Hebert School of Medicine
Uniformed Services University of the Health Sciences, Bethesda, MD
Former U.S. Army Surgeon General and
Commanding General of the U.S. Army Medical Command

Prior to his retirement after 32 years of active service, Lieutenant General (Retired) Eric B. Schoomaker, MD, PhD served as the 42nd U.S. Army Surgeon General & Commanding General of the U.S. Army Medical Command. He committed his career to meeting the health needs of soldiers, their families and veterans throughout the U.S., Europe and the Pacific, focusing on soldier medical readiness, enhancing battlefield care, establishing comprehensive behavioral healthcare, fostering a culture of trust, advancing comprehensive pain management, and promoting health by preventing combat wounds, injury and illness.

He is a Professor and Vice-Chair for Leadership, Centers and Programs in the Department of Military & Emergency Medicine, F. Edward Hebert School of Medicine at the nation's only Federal health university, the Uniformed Services University of the Health Sciences (USU) in Bethesda, MD. His principal interests are in both Complementary and Integrative Health & Medicine (CIHM) in the shift from a disease management-focused healthcare system to one more centered on the improvement and sustainment of health & well-being leading to optimal human performance. He promotes CIHM education and training for physicians and other health professionals, especially as they contribute to the management of acute and chronic pain. Doctor Schoomaker is also exploring the central importance of leadership education and training for health professionals, so as to realize USU's vision as the nation's "health leadership academy".



ANNE GERMAIN, PH.D.

Associate Professor of Psychiatry, Psychology,
and Clinical and Translational Science

Department of Psychiatry

University of Pittsburgh School of Medicine

Dr. Anne Germain is Associate Professor of Psychiatry, Psychology, and Clinical and Translational Science at the University of Pittsburgh School of Medicine. She is Director of the Military Sleep Tactics and Resilience Research Team, and Director of the Sleep and Chronobiology Laboratory in the Department of Psychiatry. She received her Ph.D. in Clinical Psychology from the Université de Montréal in 2001, and completed her post-doctoral training in clinical sleep research at the University of Pittsburgh in 2005.

Dr. Germain's research program has two main areas of interest. A first area of interest focuses on the mechanisms underlying of sleep disturbances occurring in the context stress-related psychiatric disorders, with a special emphasis on posttraumatic stress disorder (PTSD) and traumatic brain injury (TBI) in military populations. She uses multimodal sleep measurement methods including self-report measures, actigraphy and polysomnography, high-density EEG, quantitative EEG, pharmacological probes, and sleep neuroimaging techniques. A second area of interest focuses of the development, adaptation, testing, and implementation and dissemination treatments targeting sleep disturbances as a means to enhance psychological resilience and to hasten recovery from operational stress injuries. Her research program has been continuously federally-funded since 2005 through competitive investigator initiated awards from the Department of Defense and National Institutes of Health.

Dr. Germain has published over 120 peer-reviewed articles and book chapters on insomnia, nightmares, treatments of sleep disorders, and sleep in the context of PTSD and other stress-related disorders. She has and continues to serve on various committees of the Sleep Research Society and American Academy of Sleep Medicine. She currently serves on the Editorial Board of the journal *Behavioral Sleep Medicine*, and is a regular peer reviewer for specialized journals on sleep, trauma, and psychiatry. She also serves to serves on various study sections for the Department of Defense, the Department of Veterans Affairs, the National Institutes of Health, and the Canadian Institutes of Health Research.



Department of Veterans Affairs

Senior Executive Biography

Tracy W. Gaudet, MD

**Executive Director
Veterans Health Administration's
National Office of Patient Centered Care & Cultural
Transformation**

Tracy W. Gaudet, MD, became Executive Director of the Veterans Health Administration's (VHA) National Office of Patient Centered Care and Cultural Transformation in January 2011.



The National Office of Patient Centered Care and Cultural Transformation (OPCC&CT) is charged with leading VHA's transformation to provide personalized, proactive, patient driven care to our Nation's Veterans. This undertaking represents one of the largest evolutions in the philosophy and process for healthcare delivery ever undertaken by an organized healthcare system. Dr. Gaudet is responsible for creating a structure, employing and training staff, establishing Centers of Innovation and guiding and supporting the transformation of every VHA Network and healthcare facility.

Under the direction of Dr. Gaudet, the OPCC&CT office has made significant progress toward VA's goal for personalized, proactive, and patient driven health care. Through 2013, Dr. Gaudet and her staff have achieved some significant milestones towards transformation including the development of foundational concepts and framework to educate VHA about patient centered principles. The Office has partnered with nine Centers of Innovation which fuel a national innovation engine for the country. Additionally, the Office has directly supported local transformational efforts in each of the 23 Veterans Integrated Service Networks and to more than 50% of VHA medical centers, providing the support they need to build groundbreaking programs that can then be disseminated nationally. The OPCC&CT is working with these medical centers to measure the outcomes of their projects and to identify those initiatives that have had the greatest impact on cultural transformation.

Transforming from problem-based disease care to patient-centered health care is an opportunity unparalleled in the history of medicine. The 21st Century VHA is a healthcare system that has the Veteran at the center, and begins with *their* vision of health and *their* goals. It links the Veteran's personalized health plan to what matters to them in their lives, and it supports them in acquiring the skills and resources they need to succeed in making sustainable changes in their health and life. Moving to a patient-centered approach will require a culture change within VHA. Cultural transformation is a tremendous undertaking, and is a process that takes years. Culture is individual and collective behavior, based on experience and incentives. VHA must create new experiences for both Veterans and staff, experiences that result in a deep understanding of what 21st Century Healthcare can be. VA will work to align incentives to support these new healthcare behaviors and this new system of care. Transformation is profound, fundamental and permanent change, which results from sustained experiences and incentives.

ABOUT DR. GAUDET:

Dr. Gaudet came to the VA from Duke University Medical Center where she served as Executive Director of Duke Integrative Medicine, a position she held from 2001 to 2010. She led Duke Integrative Medicine to the forefront of the field, co-founding The Consortium of Academic Health Centers for Integrative Medicine

and chairing the Membership Committee (2002-2004), as well as serving on the Steering, Executive, Education and Policy Committees. Prior to her work at Duke, Dr. Gaudet was the founding executive director of the University of Arizona Program in Integrative Medicine, leading the design in the country's first comprehensive curriculum in this new field, launching a two-year fellowship and then creating the two year distance learning fellowship.

CAREER CHRONOLOGY:

- Executive Director VHA National Office of Patient Centered Care & Cultural Transformation: Veterans Health Administration, Washington, DC, 1/2011-present
- Executive Director of Duke Integrative Medicine: Duke University Medical Center, Raleigh, NC, 2001-2004.
- Executive Director: University of Arizona Program in Integrative Medicine, Tucson, AZ, 1996 – 2000.

EDUCATION:

Dr. Gaudet received her BA degree in Psychology and Sociology from Duke University, her MD degree from Duke University, and she completed her residency in Obstetrics and Gynecology at the University of Texas in San Antonio. She is Board Certified in Obstetrics and Gynecology, and regularly teaches and writes for the American College of Obstetrics and Gynecology.

AWARDS AND HONORS:

Dr. Gaudet is a recognized leader in the transformation of healthcare. She speaks nationally through both public and professional venues ranging from The Institutes of Medicine and Department of Defense events to The Oprah Show. She has been featured in numerous national media, including the PBS nationally acclaimed special entitled "The New Medicine," and was named by Shape magazine as one of the eleven women who shape the world. In July of 2011, Dr. Gaudet was recognized as one of the "Top 25 Women in Healthcare 2011" by Modern Healthcare. In October of 2013, Dr. Gaudet was featured as a Game Changer in Fortune Magazine. She has been named the recipient of the 2013 Bravewell Leadership Award for her significant contributions to advancing the field of medicine. The award recognizes national leaders who are resilient change agents and have a compelling vision for the future of medicine that inspire and encourage others. Dr. Gaudet is also the author of Consciously Female, a book on integrative medicine and women's health, and Body, Soul and Baby, both published by Bantam Books.

COL Matthew Hepburn, MC, USA joined DARPA as a program manager in 2013. He aims to address the dynamic threats of emerging infectious diseases with potential impact on national security.

Prior to joining DARPA, COL Hepburn served as the Director of Medical Preparedness on the White House National Security Staff. Additional previous assignments include: Chief Medical Officer at a Level II medical facility in Iraq, clinical research director at the US Army Medical Research Institute for Infectious Diseases, exchange officer to the United Kingdom and internal medicine chief of residents at Brooke Army Medical Center at Fort Sam Houston, Texas.

COL Hepburn completed internal medicine residency and infectious diseases fellowship programs at Brooke Army Medical Center. He holds Doctor of Medicine and Bachelor of Science in biomedical engineering degrees from Duke University.

BG Jill K. Faris is a member of the Ohio Army National Guard. She assumed her duties as the Assistant Surgeon General for Mobilization, Readiness and National Guard Affairs on June 23 2014. As Assistant Surgeon General, she assists the Deputy Surgeon General in providing consultative services and strategic planning in all aspects of medical readiness, health care, medical personnel, medical operational and training issues that comprise the critical medical readiness indicators pertaining to the Army National Guard. She began her military service as a Private in the South Dakota Army National Guard, and upon graduation from South Dakota State University, Brookings, South Dakota, in 1987 received her commission. She has served as a member of the South Dakota, Minnesota and Ohio Army National Guard, respectively, during her 33 years of service.

She served in all medical operations positions from, company through Division and Joint Force Headquarters. Recent assignments include Deputy State Surgeon for Minnesota and Ohio, Division Medical Operations Center Chief, Deputy Commander Medical Detachment, Deputy J-1 Mobilization Readiness, and Deputy Surgeon for the Army National Guard.

BG Faris received a Bachelor of Arts degree in Broadcast Journalism from South Dakota State University and a Master of Business Administration from Trident University. She is also a graduate of the United States Army War College, Command and General Staff College, Combined Service Arms Service School, Medical Service Corps Advance Course, Adjutant General's Officer Basic, Support Operations Course, Joint Senior Medical Leaders Course, Medical Strategic Leadership Program, and Global Health Strategies for Security Course.

Her military awards and decorations include the Meritorious Service Medal (1 silver Oak Leaf Cluster), Army Commendation Medal (3 bronze Oak Leaf Clusters), Army Achievement Medal, Air Force Commendation Medal, Army Reserve Components Achievement Medal (1 silver Oak Leaf Cluster and 3 bronze Oak Leaf Clusters), National Defense Service Medal (Bronze Service Star), Humanitarian Service Ribbon, Armed Forces Reserve Medal (Gold Hourglass Device), Army Reserve Components Overseas Training ribbon (with Numeral 3), Army Service Ribbon, Ohio Distinguished Service Ribbon, Ohio Service Ribbon (with Numeral 2), Ohio Faithful Service Ribbon, and Minnesota Service Ribbon (4 bronze Oak Leaf Clusters). Colonel Faris has been awarded the Department of the Army Staff Identification Badge.

She is a life member of the National Guard Association of Ohio and the National Guard Association of the United States.

Major General Patrick D. Sargent assumed position of Deputy Commanding General for Operations, U.S. Army Medical Command, JBSA, Texas, on 12 July 2016 and the 18th Chief of the U.S. Army Medical Service Corps. His most recent assignment was leading the Army Medicine Enterprise in the Indo-Asia-Pacific as the Commanding General of the U.S. Army Medical Regional Health Command – Pacific and served as the CEO of the Hawaii Enhanced Multi-Service Market, and Command Surgeon for U.S. Army Pacific in Hawaii.

Previously, MG Sargent was the Deputy Chief of Staff, G-3/5/7 for the U.S. Army Medical Command, Washington, DC and the Commander of Darnall Army Medical Center at Fort Hood, Texas, where he led efforts to implement Soldier and Patient Centered Medical Homes and the CRDAMC Replacement Project. His formative assignments include: Chief of Staff, Army Warrior Transition Command, Washington, DC; Commander, 62nd Medical Brigade, JBLM, Washington, in which he deployed for 15 months as the Medical Task Force Commander in support of Operation Iraqi Freedom; Executive Officer to the Chief of Army Legislative Liaison, Pentagon, Washington, DC; Commander, 421st Medical Evacuation Battalion, Wiesbaden, Germany, where he deployed in support of Operation Iraqi Freedom; Director, Congressional Operations for the U.S. Army Surgeon General and Army Congressional Fellow in the Office of United States Senator Richard Durbin, Washington, DC; Commander, 507th Medical Company, (Air Ambulance) Fort Hood, Texas and Battalion Executive Officer, 36th Medical Evacuation Battalion, Fort Hood, Texas; Career Manager, Human Resources Command, Alexandria, Virginia; Battalion S-2/3, 52nd Medical Evacuation Battalion, Yongsan, Korea; Instructor, AMEDD Center and School, JBSA, Texas; Commander, Charlie Company, 115th Forward Support Battalion, 1st Cavalry Division, Fort Hood, Texas and Aeromedical Evacuation Pilot, 236th Medical Company, in support of Operation DESERT SHIELD / DESERT STORM.

MG Sargent is a graduate of the Adjutant General Officer Basic Course, Initial Entry Rotary Wing Course, Aviation Officer Advanced Course, Combined Arms and Services Staff School, Command and General Staff College, and the National War College.

MG Sargent is board certified in Healthcare Administration and a Fellow in the American College of Healthcare Executives. He is a member of the Order of Military Medical Merit and Order of Saint Michael. He is the recipient of the Tuskegee Airman, Inc. prestigious General Benjamin O. Davis Jr. National Military Award. MG Sargent earned the Army Surgeon General's prestigious 9A Proficiency Designator for being eminently qualified as an Aeromedical Evacuation Officer.

He is a Distinguished Military Graduate, receiving his commission and earning a Bachelor of Arts Degree in Political Science from Florida State University. He earned a Master of Arts Degree in Human Resource Development from Webster University and a Master of Science Degree in National Security Strategy from the National Defense University. He also earned a Certificate in Healthcare Leadership from Cornell University.

MG Sargent's awards, decorations, and honors include the Distinguished Service Medal (with Oak Leaf Cluster), Legion of Merit (with three oak leaf clusters), Bronze Star Medal (with Oak Leaf Cluster), Meritorious Service Medal (with four Oak Leaf Clusters), Air Medal, Army Commendation Medal (with two Oak Leaf Clusters), and an Army Achievement Medal (with Oak Leaf Cluster). He has earned the

Expert Field Medical Badge, Senior Army Aviator Badge, Parachute Qualification Badge, Air Assault Badge, and the Army Staff Identification Badge.

Alex leads New Product Development and Payer Innovation for Walmart's U.S. Health & Wellness business. His team focuses on delivering payer solutions that drive down the cost of healthcare by leveraging Walmart's broad assortment of health & wellness products and services. Alex holds a BA in Global Business from the University of Florida and MBA from the Kellogg School of Management & Hong Kong University of Science and Technology. He is a Fulbright Scholar and fluent in five languages.

Mercy Virtual



**Randall S. Moore, MD,
MBA**
President, Mercy Virtual

15740 South Outer Forty
Chesterfield, MO 63014
636-237-4033
randall.moore@mercy.net
Mercy.net

As president of Mercy Virtual, Dr. Randall Moore and his team are pioneering a new model of care using the power and potential of telemedicine to expand access and improve outcomes, while reducing costs.

Dr. Moore's experience includes more than 30 years working as both an academic clinical physician as well as a business executive. A common theme across his work is realizing the value of shifting care from a reactive, provider-based model, to a true patient-centric model that extends a continuum care into the daily lives of patients.

Before joining Mercy, Dr. Moore focused on the development and implementation of transformational health care models through his consulting firm. Working in major health care systems such as Intermountain Health, Ascension Health and Presence Health, his work focused on evolving from traditional fee for service to optimizing value of population health.

As CEO of American Telecare, the company developed innovative solutions to enable health care teams to extend care beyond the walls of the hospital and clinic environment. By identifying the needs of the 5% of the population who use as much as 50% of all health care resources, he and his team were able to show how a telemedicine-enabled care model delivers rapid gains in team efficiency, effectiveness and most importantly, improved outcomes and quality of life for patients.

Previously, Dr. Moore served on the board of an 800,000 member managed Medicaid/Medicare health plan, including chairman of the Compensation and Medicare Quality Committees.

Dr. Moore graduated with Alpha Omega Alpha honors from Johns Hopkins School of Medicine, before completing his training in internal medicine at the University of Minnesota, where he was chosen Chief Resident, and served on the faculty for nine years. His education also includes study at the University of London, graduate studies at the University of Minnesota, and earning his MBA from the Kellogg Graduate School of Management at Northwestern University.

BRIGADIER GENERAL LISA L. DOUMONT
Assistant Surgeon General for Mobilization Readiness and
Army Reserve Affairs (IMA)
Office, the Surgeon General
and
Deputy Commander (IMA)
Army Reserve Medical Command



BG Lisa Doumont, a native of Youngstown, Ohio, is assigned to the Office of the Surgeon General as the Assistant Surgeon General – Mobilization, Readiness & Reserve Affairs (Falls Church, VA) and dual-hatted with the Army Reserve Medical Command (Pinellas Park, FL) as Deputy Commanding General. Her previous assignments include the J9 Director for the Joint Enabling Capabilities Command in Norfolk, VA. She recently commanded the 3D Medical Command Deployment Support (MCDS) Operational Command Post (OCP) Forward (FWD) and deployed Detachment 7 to Kuwait as the medical enabling command for U.S. Army Central in support of Operations Enduring Freedom and Inherent Resolve.

BG Doumont is a Distinguished Military Graduate of the Old Dominion University Reserve Officer Training Corps. Upon graduation, she received a Regular Army Commission as a 2nd Lieutenant in the Medical Service Corps. After attending the Officer Basic Course, BG Doumont served in various leadership and staff positions until joining the United States Army Reserve in 1993. Since then, she has served in various units in Ohio, Virginia and Pennsylvania. She has commanded at the company, battalion and brigade level.

BG Doumont earned Bachelors of Science Degrees from Old Dominion University in Norfolk, VA in the fields of Biology (1988) and Nursing (1995). Additionally, BG Doumont earned a Master of Business Administration degree in 2005, again from the Old Dominion University, and a Master of Strategic Studies from the U.S. Army War College, Carlisle, PA in 2010. Currently, she is in her second year of Doctoral studies in Organizational Leadership at Shenandoah University.

BG Doumont's military awards and decorations include the Legion of Merit, Bronze Star Medal, the Meritorious Service Medals, the Kosovo Campaign Medal, the Iraq Campaign Medal with Campaign Star and the Expert Field Medical Badge. In 2014, BG Doumont earned the prestigious U.S. Army Medical Department 9A proficiency designator for mastery of military medical management. Similarly, she was inducted into the Army Medical Department "Order of Military Medical Merit" in 2011 in recognition of her career-long contributions to the Army Medical Department

INTELLECTUAL VENTURES®

Jeremy R. Salesin **Vice President**

Jeremy R. Salesin is vice president of acquisitions for Intellectual Ventures. In this role, Mr. Salesin is responsible for managing a global effort focused on acquiring invention rights, and leading a talented team of professionals responsible for assessing, valuing and acquiring patent portfolios from a diverse range of sellers. He is also responsible for further developing Intellectual Ventures' unique acquisition ecosystem involving the company's corporate relationships, channel partners and strategic alliances, and engages in business development for commercial application of technologies developed in IV Labs.

Prior to joining Intellectual Ventures, Mr. Salesin spent 11 years at Eastman Kodak Company, most recently as vice president and managing director of corporate development. At Kodak, he developed strategy with business units for acquisitions and divestitures to deliver on strategic objectives, supervised all worldwide mergers, acquisitions, joint ventures and divestitures, and established and maintained processes for deal negotiation, valuation analysis and due diligence. Before joining Kodak, Mr. Salesin served in a variety of management, business development and legal roles at Silicon Valley companies, including as vice president of business development and administration at GotSavings.com, a pioneer in the provision of rebates and coupons to online shoppers; director of business affairs, general counsel, and secretary for LucasArts Entertainment Company, a global developer and publisher of interactive entertainment software; and vice president of business affairs, general counsel and secretary of Sanctuary Woods Multimedia Corporation, a provider of interactive edutainment and entertainment software. He began his career at the law firm of Graham & James in San Francisco, where he specialized in intellectual property transactions and maritime litigation, after clerking for a federal magistrate.

Mr. Salesin received his bachelor's degree from Oberlin College with high honors, and his law degree from the University of Michigan Law School, where he served on the senior editorial board of the *Michigan Law Review* and graduated with honors. He is a member of the California Bar.

The Boeing Company
929 Long Bridge Drive
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James R. Moran

Vice President, Army Systems
Defense, Space and Security

Government Operations



James “Jamey” Moran, U.S. Army Brigadier General (Retired), is Vice President, Army Systems, Defense, Space and Security, for Boeing Government Operations. He joined the company in 2010, following successful positions with Northrop Grumman and Elbit, and a distinguished career with the U.S. Army.

Moran brings to Boeing proven capabilities in strategic planning, program management, technology development and systems integration. He has extensive systems experience having served as a Space Systems Engineer and as a Project Manager for three different programs: an Air Defense System, a Command and Control System, and the Army’s Tank Systems. As the Tank Systems Project Manager, he was responsible for the largest program in the Army and successfully completed the development, production and fielding of the first division of the M1A2SEP Abrams Tank. Subsequently as a Program Executive Officer, he was responsible for nine Project Offices covering 376 Army products to include the creation of the Rapid Fielding Initiative which lead to the equipping of over 700,000 Soldiers deploying to Iraq and Afghanistan.

During his Army career, he managed foreign military sales in Saudi Arabia, Kuwait and the Egyptian Tank co-production program. Moran also worked for the German firm IABG under the US-German Scientist and Engineer Exchange program. While serving as the Commandant of the Defense Acquisition University, he managed the five campuses responsible for training and educating the Department of Defense Acquisition workforce.

Moran was awarded Master of Science degrees from both the Industrial College of the Armed Forces and the Aeronautics and Astronautics Department of The Air Force Institute of Technology at Wright-Patterson Air Force Base. He was awarded a Bachelor of Science degree in Engineering from the U.S. Military Academy, West Point. He serves on the Photonis Board and was a consultant for the Army Science Board. He is a frequent speaker and author on defense topics.



**MAJOR GENERAL BRIAN C. LEIN
COMMANDING GENERAL
US ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
HEALTH READINESS CENTER OF EXCELLENCE**

MG Brian Lein is a native of New York and a graduate of the United States Military Academy as a Distinguished Military Cadet. He received his medical degree from Temple University School of Medicine in 1988 as an Alpha Omega Alpha Scholar. Surgical training included Internship in General Surgery at Madigan Army Medical Center in 1989 and Residency in General Surgery at Abington Memorial Hospital in 1993.

MG Lein has served in various leadership and command positions to include Deputy Surgeon General/Deputy Commanding General for Operations, US Army Medical Command; Command of Landstuhl Regional Medical Center and Evans Army Community Hospital; as well as Command Surgeon positions in ISAF Joint Command, US Army Forces Command, Coalition Forces Land Component Command/Third Army, and 4th Infantry Division. Staff surgeon assignments include 67 FST (Abn) in Operation Joint Endeavor, Bosnia; Joint Special Operations Command Augmentee Surgeon; 31st CSH (Caretaker); William Beaumont Army Medical Center; and 2nd General Hospital/Landstuhl Army Regional Medical Center. He is currently serving as the Commanding General, US Army Medical Research and Materiel Command and Fort Detrick.

He is a graduate of the AMEDD Officer Basic and Advanced Courses, the US Army Command and General Staff College, and the US Army War College where he earned a Masters Degree in Strategic and National Security Studies.

MG Lein's awards and decorations include the Distinguished Service Medal (1OLC), Legion of Merit (2OLC), Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal (2OLC), the Army Parachutist Badge, the German Sports Badge (Gold), and The Order of Military Medical Merit.

Biographical Sketch

George V. Ludwig serves as the Acting Principal Assistant for Research and Technology where he exercises scientific oversight and direction of the Command's Science and Technology programs (\$1.5 billion in FY09) in Military Operational Medicine, Combat Casualty Care, Military Infectious Diseases, Advanced Technology, Medical Chemical and Biological Defense, and Congressional Directed Special Interest Research Programs, as well as in oversight of the Command's worldwide laboratory system of laboratories, six in the continental United States and three outside the continental United States.

Prior to his current position, Dr. Ludwig served as the Civilian Deputy Principal Assistant for Research and Technology with the U.S. Army Medical Research and Materiel Command (USAMRMC), MEDCOM where he is responsible for implementing medical research policy, facilitating strategic partnerships, and coordinating medical research and development intellectual capital and physical infrastructure. He led USAMRMC efforts to establish a new overseas laboratory in Tbilisi, Georgia, He also facilitated and managed efforts to codify and organize USAMRMC scientific and technical competencies.

Dr. Ludwig also served as Acting Director of the Defense Laboratories Office while on temporary assignment to the Assistant Secretary of Defense for Research and Engineering. In that position, Dr. Ludwig served as the primary advocate for the Department's in-house laboratory system to senior DoD and Service leadership, Congress, academia, and industry. He also had oversight responsibilities for the DoD technology transfer program. He served as the primary source of laboratory policy at the DoD level and served as the source of new legislative initiatives on behalf of the defense laboratories.

Previously Dr. Ludwig served as Science Director at the United States Army Research Institute of Infectious Diseases where he helped USAMRIID meet the challenges of a changing national and international biodefense landscape. Dr. Ludwig also served as Chief of the Diagnostic Systems Division at USAMRIID where he coordinated a program for development of advanced diagnostics capable of identifying potential biological threats and other high-hazard infectious and non-infectious disease agents. Dr. Ludwig

worked extensively on vaccine development while at USAMRIID, serving on the team responsible for development of new and innovative vaccine platforms including a recombinant vaccine for Venezuelan Equine Encephalitis, and an alphavirus vaccine replicon capable of stimulating immunity to nearly any disease-causing agent. He traveled extensively in support of humanitarian and capacity-building efforts for the military including as a team leader for disease outbreak investigations in the former Zaire (Ebola virus), Colombia (Venezuelan equine encephalitis virus), and the Southwest United States (Sin Nombre virus). Dr. Ludwig received his Ph.D. from the University of Wisconsin in 1990 and is author of nearly 70 manuscripts, technical reports, book chapters, and other publications written during 30 years of relevant experience. He owns five patents resulting from his work on vaccine delivery systems and has received numerous awards and honors including the Order of Military Medical Merit, Superior Civilian Service Medal and two Achievement Medals for Civilian Service.

Major General Jeffrey B. Clark



Director, Healthcare Operations Directorate Defense Health Agency

Major General (MG) Jeff Clark was born in LaGrange, North Carolina and is a graduate of Davidson College, East Carolina University School of Medicine, the US Army Command and General Staff College and Army War College. MG Clark earned a Master of Public Health at the University of Washington and a Master of Strategic Studies at the Army War College. He is board certified in Family Medicine. He is board certified in Family Medicine.

Following Family Medicine Residency at Silas B. Hays Army Community Hospital, Fort Ord, California, MG Clark served as Family Physician and Flight Surgeon, 543rd General Dispensary, Taegu, Korea from 1987-1989. While at Fort Bragg, he served as staff Family Physician at the 1st Corps Support Command Clinic, Faculty and Clinic Director of the Womack Army Community Hospital Family Medicine Residency, and Senior Medical Officer of C Co, 307th Medical Battalion, 82nd Airborne Division during Operation Desert Shield/Storm. BG Clark served as 82nd Airborne Division Surgeon from 1993-95. He commanded the 168th Area Support Medical Battalion, Korea from 1997-1999 and served as Chief of Primary Care and Family Medicine at Womack Army Medical Center, Fort Bragg from 1999-2001. While assigned to the Wuerzburg MEDDAC/67th CSH from 2001-2004, MG Clark served as Deputy Commander for Clinical Services and as Commander of Task Force Medical Falcon, Kosovo. While in command of the 21st Combat Support Hospital, 2005-2007, MG Clark led unit deployments to New Orleans in support of the Hurricane Katrina Relief Operation and during OIF 06-08 as TF 21 MED provided detainee health care for the Iraqi theater of operations. Following his assignment as Chief of Preventive Medicine for Darnall Army Medical Center, Fort Hood, Texas, MG Clark served as Commander, 65th Medical Brigade / USAMEDDAC-Korea and as USFK/UNC/CFC Surgeon from 2008-2010. He served as Chief of Medical Corps Branch, Human Resources Command, Fort Knox, Kentucky prior to commanding Landstuhl Regional Medical Center from 2011-2012. He commanded Europe Regional Medical Command and served as US Army Europe Command Surgeon until July 2013. MG Clark served as Director, Walter Reed National Military Medical Center 2013- 2015. MG Clark was the Interim Director, National Capital Region Medical Directorate from October 2015 through February 2016 before assuming his current role.

MG Clark's awards and decorations include the Defense Superior Service Medal, Legion of Merit (2 OLC), Bronze Star (1OLC), Meritorious Service Medal (7OLC), Combat Medical Badge, Expert Field Medical Badge, Flight Surgeon Badge, and the Parachutist's Badge. He is a member of the Order of Military Medical Merit and recipient of the Republic of Korea Order of National Security Merit, Samil Medal.

Major General Steve Jones retired from the United States Army on 1 September 2016 after 38 years of active service. In his final assignment he served as Commanding General, U.S. Army Medical Department Center and School, U.S. Army Health Readiness Center of Excellence, and Chief, U.S. Army Medical Corps.

MG (Ret.) Jones graduated from Vanderbilt University in 1974 and Vanderbilt University School of Medicine in 1978. He trained in Internal Medicine and Cardiology at Walter Reed Army Medical Center, and earned a master's of science degree in National Security Studies from the National War College. He previously commanded Joint Task Force National Capital Region Medical; Pacific Regional Medical Command and Tripler Army Medical Center; Blanchfield Army Community Hospital, DeWitt Army Community Hospital, and Medical Element, Joint Task Force Bravo, Honduras. He served as Command Surgeon for Multi-National Force-Iraq; Combined/Joint Civil Military Operations Task Force-Bagram, Afghanistan; United States Southern Command; U.S. Army Cadet Command; and National Defense University. Other assignments include Division Surgeon, 25th Infantry Division (Light), Medical Director, TRICARE Northeast; Deputy Commander for Clinical Services, Womack Army Medical Center; Assistant Chief, Cardiology Service, Tripler Army Medical Center; and Director, Cardiology Clinic, Walter Reed Army Medical Center.

Major General Jones is a graduate of the U.S. Army Command and General Staff College, Armed Forces Staff College, and National War College. He is a Fellow of the American College of Cardiology and American College of Physicians.

His awards and decorations include the Defense Distinguished Service Medal, Army Distinguished Service Medal with oak leaf cluster, Defense Superior Service Medal with oak leaf cluster, Legion of Merit with third oak leaf cluster, Bronze Star Medal with oak leaf cluster, Defense Meritorious Service Medal with oak leaf cluster, Meritorious Service Medal with third oak leaf cluster, Joint Service Commendation Medal with oak leaf cluster, Army Commendation Medal with oak leaf cluster, Army Achievement Medal with oak leaf cluster, Afghanistan Campaign Medal, Iraq Campaign Medal, Global War on Terrorism Service Medal, Korean Defense Service Medal, Humanitarian Service Medal, National Defense Service Medal, Joint Meritorious Unit Award with second oak leaf cluster, Army Superior Unit Award with oak leaf cluster, Combat Medical Badge, Ranger Tab, Air Assault Badge, Parachutist Badge, and Expert Field Medical Badge.

Thomas Low

Thomas Low serves as the Associate Director of the Robotics Programs at SRI International, of Menlo Park, CA. where he has worked for the past 32 years. He earned his BSME from UC Berkeley and MSME from Stanford University. Mr. Low's three decades of technical contributions have resulted in 39 issued patents in diverse fields of research, from biochemical processes to robot system design. He was a member of the development team that created the prototype da Vinci Robotic surgical system, the new Verb Surgical platform, and he led the development of the Taurus dexterous telemanipulation system for inerting improvised explosive devices. He will discuss the DARPA TraumaPod program, led by SRI International.

Shawn Levy, Ph.D.
Faculty Investigator
Director, Genomics Services Laboratory
Director, Clinical Services Laboratory
HudsonAlpha Institute for Biotechnology

Assistant Professor (Adjunct)
Department of Genetics
University of Alabama-Birmingham

Associate Professor (Adjunct)
Department of Epidemiology
University of Alabama-Birmingham

Shawn Levy, PhD is a Faculty Investigator at the HudsonAlpha Institute for Biotechnology in Huntsville, AL and the Director of the Genomics Services Laboratory and the Clinical Services Laboratory. Dr. Levy received his PhD in Biochemistry from Emory University in 2000 and shortly after joined the faculty of Vanderbilt University as a Research Assistant Professor in Molecular Physiology and Biophysics. While at Vanderbilt from 2000-2009, Dr. Levy was an Assistant Professor of Biomedical Informatics and directed the genomics efforts for a number of research centers on campus. Dr. Levy joined HudsonAlpha in August 2009 and established the Genomics Services Laboratory (GSL). The GSL is a comprehensive genomics facility supporting all major next-generation sequencing platforms as well as microarray, genotyping and gene expression platforms. Dr. Levy is adjunct faculty in the Department of Genetics and Department of Epidemiology at the University of Alabama-Birmingham. He is an author or co-author on more than 100 peer-reviewed publications and his research interests include environmental genomics, technology and methods development in high-performance sequencing for gene expression profiling, genotyping, and structural and functional genomics of the immune system and the genomics of complex disorders with a special emphasis on neurological disease.

The HudsonAlpha Institute is a private, non-profit research institute with a three-pronged mission of genomics research, educational outreach and economic development. In addition to individual research awards, the research portfolio of HudsonAlpha includes participation in the The Cancer Genome Atlas Project, the ENCODE project, a Center for Excellence in Genome Sciences, several center grants as well as research awards from NASA and the military.

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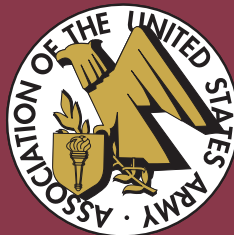
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