

The Point

A newsletter for and about the people of the
**U.S. Army Medical Research
and Materiel Command**
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USAMRMC Conference Draws Small Businesses Looking for Big Contracts

Business isn't for the faint of heart. No one knows this better than the small business owner, who must shepherd a company through the early entrepreneurial days of sweat equity to build a brand and experience sustainable growth. The challenges are myriad, and the turbulent economy, with its seismic shifts and mercurial markets, has required an extra measure of adaptability and resilience. Networking has become an increasingly critical tool

for small business owners seeking an edge. It's no surprise, then, that some 220 attendees and 40 exhibitors participated in the U.S. Army Medical Research and Materiel Command's Advanced Planning Briefing for Industry and Small Business Conference, eager to hear leaders detail their subcommands and highlight contracting opportunities. Their hope was to turn a stack of business cards into profitable contracts.

Jerome Maultsby, organizer of the inaugural April 26 conference and associate director of the Office of Small Business Programs, USAMRMC, said, "Our goal was to help those business firms interested in competing for federal procurements to become better acquainted with our mission requirements from the various offices while gaining a better sense of what's on the horizon in terms of current and future procurements."

The OSBP forges business-government alliances and better equips small businesses to compete for procurements. The office supports firms that provide relevant products, services, and solutions for research, acquisition, logistics, and technology that benefit the nation's Warfighter. Army small business spending has increased 55% from \$18 billion in 2005 to \$28 billion in 2010. According to the Small Business Administration, in 2009 small businesses were awarded a record 21.9% of federal contract dollars, approximately \$97 billion—a figure federal agencies plan to increase in coming years.

USAMRMC, the Army's medical materiel developer, is responsible for medical research, development, and acquisition and medical logistics management. As such, it is a major contributor to the overall Army Small Business Program with 24% of its \$2 billion budget going to its affiliated contractors.



The U.S. Army Medical Research and Materiel Command hosted the first Advanced Planning Briefing for Industry and Small Business Conference April 26 at Hager Hall in Hagerstown, Md. Some 220 attendees and 40 exhibitors joined the event to network and learn about current and future U.S. Army procurement opportunities. Above, Col. Russell Coleman, commander of the U.S. Army Medical Materiel Development Activity, greets Emily Shaw of All-Shred, a Frederick, Md., mobile document destruction company.

Photo by Jill Lauterborn



Exhibitor Dave Lucas, owner of Convergent Solution, demonstrates Cyber-Anatomy 3D simulation software at the U.S. Army Medical Research and Materiel Command's Advanced Planning Briefing for Industry and Small Business Conference April 26 at Hager Hall in Hagerstown, Md.

Photo by Jill Lauterborn

The U.S. Army Medical Command spends about half of its budget on small firms. USAMRMC is committed to increasing both the percentage and overall procurement dollars awarded to small businesses.

Fort Detrick is already the economic engine for area companies, in 2009 alone providing \$2 billion in contracts—\$600 million to Maryland companies, \$55 million locally. Small businesses are the beneficiaries of much of this spending.

Winning a coveted contract can be a complex, sometimes bewildering process. The competition for govern-

ment procurements can be daunting. The goal of the conference was to help demystify the process. The conference drew local and regional prime and subcontractors, as well as seasoned and novice business firms. The day's itinerary centered on 20-minute project overviews from USAMRMC program managers and commanders who went over the multifaceted program requirements with attendees.

Maj. Gen. James Gilman, USAMRMC commanding general, urged attendees to put their best foot forward. "This conference is all about fostering competition," he explained. "When you compete for our business, we win.

And you win, too, because you develop a better business."

Christine Demas, director of the Fort Detrick Business Development Office, encouraged prospective contractors to work closely with FDBDO as they develop their proposals. "We want you to be able to come to the table with everyone else and compete," she said. FDBDO has advised hundreds of companies, small and large, on all facets of doing business with Fort Detrick. "We offer training, from programs on federal contracting for beginners to teaming," explained Demas. "We moved this year to webinars. You don't even have to come to our office; you can attend our class from your desk over lunch."

Col. Russell Coleman, commander of the U.S. Army Medical Materiel Development Activity, emphasized the importance of niche businesses: "The government does not build a single thing. We do it by relying on the commercial world, the business world, what all of you do. The challenge is making the right connection. You've got to try to make that best match, and you have to do a good job selling what you have to offer."

The conference provided exhibitors Sheila and Dave Lucas, co-owners of Convergent Solution, such an opportunity. The 11-year-old Lakewood, Colo., company sells an array of simulation software for interactive training in various topics, from medical to mining safety.

"I've been trying to network into USUHS [Uniformed Services University of the Health Sciences] since last June," said Sheila Lucas. "Col. Robinson came over early in



the morning, looked at our Cyber-Anatomy system and said, ‘Here’s the name of a key decision maker at the SimCenter [National Capital Area Medical Simulation Center].’”

A hopeful smile spread across Lucas’ face. “All we need are a few good contacts. All we need is to connect with a few key decision makers.”

Richard Smerbeck, Business Acceleration manager for Dawnbreaker, a 20-year-old Rochester, N.Y., company that provides commercialization assistance to small, high-technology businesses, was pleased with the high rank and level of the presenters. “It isn’t often you have the opportunity to meet so many decision makers in one place,” says Smerbeck. “I was even more impressed by the approachability of the presenters. I wish more meetings were structured like this one.”

Smerbeck, an old hand at the procurement process, counseled newcomers to contracting to stay the course.

“Persistence and patience are very important, especially when you are starting out,” said Smerbeck. “You need to get your name and your services in front of purchasers and decision makers. Take the time to learn from others who are successful in gaining contracts. There is a lot of assistance available. Submit white papers, respond to RFIs and RFPs. Always request a debrief on any proposal—successful or unsuccessful. Your diligence will pay off.”

More online at www.mrmc.smallbusopps.army.mil and www.fdbdo.com.

Jill Lauterborn
USAMRMC writer

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At a touching May 20 farewell luncheon, 6MLMC forward team members address family and colleagues about their upcoming deployment to lead the U.S. Army Medical Materiel Center-Southwest Asia at Camp As Sayliyah, Qatar. From left, Lt. Col. David Sloniker, Maj. Peter Ramos, Sgt. 1st Class Antonio Rowe, Sgt. 1st Class Michael Brady, Staff Sgt. Orton Porter, and Spc. Harrylouis Rodriguez.

Photo by Larry Sorcher

6MLMC Team Bids Farewell Before Deploying

Fort Detrick's 6th Medical Logistics Management Center forward team gathered with family and colleagues May 20 to break bread and bid farewell before deploying early the next morning. Members will spend a year spearheading the U.S. Army Medical Materiel Center-Southwest Asia at Camp As Sayliyah, Qatar.

The 6MLMC manages Class VIII commodity and medical maintenance, linking theater requirements with sourcing and distribution systems to ensure medical supplies and equipment get into theater. The unit deploys forward teams into theater while the base operates from the stateside.

Before leaving for Qatar, team members will receive additional training in Fort Benning, Ga., and

Kuwait. Lt. Col. David Sloniker, a support operations officer, will assume command of the USAMMC-SWA June 9. Joining Sloniker are team members Sgt. 1st Class Michael Brady, Staff Sgt. Orton Porter, Maj. Peter Ramos, Spc. Harrylouis Rodriguez, and Sgt. 1st Class Antonio Rowe.

To prepare for the mission, the team was fully trained on the Theater Enterprise-Wide Logistics System, a relatively new state-of-the-art enterprise resource planning system deployed at the U.S. Army Medical Materiel Centers in Korea, Europe, and Qatar.

"If you want to know the status of flu vaccine—who has flu vaccine and where it is at—go to the system," said Sloniker. "It lets you see what's on the

shelf at the global medical materiel centers."

The team is small, but the members boast a diverse set of skills.

"Without us—the medical logisticians—you're just another smart guy," said Sloniker. "The doctor can't do his job if he doesn't have the materiel, the stuff to treat with, and the equipment to make sure that works. So that ventilator that the Soldier is on, the wrench is turned by one of our guys. We have a definite impact on the overall health care of the theater and the mission."

As the materials management chief, Ramos will assess needs across the Central Command's area of responsibility. Rowe will serve as the out-



bound manager, ensuring requests are shipped. Brady will support medical maintenance using the Standard Army Maintenance System. Porter will be the customer support chief. Rodriguez will train in all areas of warehouse management, gaining the know-how to teach others when he returns to Fort Detrick.

6MLMC commander Col. Michael Ryan acknowledged the gathering was bittersweet.

“We’re standing up here incredibly proud and confident of the team that’s going forward,” said Ryan. “But I feel like I’m losing my kids.... This is the best, the brain trust, the heart and soul of this unit.

“I have absolute faith and trust and confidence in every one of you,” continued Ryan. “I guarantee something will happen to some Soldier, and you’ll get a call in the middle of the night, and you’ll answer that call and complete the mission. Some Soldier or Airman will live another day because the right supplies will be available, or the right piece of medical equipment will be maintained, as a direct result of the work you did and the leadership you provided.”

Sloniker openly expressed his gratitude for all the spouses, their sacrifice, and support. “Without you, we wouldn’t be here.”

Maintaining a connected family across the miles takes planning with a little help from technology.

“We tried to take care of the basic stuff, like preplan the budget for the year,” said Brady, facing his second tour away from his wife, Pamela, and his children. “We try to limit the unexpected things that happen. We set up those lines of communication like Skype. I’ll have my laptop so we can figure out the best times to contact.”

Pamela, former military, reminisced about her own experience abroad: “In the early ’90s, there wasn’t anything so my mom sent care packages when I was in Germany. I talked to her on the pay phones we had.

“It helps that I used to be in the military,” added Pamela, “so I know who to get in contact with if I have any problems. We have Facebook and e-mail, all of those things. We’ve been taking a lot of pictures and burned them on a CD.”

This mission marks the first deployment for Rodriguez and Rowe. Both expressed an eagerness to dive into their new roles but admitted it would be a challenge for their families.

“On a personal level,” said Rodriguez, “I’m excited about seeing a different culture, seeing a different country. You’re doing something that maybe 10% of the population in this country has had a chance to do.”

Glancing at his wife across the table, Rodriguez added: “I don’t think Kelley’s ready yet—like any spouse would be—nervous, concerned for your safety and welfare. But at the same time, they support your decision. It’s our job. It’s what we signed up to do.”

Rowe brushed off serious worries about his wife, Shadonna. “My wife is prior military so she understands.”

Telling children is always tougher, but Rowe managed it with straight-up honesty. He’s confident they can cope (perhaps a little too well).

“I told my kids, ‘Dad’s going to work for a year.’ My older daughter is 9, and she understood. My younger son is 4. I told him, ‘Daddy’s leaving you in charge,’ so he’s walking around saying, ‘I’m in charge when

Daddy leaves!’ He’s smart, so he understands.”

Sometimes schools help bolster the spirits of the military family by sending care packages to the deployed. Pamela mused to husband Brady: “Maybe Brianna’s 7th-grade class might do something ...so it’s not so sad.”

Most team members have their laptops loaded with computer games and cases of DVDs to while away free time otherwise spent getting homesick.

For Rowe, the deployment provides the structure and the opportunity to launch a personal mission. “I brought my ‘Insanity’ [fitness] DVDs so I’ll be working out,” he said. “My goal is to be 25 pounds lighter by the time I get back.”

Team members have prepped and packed and planned for every contingency while they’re away. But they still leave behind one thing—a concern for their families. 6MLMC leadership shares that concern and pledged to take care of their families.

“We’re here to honor these guys who are going to assist the docs to save lives on the battlefield,” said 6MLMC Sgt. Maj. Edward Kelsey. Turning toward the families, he added, “We’re also here to put a face to the name of the folks who will take care of you. You have my commitment to serve but also to pray because that’s where the power’s at. Pray for their safety but also for your peace of mind.”

Urging the families to call with any need, Kelsey added with a grin: “We cut grass. We watch kids. You name it, we do it.”

Jill Lauterborn
USAMRMC writer

TATRC Hosts International Sessions on Medical Simulation and Clinical Skills at the 18th Annual Medicine Meets Virtual Reality Conference

Scientists, physicians, and engineers from across the globe explored emerging medical technologies to address the critical military need for surgical training and maintenance of clinical skills.

At the 18th Annual Medicine Meets Virtual Reality Conference held in Newport Beach, Calif., in February, more than 450 participants from 20 countries presented and assessed groundbreaking developments in simulation, modeling, imaging, robotics, and other emerging tools for patient care and medical education.

Representatives from the government, the military, academia, and industry gathered to explore topics such as plasma (ionized gas) medicine for wound care and pathogen control, the Department of Defense's initiative to develop a standardized tri-service medical simulation training platform, virtual reality in

clinical and research psychology, and haptics (feedback through the sense of touch). The conference keynote speaker was Adrienne Noe, director of the National Museum of Health and Medicine, addressing the museum's and MMVR's roles in broadening understanding of the state of technology in the field.

Since 1992, MMVR has gathered technologists, caregivers, educators, and thought leaders with the aim of improving medical care and education through advanced medical technologies. According to participant feedback, the conference provokes singular interactions among developers and end users by creating a collab-

orative environment for sharing new solutions to health care challenges.

To focus on specific military needs and bring key innovations to MMVR, the U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center has strategically partnered with conference organizer Aligned Management Associates, Inc., since 2001. This year, TATRC hosted two preconference sessions on medical simulation and clinical skills—"a shot in the arm for Army medical research and training," according to TATRC director Col. Karl Friedl. The two days enjoyed record-breaking attendance with standing room only.

Armed Forces Simulation Institute for Medicine Industry Day

On Tuesday, Feb. 8, TATRC highlighted the new Armed Forces Simulation Institute for Medicine in a day designed to share military health care needs with developers and potential users of simulation-based training systems. TATRC facilitated the AFSIM Industry Day on behalf of a DoD committee that oversees medical simulation research funding.

Event chair Harvey Magee, technical director of TATRC's Medical Simulation and Training Technology Portfolio, explained, "This focused gathering of government, academia, and industry attendees marks the begin-



Left to right: Harvey Magee, Dr. Jeffrey Stephenson, Dr. Charles Peterson, and Maj. Thomas B. Talbot, M.D.

Photo by Lori DeBernardis



ning of a new era in simulation-based research to improve training, patient safety, and clinical effectiveness. We are excited to inform the public about a new DoD funding source for medical simulation projects.”

One-on-one interviews with government officials enabled industry representatives to informally explore specific military needs and how their organizations’ key strengths might best be applied. Participants also discussed ideas for future AFSIM strategies through a moderated “open mic” session.

The founding of AFSIM stems from an infusion of DoD Health Affairs research funding in fiscal year 2010. As a result of this Defense Health Program funding, administered through USAMRMC, several tri-service Joint Program Committees were established. One such committee is JPC1a, Medical Simulation.

JPC1a-MedSim research and development efforts are guided by a steering committee of leaders and end users from the Army, Navy, and Air Force. USAMRMC has charged TATRC with executing the research approved by the steering committee. TATRC has been committed to over-the-horizon research of simulation-based training technologies for more than a decade.

TATRC helped create AFSIM to coordinate the JPC1a efforts. At the Industry Day, AFSIM director and chair of the JPC1a-MedSim Steering Committee Maj. Thomas B. Talbot, M.D., introduced the institute and its four major initiatives.

Said Talbot, “Health care is in need of improvement, from making hospitals safer for patients to training physicians, nurses, and medics in skills that

vary greatly between deployment and home duties. Advanced simulation technology offers a promising way to improve the quality and quantity of medical training.”

Goals and current projects in each AFSIM initiative include:

Combat Casualty Training Initiative

The goal is to fund systems and research to improve pre-hospital trauma training and prepare lifesavers psychologically. By integrating advanced training technology and virtual reality scenarios into all services’ medical training, pre-hospital personnel will remain continuously in a high state of readiness. New systems also may improve patient safety through statistically valid recognition of lost skills. Current projects include a multiple amputee trauma trainer and validation studies to identify which types of training are most effective for each situation.

Medical Practice Initiative

This initiative funds development of medical simulation training systems and competency assessment to maintain physician skills, both pre- and post-deployment. An end goal is the COMRADE system (Continuous Observation of Medical Records for Advanced Doctor Education), which will leverage electronic health records as a training portal. It will enable automatic, real-time evaluation for loss of skills and knowledge in different specialties; for instance, if a physician hasn’t seen a certain type of case in six months, COMRADE will schedule a teaching session with a virtual patient.

Patient-Focused Initiative

Investments in training technology are leveraged to apply advanced interactive technologies to aid in healthy living, medical practice, and patient rehabilitation. Injured Warfighters will benefit from applications for traumatic brain injury, post-traumatic stress disorder, and physical therapy. Projects in progress include a physical therapy coaching system and olfaction and resilience research.

Developer Tools for Medical Education

To make it more efficient and cost-effective to develop interactive medical and surgical training content, this initiative supports the creation of advanced open source tools. These tools will encourage a wider and more diverse community to contribute innovative content. Open source needs include a practical physiology engine, natural language processing, speech and motion recognition, a virtual reality anatomy platform, and a medical asset library. Current projects include dynamic holographic displays and 3D in medical education as well as developing an open platform that will enhance interoperability among simulation systems.

Talbot noted that the Industry Day’s 240 participants greatly expanded the national conversation on the challenges and opportunities in the medical simulation field.

Moving forward, AFSIM will continue to identify enabling technologies, develop them into systems of simulation-based training, and validate them to determine how skills learned via simulation transfer to the everyday delivery of health care.

TATRC Continuing Clinical Competency Symposium



Symposium attendees actively engaged in discussion in response to panel presentations.

Photo by Harvey Magee

TATRC hosted a clinical education symposium to focus on the role of simulation in surgical training, skills maintenance, competence assessment, and certification Feb. 9.

The event was co-chaired by Kevin Kunkler, M.D., senior clinician and subject matter expert for TATRC's Medical Simulation and Training Technology Portfolio, and Thomas Knuth, M.D., TATRC Trauma Portfolio manager. Kunkler noted, "It is vital that the military find effective methods to address the deterioration of skills for the thousands of surgeons, anesthesiologists, and interventionists who are preparing to perform different specialized procedures during or after deployment. Maintaining clinical skills is also crucial on the civilian side." According to the Centers for Disease Control and Prevention, medical mistakes cause 40,000 to 200,000 deaths per year in the United States.

Knuth said, "The most valuable medical asset on the battlefield is a competent physician, nurse, or medic. What we discuss today must help us define and measure surgical competence. If we can measure it, we can manage it. Another goal today is to explore

the effectiveness of simulator-based training and the role of virtual reality in improving education and training."

The keynote speaker of the session was Lockheed Martin Virtual World Labs chief architect Richard Boyd, a highly sought industry speaker who presented his perspective on simulated clinical environments and virtual system engineering for medical and surgical training and research. He noted, "Unprecedented, even revolutionary, recent progress in computer gaming technologies, sensors, artificial intelligence, and development processes makes this an opportune time to bring the best technologies from computer gaming and aviation to address our health care crisis."

According to Boyd, as viewed across a variety of statistical measures, the U.S. health care system lags behind its peers in other industrialized nations, including spending approximately \$300 billion attributable to medical mistakes and defensive medicine. Highly sophisticated training systems—which Boyd described as flight simulators for health care—are just one of the ways technology could be applied to improve care.

Through a series of four panel discussions and open question sessions, symposium participants explored issues in skills deterioration and pre-leave/pre-deployment preparations. The panels of experts in education, training, and simulation comprised leaders from professional societies and military and civilian medical research institutes and hospitals.

Panel topics included:

Gaps and Needs

Chair of the JPC1a-MedSim Steering Committee, Talbot moderated a panel on maintaining clinical competency across the deployment spectrum, interventional procedure competence in the academic and civilian communities, and gaps perceived by reservists. Audience comments included the need for standards of excellence and military requirements for curricula.

Evaluation—Metrics and Validation

University of California, Los Angeles professor and TATRC senior advisor Warren Grundfest, M.D., moderated the panel that presented decision-based metrics, validation designs and how they could be integrated into curricula, and an anesthesiology case study on simulation for recertification. Audience discussion centered on the medical community's position on the goals of validation as it applies to simulation.

Individual and Group Perspectives

Event co-chair Kunkler moderated panel presentations on design and assessment issues for continuing clinical competencies using computer simulations, a study on maintenance of certification at a civilian surgery department, and the perceived effects of deployment on surgeon and physician

skills in the Army Medical Department. Audience comments regarding plausibility of technology applications versus current ways of guiding nonexperts were discussed.

Testing and Certification Recommendations

Event co-chair Knuth moderated a panel on the Surgical Education, Training, and Assessment Consortium's work toward standardized clinical competence and testing, the role of

simulation in continuing clinical competence, and reintegration opportunities for returning Soldiers. Audience concerns included providing appropriate amounts of practice and gathering data on whether certification makes a difference in patient safety.

The resoundingly successful event ended with a networking reception that allowed the 230 participants to continue deliberations on potential solutions. According to Kunkler, the need for standardization was a key theme.

TATRC chief scientist Charles Peterson, M.D., said, "We organized this meeting as a forum to better understand the current gaps and explore the directions thought leaders are pursuing to address needs in this crucial area. We heard many excellent ideas that could help steer future programs. Our hope is to inspire creative solutions within the health care community, whether through technology, standardization, curriculum, or other advancements."

Interactive Demonstrations of Key Technologies



Dr. Dwight Meglan (SimQuest) demonstrates a wound closure simulator.

Photo by Harvey Magee

Six investigators funded through TATRC presented highly interactive demonstrations of their prototypes and advanced technologies at the conference from Feb. 10–12. These TATRC partners from public and private laboratories throughout the country exhibited work that addresses key military medical needs:

- Dr. Dwight Meglan of SimQuest presented a wound closure simulator as well as three game-based trainers: one for combat medics facing improvised explosive device events, another for rapid trauma skills training, and a third for maintenance of certification for surgical skills.

- Dr. Charles Shanley of William Beaumont Hospital in Michigan demonstrated data-driven optimization of surgeon skills for enhanced training, simulation, and assessment.
- Dr. Albert Rizzo and Dr. Belinda Lange of the University of Southern California Institute for Creative Technologies presented three projects: virtual reality-assisted exposure therapy for PTSD, VR game-based motor rehabilitation, and SimCoach virtual human support agents for psychological health care.

- Jamie Antonisse and Dr. Bonnie Kennedy of Blue Marble Game Company exhibited "Treasure of Bell Island," a console-based video game for cognitive and motor therapy applications.
- Dr. Rasha Morsi and Dr. Mona Rizvi of Norfolk State University in Virginia presented the VNurse, a modular dynamic virtual simulations framework for nurse training.
- Dr. Karl Reinig and Dr. Nick Bernstein of Touch of Life Technologies exhibited the Common Platform Medical Skills Trainer, a virtual reality, dual-handed haptics training for procedures for compartment syndrome, retinal surgery, and regional anesthesia.

For more information on AFSIM or the TATRC Medical Simulation and Training Technology Portfolio, contact Harvey Magee at harvey.magee@tatrc.org. For more on the annual MMVR conference, visit www.NextMed.com.

*Barb Ruppert
TATRC science and
technology writer*

USAARL Donates Computers to Dale County Board of Education



On behalf of the Dale County Board of Education, Juan Cepero accepts 11 computers donated by USAARL. Pictured from left to right are Col. Joseph McKeon and Juan Cepero.

Photo by Scott Childress, USAARL

The U.S. Army Aeromedical Research Laboratory at Fort Rucker, Alabama, donated 11 computer systems to the Dale County Board of Education May 6. Juan Cepero, technology director, accepted the donated equipment on behalf of Dale County City Schools. Cepero indicated that the computers would be placed in classrooms to facilitate and nurture the study of

science and mathematics by students of Dale County public schools.

According to Col. Joseph McKeon, USAARL commander, "In order to encourage the study of science and mathematics at all levels of education, federal laboratory commanders are authorized by the Education Partnership Act, Title 10 United States Code 2194, to transfer to educational non-

profit organizations excess defense laboratory equipment."

"As a local defense laboratory that employs scientists, engineers, and research technicians, USAARL wants to encourage students enrolled in local schools to learn important mathematics and science concepts," McKeon said. "We also want students to learn how to perform basic computer technology skills, such as typing, conducting educationally based Internet searches, and using various computer programs."

"The laboratory makes these contributions to local students so that the nation will benefit from a better prepared scientific, engineering, and technical workforce," McKeon said.

This is the eighth computer equipment transfer USAARL has made to schools in the Wiregrass region. Other donations from USAARL include photographic equipment to Enterprise State Community College and science laboratory equipment to Troy University and Opp High School.

*Catherine Machen
USAARL Public Affairs*



At a May 17 ceremony, Maj. Gen. James Gilman, the U.S. Army Medical Research and Materiel Command commanding general, addresses a small crowd, including Dr. Adrienne Noe (left), director of the National Museum of Health and Medicine. An exhibit of the amputated leg of Union Maj. Gen. Daniel E. Sickles, on loan from NMHM, was presented for display at the USAMRMC Headquarters building at Fort Detrick, Md. "This is a great opportunity to highlight one of NMHM's many artifacts and to welcome the museum to MRMC," said Gilman. NMHM documents the history and practice of American and military medicine. In September the museum is set to complete its move from the Walter Reed Army Medical Center to its new state-of-the-art facility at the Fort Detrick-Forest Glen Annex in Silver Spring, Md.

Photo by Dave Rolls



USAARL Researcher Lawson Gives an Out-of-This-World Presentation



Dr. Ben Lawson, USAARL research psychologist

Photo by Scott Childress, USAARL

Dr. Ben Lawson, a research psychologist at the U.S. Army Aeromedical Research Laboratory, was the invited

guest speaker at the 8th Symposium on the Role of the Vestibular Organs in Space Exploration dinner banquet held April 9.

Lawson was invited by Dr. Charles Oman, director of the Man Vehicle Laboratory at the Massachusetts Institute of Technology and chair of the ROVOSE Organizing Committee, to give a presentation entitled “How I Learned to Stop Worrying About Space Exploration and Start Loving the Vestibular Organs.”

The ROVOSE is a small symposium focused on problems of spatial disorientation in space, space sickness, and post-flight after effects. The first ROVOSE symposium was held in 1965 and organized by Dr. Ashton Graybiel.

Lawson has more than 18 years of spatial orientation research experience with the government. He studied at the Ashton Graybiel Spatial Orientation Laboratory at Brandeis University before working at the U.S. Navy Aerospace Medical Laboratory in Pensacola, Fla. Lawson transferred to USAARL in 2009.

Lawson’s presentation acknowledged past and present conference organizers, key contributions of the conference over the years, changes in the conference from the first meeting, vestibular science in the wider context of space exploration, and inspirational themes related to human exploration of inner and outer mysteries.

*Catherine Machen
USAARL Public Affairs*

USAMRIID Hosts Annual Enlisted Dining In

The military has many traditions. One of them is “Dining In,” which is a formal stag banquet maintaining a high degree of military atmosphere, tradition, and fellowship. It is customary during the Dining In to pay tribute to those who have made outstanding contributions to the service, to hear an address by a distinguished guest, and to present a series of toasts to dignitaries, heads of state, and fallen comrades.

On April 8, the U.S. Army Medical Research Institute of Infectious Diseases held its first Enlisted

Dining In. The enlisted Soldiers of USAMRIID invited three guests, Col. John Skvorak, USAMRIID

commander; Col. Keith Martin, deputy commander; and Capt. Sarath Rednam, company commander.



USAARL Researcher Gaydos Awarded ACEP Best Staff Presentation

Lt. Col. Steve Gaydos, an aerospace medicine specialist and chief of the Aeromedical Factors Branch at the U.S. Army Aeromedical Research Laboratory, received the Best Staff Presentation at the Government Symposium for the American College of Emergency Physicians in March.

Gaydos presented a synopsis of the study entitled, "Comparison of the Effects of Ketamine and Morphine on the Performance of Representative Military Tasks," which began August 2010.

The ketamine and morphine study evaluated the effects of 25 mg of intramuscular ketamine versus 10 mg of intramuscular morphine on

the performance of representative Warrior Skill Tasks in 48 healthy subjects. Gaydos said, "Sometimes we have a difficult time controlling pain at the point of injury. Morphine has been used for battlefield analgesia for a long time, and its longevity in this capacity speaks to its strengths. But, it is also important that we look at alternative drugs and routes of delivery too, particularly agents with rapid onset and opioid-sparing effects. This study furthers those efforts."

The study concluded that despite the fact that subjects were more symptomatic on ketamine, the Warrior Skill Tasks were largely resistant to performance decrements, suggesting that a trained skill task remains some-

what resilient to the drugged state at this dosage.

Gaydos commended the research team stating, "This study would not have been possible without the hard work of these researchers, doctors, technicians, and Soldiers. They not only implemented the study without a hitch, ensured the well-being of the subjects, and achieved the goals and objectives of the study, they also mentored and taught me along the way. Without a doubt, this team conducted quality research for the Soldier and certainly earned this award."

*Catherine Machen
USAARL Public Affairs*



The research team included, from left to right, Sgt. Pedro Cruz, Jim Chiramonte, Spc. Adam Thompson, Edna Rath, Dr. Amanda Kelley, Jeremy Athy, Staff Sgt. David Lopez, Lt. Col. Steve Gaydos, Catherine Webb, Lt. Col. Patricia Walters, and Elizabeth Stokes. Sgt. Arlene Breaux, Bradley Erickson, Dr. Heber Jones, Melody King, Lana Milam, Stephanie Moon, Pfc. Shannon Pippinger, Spc. Navdeep Saini, Mindy Vasbinder, Cpl. Joe White, and Dr. Robert Wildzunas are not pictured.

Photo by Scott Childress, USAARL



Harper Retires from the U.S. Army After 30 Years

Col. Isiah M. Harper, Jr., retired from the U.S. Army after 30 years of dedicated service at an official retirement ceremony, officiated by Maj. Gen. James Gilman, commanding general of the U.S. Army Medical Research and Materiel Command and Fort Detrick, at the Capt. Jennifer J. Shafer Odom Fitness Center May 20.

Harper began his Army career in 1981 as the chief of Ambulatory Pharmacy and the chief of Pharmacy Support at Darnell Army Community in Fort Hood, Texas. In his 30-year career, Harper has served in virtually every pharmacy position in various locations around the world from Seoul, Korea to Fort Detrick, Md.

“Relatives and friends who sacrificed their lives during the Vietnam War inspired me to join the Army,” said Harper. “They didn’t receive a parade when they returned. They will always be my heroes.”

During the retirement ceremony, Harper paid tribute to the five young men whose sacrifices while serving in Vietnam inspired him to join the Army. Service members serving during Vietnam did not receive the recognition due to them and were often mistreated upon their return. Due to their treatment, Harper promised himself that he would make his place in the military.

Joining the South Carolina State ROTC program changed Harper’s opinion of the military.

“After understanding more of the dynamics of the Army, I accepted a scholarship,” said Harper. “Thirty years later, here I am.”

Gilman praised Harper’s career and



Maj. Gen. James Gilman, commanding general of the U.S. Army Medical Research and Materiel Command and Fort Detrick, pins a medal on Col. Isiah M. Harper, Jr., who retired from the U.S. Army May 20 after 30 years of dedicated service.

Photo by Doug Valentine

his gift for working with people throughout his career, which was evident in the number of people in attendance at the ceremony. More than 300 people attended.

“Everything I have done in the military has never been about me,” said Harper. “It has been about someone else. I love taking care of people. I love working with people.”

Harper was presented with three tables’ worth of awards and gifts. He received the Legion of Merit Medal; The Presidential 30-Year Letter; the 3-Star Letter and the 30-Year Medalion from U.S. Army Surgeon General, Lt. Gen. Eric Schoomaker; the USAMRMC Commanding General Note and Coin; and the U.S. flag flown over the U.S. Capitol, Fort Detrick, and the Francis Scott Key grave.

Additionally, Harper received a proclamation from the Mayor of North Charleston, S.C., R. Keith Summey, declaring the 20th day of May 2011 to be Col. Isiah “Ike” Harper Day.

Now that he is retired, Harper plans to become self-employed so that he can work with our Warriors and mentor children.

“I would like to accomplish my 25-year-old dream of developing a youth mentorship, leadership institution,” said Harper. “America’s future exists with our children.”

*Carey Phillips
USAMMDA Public Affairs*

USAMRICD Young Investigators Recognized by Professional Scientific Societies

Several young scientists at the U.S. Army Medical Research Institute of Chemical Defense recently received Young Investigator Awards from two separate scientific professional societies at their respective April meetings. Dr. John Azeke and Joseph Boecker were awarded Albert Kligman Young Investigator Scholarships from the U.S. Technical Symposium of the International Society for Biophysics and Imaging of the Skin, and Dr. Lindsey Hamilton was recognized by the American Society for Pharmacology and Experimental Therapeutics. Additionally, Hamilton's presentation at the ASPET's annual Experimental Biology meeting, held April 9–13 in Washington, D.C., won first place in the Division of Behavioral Pharmacology poster competition.

Both Young Investigator Awards recognize scientists with no more than five years of experience in their fields. The abstract submitted to the meeting also is used to select recipients of the ISBS scholarship while ASPET additionally looks at the investigator's related research interests and publication record.

Both Azeke and Boecker presented podium lectures at the symposium's meeting in Tampa, Fla., April 6–9, which qualified them for the award. Azeke's presentation was entitled "Multivariate Validation of Injury Consistency in an Established Swine Model for Cutaneous Sulfur Mustard Exposures," while Boecker's lecture discussed "The Examination of Nitric Oxide-Accelerated Wound Healing by Laser Doppler Perfusion Imaging of Percutaneous Sulfur Mustard

Lesions." As scholarship recipients, Azeke and Boecker had most of the cost of attending the symposium covered by the society and also received one year of complimentary full membership into the society, which includes a one-year subscription to the official journal of ISBS, *Skin Research and Technology*.

Hired in 2009, Azeke earned his Ph.D. in biomedical engineering from the University of Florida in 2007. He serves as co-investigator with Dr. Ernest Braue, Jr., in the institute's Medical Toxicology Branch on three research grants funded by the Defense Threat Reduction Agency to develop and field maximally effective treatment regimens for chemical warfare agent and toxic industrial chemical casualties. In his research, Azeke uses a variety of nondestructive and noninvasive bioengineering tools, including infrared analysis, ultrasonography, colorimetry, ballistometry, image analysis, evaporimetry, and clinical evaluation, to develop comprehensive physiological models of CWA injury.

Boecker worked as an intern at USAMRICD while earning his bachelor's degree in biomedical engineering from Northwestern University, which he received in 2003. He returned to USAMRICD in 2009 to work for Braue and in 2010 transferred to the Physiology and Immunology Branch to work for Capt. Robert Brodnick on his protocol studying the effects of topical nitric oxide treatment regimens in cutaneous sulfur mustard and thermal injuries. Braue and Azeke are also

co-investigators on this project.

"I am very proud of my team members being recognized by this scholarship award," said Braue, who was one of the main organizers of the symposium and served as the Scientific Program chairman.

"They have both made essential contributions to meeting the goals of this project by developing improved treatment strategies for healing sulfur mustard wounds," he continued. "Their expertise in biomedical engineering techniques and data analysis has greatly accelerated our progress, and I congratulate them and all my team members for a job well done."

Braue also had other members of his team, Roy Railer and Robert Stevenson, present a poster entitled "Comparison of Hair Removal Methods prior to Sulfur Mustard Exposure" at the symposium.

Hamilton earned her Ph.D. in neuroscience from Wake Forest University School of Medicine in 2010 and has been employed at USAMRICD for less than a year, working with Dr. Todd Myers in the Neurobehavioral Toxicology Branch. Myers' team conducts behavioral studies, using sensitive, objective, and automated tests of operant and respondent conditioning, to assess the safety and efficacy of chemical warfare nerve agent medical countermeasures in a variety of species.

"Lindsey's professionalism and scholarship are great assets to our research program," said Myers. "I am proud of her accomplishments at the USAMRICD in such a short

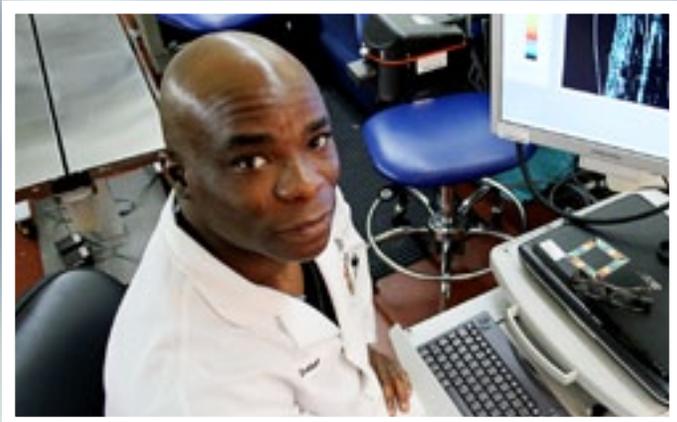


Dr. Lindsey Hamilton applies her knowledge of neuroscience and behavioral testing to assess the safety and efficacy of chemical warfare nerve agent medical countermeasures.

period of time, and I predict that her expertise in nonhuman primate behavioral testing, coupled with her background in neuroscience, will allow her to continue to make significant contributions to our medical chemical defense research program.”

Her first-place poster presentation, co-authored by Andrew J. Bonvillain and Myers, was entitled “Time Course, Safety, and Efficacy of

Reversible Acetylcholinesterase Inhibitors in Cynomolgus Macaques.” For the Young Investigator Award, Hamilton received a certificate and monetary prize. The Behavioral Pharmacology Division Best Abstract Award consisted of a certificate, a monetary prize, and the opportunity for Hamilton to serve on the Executive Committee for the Behavioral Pharmacology Division, which selects symposium topics and speakers for



Dr. John Azeke developed a novel multivariate analytical method for evaluating injury and wound healing and performed an objective validation of USAMRICD’s established superficial dermal HD injury model.



Using his expertise in state-of-the-art bioengineering techniques and instrumentation, Joseph Boecker evaluated improved treatment strategies being developed by USAMRICD scientists for healing sulfur mustard wounds and compiled data for the laser Doppler portion of the study.

Photos by Darrell Jesonis, USAMRICD

next year’s meeting. Criteria for the Poster Award included research positions held by the first author, past awards and honors, professional society memberships, and publication record, as well as the written, oral, and visual presentation of the poster and the significance of the research.

Source material provided by USAMRICD

USAISR Burn Center Nurse Spruill Receives Honor Society Top Award

St. Philip's College Nursing Faculty member Rose Spruill recently received an Image Maker Award from the Sigma Theta Tau International Nursing Honor Society, Delta Alpha Chapter-at-Large in San Antonio, Texas, and an Ambassador appointment from the National League for Nursing.

Spruill accepted the Image Maker Award at a recent reception at Oak Hills Country Club in San Antonio.

The San Antonio chapter recognizes excellence in nursing through the Nurse Image Maker Award. Spruill was among registered nurses from local health care and professional organizations receiving recognition.

"She was selected to receive this award because of her professional image, positive and caring attitude, leadership qualities, commitment to continuous learning, and significant contributions to the society and the community," said Teresa McPherson, interim dean of Nursing and Allied Health.

STTI is an honor society for nurses committed to fostering excellence, scholarship, and leadership in nursing to improve health care worldwide. It is a society of nursing leaders who are active in research, education, and practice in the field. As an honor society, it recognizes those who excel in their field and emphasizes the importance of continued professional enhance-

ment. The nation's second largest nursing society, the organization is a global community of 405,000 nurses. Membership is by invitation to nursing students who excel in scholarship and to nurse leaders who are exceptional achievers in the field, such as Spruill. Read more about the society at <http://www.nursingsociety.org/default.aspx>.

In her new Ambassador capacity with the National League for Nursing, Spruill informs St. Philip's College faculty and administration about league initiatives, grant opportunities, conferences, publications, workshops, and other benefits available to league members. Spruill was appointed as an Ambassador because she is an

USAMRICD's Petrali Receives Spirit of Service Recognition

Among 54 federal employees from the Washington, D.C., area to be honored in the Spirit of Service ceremony and reception at the Pentagon for federal careers of more than 48 years was Dr. John Petrali, a research anatomist at the U.S. Army Medical Research Institute of Chemical Defense. Petrali was recognized for 51 years of service to the federal government.

Petrali began serving his country in the military, and as a medical corpsman private he was stationed at Edgewood Arsenal in 1959, assigned to a predecessor laboratory of USAMRICD. His federal civilian career began in 1962 as a biologist in the Pathology Branch of the same organization. There under the mentorship of Dr. Ludwig Sternberger,

Petrali trained in electron microscopy, immunology, and ultrastructural techniques. In 1969, he received his doctorate in anatomy and pathology from the Medical Graduate Program of the University of Maryland School of Medicine.

During Petrali's long career at USAMRICD, he has designed and conducted primary research to detect the mechanisms of chemical threat agents and to identify those that may be predictive or diagnostic of injury. His work has led to a number of breakthrough discoveries. He was one of the first to define the effects of nerve agents on the blood-brain barrier as being dependent on convulsive activity and the first to define the sequential

ultrastructural immunopathogenesis of blister formations in exposed skin and cornea resulting from exposure to the chemical warfare agent sulfur mustard. These investigations are now considered benchmark studies for the fielding of anticonvulsants as first-line, immediate treatment of nerve agent casualties and for the development of noninvasive immunodiagnostic strategies to confirm mustard gas exposure.

Petrali is the author of, or co-author on, more than 140 peer-reviewed scholarly articles, book chapters, and technical reports, as well as presentations at innumerable scientific and professional meetings. Several of his presentations have received best poster or best paper awards. He also holds two patents:

outstanding instructor, colleague, and mentor, McPherson said.

The league created its Ambassador program to help academic nurse faculty and nursing program members understand what the organization offers to enhance professional development and status. Ambassadors also explain to both the league's professional staff and its board what issues and challenges are of greatest concern to nurse educators in the field so the organization maximizes the use of its assets. Spruill keeps both St. Philip's College and the league connected in her new capacity. With 20,000 individual and 1,100 institutional members, the league is the preferred membership organization for nurse faculty and leaders in nursing education.

Steven Galvan
USAISR Public Affairs

“Free Floating Cryostat Sections for Immunolectron Microscopy” and “Optical Device for Self-Monitoring of Pupillary Response.”

In addition to numerous performance awards, Petrali has received a Federal Executive Board Outstanding Career Service Award (1987) and the Senior Research Scientist of the Year Award from the Defense Threat Reduction Agency, Joint Science and Technology Office, Chemical/Biological Defense Program (2006). Petrali is a fellow of the Microscopy Society of America and served as chairman of the National Certification Board for electron microscopy technologists (2006–2009). In 2010 he was awarded an honorary doctorate of science from his undergraduate alma mater, Davis and Elkins College, Elkins, West Va.

Source information provided
by USAMRICD

Natick Soldier Systems Center Hosts Annual Holocaust Remembrance

The Natick Soldier Systems Center annual Holocaust Remembrance program was held April 28 in Hunter Auditorium. Edward Krasa, a Holocaust survivor and educator, spoke about his experiences surviving Theresienstadt (Terezin) concentration camp in Czechoslovakia and the use of music and culture by Terezin prisoners as instruments of resistance and defiance.

Krasa also is included in the recently released book by Susie Davidson, *I Refused to Die: Stories of Boston Area Holocaust Survivors and Soldiers Who Liberated the Concentration Camps of World War II*, and in

her accompanying documentary film, *The Holocaust: Memory and Legacy*.

After attending the program and meeting Krasa at the reception, U.S. Army Research Institute of Environmental Medicine commander Col. Gaston Bathalon said, “What came to mind as he was talking was how he (and other survivors) are the model of resilience, unspeakable horrors and living conditions that he has been able to ‘overcome.’ It was an incredible honor to listen and meet with him today.”

Terry Rice
USARIEM Public Affairs



Edward Krasa and his son with Col. Gaston Bathalon, USARIEM commander, and Lt. Col. William Latzka, USARIEM deputy commander, and members of the Holocaust Remembrance committee.

Photo by David Kamm, Natick Soldier Research, Development & Engineering Center



USAISR company commander, Capt. Natalie D. Collins, hands a saber to the new Company 1st Sgt. Jose Rojas during a change of responsibility ceremony June 3. Rojas took the responsibility of the company from 1st Sgt. Genaro Silvas and will lead the company with Collins.



USAISR commander Col. Lorne H. Blackbourne hands the company guide to new company commander Capt. Natalie D. Collins during a change of command ceremony June 3. Collins relieved Capt. Rachel N. Marsh who is reporting to Fort Bragg, N.C.

USAISR Welcomes New Company Commander

The U.S. Army Institute of Surgical Research welcomed a new commander during a change of command ceremony June 3.

Capt. Natalie D. Collins assumed command from Capt. Rachel N. Marsh who is reporting to the 28th Combat Support Hospital at Fort Bragg, N.C., to assume duties as the human resource manager.

While speaking to the crowd, Marsh thanked her family and friends for their support and said goodbye to the Soldiers and staff of USAISR. "Thank you for your support and dedication these past two years," said Marsh. "Your hard work and loyalty to the organization is a vital key to the success of the unit."

Marsh also thanked Col. Lorne H. Blackbourne, USAISR commander, and Command Sgt. Maj. Ella M. Lalone for allowing her the opportunity to lead the company. "There is not a day that has gone by these past two years where I haven't been

extremely impressed and proud to be your company commander," said Marsh. "Captain Collins' next two years are going to go by so quickly. You are extremely lucky to lead such an exceptional group of officers, NCOs, and Soldiers."

During his remarks, Blackbourne talked about the changes at USAISR with the addition of the new Battlefield Health and Trauma Research Institute and the addition of three new Army elements to the company. "That was no small undertaking," said Blackbourne. "But under Captain Marsh's leadership, the transition went very smoothly, which is a testament of her leadership ability."

Acknowledging that she has been given the ultimate challenge of following in the footsteps of a competent and respected officer, Collins, reporting from Brooke Army Medical Center where she served as the officer in charge of the Anatomic Pathology Laboratory, said she's ready for the challenges of being the new com-

pany commander. "It will be my responsibility to ensure that you are always physically and mentally fit to accomplish the missions expected of you," said Collins. "That is a big responsibility but one I undertake not on my own but with your help."

A graduate of Southern University and A&M College in Baton Rouge, La., with a bachelor's of science degree in biology, Collins earned her commission in the Medical Service Corps in 2004. Her military experience includes serving as platoon leader, assistant operations officer, and twice as officer in charge. She brings her experience and training to the Soldiers of USAISR and is proud to be their new commander. "I know that you will help me ensure that you are maintaining the highest standards and that you are, in fact, the best Soldiers in the Army."

*Steven Galvan
USAISR Public Affairs*



Vandre Receives Individual Letterman Award for Work at AFIRM

The 2010 Major Jonathan Letterman Award for Medical Excellence for individual accomplishments awarded to Dr. Robert Vandre, retired Army colonel, is now on display at the National Museum of Civil War Medicine in Frederick, Md.

Vandre received the Letterman Award for his efforts to establish the Armed Forces Institute of Regenerative Medicine and all his hard work while serving as director of the AFIRM.

“Dr. Vandre realized earlier than anyone the significant potential that the emerging field of tissue engineering and regenerative medicine could have in improving the lives and livelihoods of our wounded Warriors returning from the wars in Iraq and Afghanistan,” said Col. Janet Harris, director of the Clinical and Rehabilitative Medicine Research Program at the U.S. Army Medical Research and Materiel Command.

According to Harris, Vandre acted on his vision, which successfully led to the creation of a new research program, accelerating the development of regenerative medicine technologies and translating these new capabilities to the clinic.

“In 2006, I had been following the field of regenerative medicine for about four years and thought it was still a decade away from getting really useful products in the marketplace,” said Vandre.

As the director for the Army’s Combat Casualty Care Research Program, Vandre was perplexed that more lives were being saved than ever before, but the increasing number of wounded

Warriors were not able to restore anything resembling full function.

“I heard a talk by Dr. Tony Atala that summarized the most recent advances in the regenerative medicine field and was blown away with the potential and how far they had come,” said Vandre. “I realized that this was a technology that could be used to help repair the ravaging wounds of the war.”

Under the leadership of Vandre, the AFIRM was established in 2008 as a multi-institutional organization, working with fellow government organizations and two independent civilian research consortia.

“I wanted to try and do something to help put our wounded Warriors back together after they had done so much for our country,” said Vandre.

The Major Jonathan Letterman Award for Medical Excellence was established in October 2008 as a tribute to the visionary medical practices of Maj. Jonathan Letterman during the Civil War. His critical care planning saved countless lives during the war and continues to save lives in current wars, including Iraq and Afghanistan.

In honor of Letterman and his accomplishments in the field of medicine, the Letterman Award is given to the individual and the organization whose efforts contribute to the advancement of medical processes and improved patient outcomes and quality of life.

“Col. Vandre is clearly deserving of the Major Jonathan Letterman Award for medical excellence in innovation,”



Col. Robert Vandre briefing staffers at the medical research day on the Hill.

said Harris. “He exemplifies every quality of military research and development leadership that the department espouses.”

“I was very pleasantly surprised to receive this award and especially happy for the AFIRM to get the recognition I think it deserves,” said Vandre. “I hope the AFIRM brings many technologies and cures to the clinic that will heal the ravages of war and, of course, also heal the many civilian casualties of trauma.”

The Letterman Award presented to Vandre can be seen at The National Museum of Civil War Medicine in Frederick, Md. The display features the Letterman Award as well as photos and product examples from the AFIRM.

*Carey Phillips
USAMMDA Public Affairs*

USAMRICD Employees Recognized for Excellence



USAMRICD'S Federal Executive Board winners for 2011 are, from left to right, Staff Sgt. Bountieng Somsamayvong, Lt. Col. Shannon Stutler, Dr. Erik Johnson, Maj. Gleeson Murphy, Jade Makfinsky, and Joanne Holloway.

Photo by Darrell Jesonis, USAMRICD

Several employees of the U.S. Army Medical Research Institute of Chemical Defense were recognized for excellence at the annual Federal Executive Board Awards banquet held in Baltimore, Md., in May. Among the employees receiving silver awards were Lt. Col. Shannon Stutler, chief of the Research Support Division, in the category Outstanding Supervisor, GS-13 and Above; Maj. Gleeson Murphy for his service as chief, Medical Toxicology Branch, in the category Outstanding Supervisor, GS-12 and Below; Dr. Alfred Sciuto, a principal investigator, for Outstanding Professional (Non-Supervisory)

A "Grand Challenge" to Find Innovative Solutions for Military Medicine

The first winners of the Grand Challenges in Bioengineering competition are receiving their funding, and a new group of undergraduate and graduate researchers will present their innovative ideas at the 12th Annual University of California Systemwide Bioengineering Symposium June 13–15 hosted by UC Santa Barbara. One grand winner and two finalists will be announced at the symposium.

"TATRC is proud to be able to involve young minds from top academic institutions in a concerted research endeavor dedicated to military medicine. We look forward to wider involvement on the part of the military and academia in these efforts that promise hope and a better return for the Warfighter," said TATRC director Col. Karl Friedl.

The UC competition stems from a special "grand challenge" that the U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center issued to the student research community at UC's 2009 symposium. TATRC chief scientist Dr. Charles Peterson described current and emergent problems in military medicine and challenged students to develop research projects focused on addressing those problems.

In 2010, a panel of TATRC and other Department of Defense representatives selected the five most outstanding, military medicine-relevant student projects presented at that year's symposium. The winners were:

- 1st Place – Yu (Mike) Chi, UC San Diego, "Wireless Embedded ECG/EEG Physiological Monitoring," \$25,000
- 2nd Place – Erica Andreozzi, UC Davis, "Multimodal Imaging Progress for the Diagnosis of TBI," \$15,000
- 3rd Place – Foad Mashayekhi, UC Los Angeles, "Enhancing Rapid In-Field Detection of Biological Warfare Agents via Aqueous Two-Phase Systems," \$10,000
- 4th Place – Jessica DeQuach, UC San Diego, "An Injectable Decellularized Muscle Matrix for Skeletal Muscle Tissue Engineering," \$5,000



USAMMCE's VPP Workshop Promotes Worksite Safety and Health

Technical, Scientific, and Program Support; and Joanne Holloway for Outstanding Para-Professional (Non-Supervisory) Technical, Scientific, and Program Support – Individual. Bronze awards went to Staff Sgt. Bountieng Somsamayvong in the Workforce Diversity/Equal Employment Opportunity category; Jade Makfinsky in the category Rookie Employee of the Year, Administrative/Management Analyst; and Dr. Erik Johnson for Rookie Employee of the Year, Technical Scientific and Program Support.



Instructor John Ciesla covers the VPP orientation.

Photo by Christian Beuchel

- 5th Place – Yiqian (Eugene) Zhu, UC Berkeley, “Nanofibrous Scaffolds for Peripheral Nerve and Spinal Cord Regeneration,” \$1,000

Chi's work has garnered attention from other funding sources, and a spin-off company has already been established to commercialize the product.

TATRC has provided funds through the Henry M. Jackson Foundation to support the symposium and the first student awards.

*Barb Ruppert
science and technology writer
TATRC*

The U.S. Army Medical Materiel Center, Europe hosted the Department of Defense's Voluntary Protection Program Workshop in Pirmasens, Germany, April 4 through 7 to promote worksite-based safety and health.

An impressive 116 attendees joined the four-day, two-session workshop with session one geared toward commanders and managers and session two focused on supervisors, additional duty safety representatives, and employees. Presentations covered varied topics, such as the VPP process for management and employees, union participation, and workplace hazard identification.

Representatives from the European Regional Medical Command, Landstuhl Regional Medical Center, and the Baumholder Medical Clinic attended the workshop. At the close, Col. William Stubbs, USAMMCE

commander, thanked the DoD VPP Center of Excellence team for traveling to Germany and sharing safety and occupational health insights with the USAMMCE team.

Stubbs voiced great appreciation for all of the workshop participants and everyone taking time out of their busy schedules to join the program.

USAMMCE has made significant progress in its VPP initiative. It began the VPP Stage I effort June 2010 and reached 66 percent Stage I completion. By April 2011, USAMMCE had attained a 78 percent completion rate. As of April 11, USAMMCE is at 90 percent Stage I completion. The goal is to complete Stage I by July 2011 and move into Stage II, the implementation part of the VPP.

*Doris Crittenden
USAMMCE Public Affairs*

USAMMC-K Finds Using TEWLS Handheld Device Makes Everything Better

The U.S. Army Medical Materiel Center-Korea is proud to announce that it became the third Army Medical Logistics Enterprise organization to use the Theater Enterprise-Wide Logistics System Radio Frequency handheld device within its medical supply chain operation March 21.

The devices will help USAMMC-K execute its mission and improve efficiencies across the enterprise. With the implementation of RF handheld devices, USAMMC-K will be able to process and track all medical supply orders electronically, which will reduce

the amount of supply discrepancy reports submitted by customers and the paper requirements placed upon the organizations.

USAMMC-K supports the holistic, operational, and strategic medical logistics approach adopted by both the 65th Medical Brigade and the U.S. Army Medical Research and Materiel Command. The team is ready to execute the 8th U.S. Army's Single Integrated Medical Logistics Manager mission and serves as the Theater Lead Agent for Medical Materiel by providing world-class, customer-focused medical

supply, optical fabrication, and medical maintenance support to Joint forces in the Korean theater.

Before this implementation, the U.S. Army Medical Materiel Center, Europe developed a project plan and hosted multiple teleconferences with key USAMMC-K personnel to ensure that milestones were met and the system's interfaces were connected.

USAMMC-K sent a team of three personnel to Korea March 15 to assist with RF implementation, which included Holger Gerlach, Matthias Knerr, and



David Woolley providing an RF overview to USAMMC-K personnel.



USAMMC-K Soldiers, civilians, and KATUSAs operating the RF handheld devices.

USAMMC-K warehouse



David Woolley. The team's task was to build warehouse cues, validate connectivity, and train USAMMC-K Soldiers and civilians on the RF technology. The first part of the training took place in a classroom setting where participants learned the basic configuration and navigation procedures of handheld devices. Once the initial training was complete, students reviewed different handheld device functions.

Simultaneously, the implementation team collaborated with USAMMC-K staff to diagram the warehouse, configure the warehouse cues for daily pick-waves, and execute "test" cycles to ensure the RF system was operating effectively. While preparing the system for RF capability, detailed analysis of master data was conducted as well as knowledge transfer on key performance indicators and management reporting techniques in various TEWLS modules (e.g., sales and distribution, financial management, warehouse management, and materiel management).

Once the training and testing phase was complete, USAMMC-K used the new RF system to pull medical supplies March 21. The system operated flawlessly, and the USAMMC-K team especially liked the system's accuracy and reduction of paper requirements.

The implementation of RF capabilities within TEWLS demonstrates the Army Medical Logistics Enterprise's continued commitment to the ever-changing and critical mission of providing medical logistics support to Soldiers, families, and health care providers. By implementing forward-looking strategic initiatives, the enterprise will become fully integrated, providing America's premier medical team with innovative medical logistics solutions.

*Lt. Col. Shon Severns
and Holger Gerlach*



USAMMCE Family Fun Day

The smell of barbecue was in the air over the U.S. Army Medical Materiel Center, Europe running track in Pirmasens, Germany, as volunteers prepared for the USAMMCE Family Fun day May 6.

Each spring, USAMMCE hosts an event for the children of the local orphanage, the Nardini House, and USAMMCE families. This year, 41 children and their chaperones from the Nardini House joined USAMMCE families for an afternoon filled with fun, games, prizes, and food.

Before the event started, Col. William M. Stubbs, the USAMMCE commander, welcomed everyone and wished them all a good time.

Under blue skies and summer temperatures, the children participated in a treasure hunt, games, and crafts that USAMMCE volunteers set up for them. Daniel Keller, age 10, made a necklace and matching bracelet to cheer up his little sister who was in the hospital and could not be there.

According to Gerlich, the director of the orphanage, the children were excited about coming to USAMMCE. For many of them it was their second or third visit.

Keanu Germesin, age 11, said "I'm looking forward to the hot dog eating contest."

One of the chaperones, Christine Rock, said, "Everyone enjoys the warm welcome they receive every time they visit and that it makes the children feel at ease."

Wolfgang Ehl, who accompanied three of his seven children to the event said, "It is a great opportunity to spend the afternoon with my children and do something fun that doesn't cost any money."

At the end of the day, each child received a raffle ticket for one of the gifts that USAMMCE employees donated for the event.

*Doris Crittenden
USAMMCE Public Affairs*



HQ, USAMRMC REAP Panel Members (from left to right): Kim Odam, Stephen Maleson, Dr. Robert Klitzman, Dr. Stephen Creekmore, Dr. Ann Boyd, Col. Thomas Jefferson, Maj. Gen. James Gilman, Dr. Jerome Pierson, Dr. Randy Howe, Dr. John Sever, Dr. George, Sopko, Col. Richard McBride, Jr., and Dr. Laura Brosch. Panel Members not pictured: Col. Scott Miller, Dr. Robert Gifford and Jay Winchester.

USAMRMC Research Ethics Advisory Panel Hosts Orientation Meeting

The U.S. Army Medical Research and Materiel Command Office of Research Protections hosted an orientation meeting March 22 for members of the newly formed Headquarters, USAMRMC Research Ethics Advisory Panel.

“Today is a historic day for us as we add a new capability for expert research ethics consultation to our HQ review processes,” said Dr. Laura Brosch, director of the Office of Research Protections.

Maj. Gen. James Gilman, commander, USAMRMC, delivered the opening remarks, welcoming panel

members to the orientation meeting. The HQ, USAMRMC REAP is a new initiative established by the commanding general to advise HQ, USAMRMC on complex ethical issues related to the conduct of specific research protocols and programs of research. This diverse panel of Department of Defense and non-DoD nationally recognized subject matter experts has been tasked with providing independent expert advice in members’ individual capacities to USAMRMC leaders and the director of the Office of Research Protections.

“In case there is any doubt of what I expect of you, I expect you to tell me

the truth, whether I like it or not,” said Gilman.

Navy Capt. J. Christopher Daniels, deputy commander of USAMRMC, began the meeting with an overview of USAMRMC including its mission to lead the way in Joint services (Army, Navy, and Air Force) biomedical research.

Throughout the day, the emerging complexity of USAMRMC-supported research was described, and the HQ system of compliance oversight was discussed, which included the ethical and regulatory challenges that may occur in innovative, groundbreaking,



and potentially controversial human research.

The day concluded with HQ, USAMRMC REAP facilitator, Kim Odam, outlining the procedures for panel operations.

The HQ, USAMRMC REAP consists of a standing panel of subject matter experts in the following areas relevant to USAMRMC-supported research: clinical ethics, research bioethics, behavioral health, neuroscience, pharmacology, trauma/critical care, oncology, infectious disease, hematology, pediatrics, and regulatory compliance/legal. Members are from diverse civilian institutions, such as the National Institutes of Health, Columbia University, and Hood College, in addition to DoD organizations that include the Uniformed Services University of the Health Sciences.

HQ, USAMRMC REAP reviews are focused on several categories of research, including but not limited to: gene transfer technologies; Secretary of the Army waiver requests of the 10 USC 980 requirement for advance informed consent in planned emergency research; complex ethical, risk/benefit, and/or other safety, rights, and welfare issues in human research; and research noncompliance cases as determined necessary. Panel members have been and will be selected based on subject matter expertise to address focused questions related to specific research issues. Each member will provide an analysis and make recommendations that are nonbinding, allowing the HQ, USAMRMC REAP to identify possible courses of action related to the resolution of the complex issues and present them to the commanding general for approval.

Melissa Miller
USAMRMC Public Affairs



The non-commissioned officers of the U.S. Army Medical Research Institute of Infectious Diseases conducted a staff ride in Gettysburg, Pa., May 26. Staff Sgt. Charles Warren, Medical Company Training NCO, served as the tour guide. The Soldiers of USAMRIID had a great time while discussing the three-day Battle of Gettysburg. They also talked about how lessons learned from 1863 can apply now in Iraq and Afghanistan.



Massachusetts Congressman Edward Markey meets with USARIEM leadership and Dr. Lisa Leon in a newly renovated USARIEM research laboratory during his visit April 28.

Photo by David Kamm, Natick Soldier Research, Development & Engineering Center

Jenkins Named Fort Detrick Organization Volunteer of the Year

Willie Jenkins, property book officer for the U.S. Army Medical Materiel Development Activity, was awarded the Fort Detrick Organization Volunteer of the Year Award for his efforts in support of the Fort Detrick Child, Youth & School Services at an awards ceremony at the Community Support Center and Army Community Service Building April 7.

During the awards ceremony, Maj. Gen. James Gilman, commanding general of the U.S. Army Medical Research and Materiel Command and Fort Detrick, presented Jenkins with two awards. The first was the Fort Detrick Organization Volunteer of the Year Award. The second was a Letter of Appreciation for the hours of volunteer services donated to the Fort Detrick Community.

This is the second time Jenkins has received the Fort Detrick Organization Volunteer of the Year Award.

“I received the same award in 2008, but I knew about it before the ceremony,” said Jenkins. “This year it was such a surprise that I was a tad emotional. It is quite rewarding and a very humbling experience.”

Jenkins volunteers his time coaching Youth-14 basketball, coaching youth bowling, and participating as a swimming judge and timing official for the youth swim team. Jenkins explains that he enjoys volunteering so he can help young people learn and grow.

“Many of the kids that I have worked with over the years have developed into very interesting young men and women,” said Jenkins. “Some have



Maj. Gen. James Gilman, commanding general of the U.S. Army Medical Research and Materiel Command at Fort Detrick, presents Willie Jenkins with the Fort Detrick Organization Volunteer of the Year Award.

gone off to college and others have joined the military.”

Jenkins explains that a highlight of the year was taking the Youth-14 basketball team to a Wizards game. Team members were surprised when they were invited to play a four-minute scrimmage as part of the half-time show.

“A sincere and heartfelt ‘thanks’ to coach Jenkins for creating a truly memorable experience for

the youth of our military and DoD civilian families,” said Lt. Col. Karen Kopydowski, deputy commander of USAMMDA. “We’re fortunate to have individuals like Willie Jenkins who give selflessly of their time to make a positive impact on our future generations.”

Carey Phillips
USAMMDA Public Affairs



Change of Command Ceremony for USACEHR

Col. Peter J. Schultheiss, commander of the U.S. Army Medical Research Institute of Chemical Defense, presided over the change of command ceremony for the U.S. Army Center for Environmental Health Research during which Col. Andrea M. Stahl passed command of USACEHR to Lt. Col. Richard P. Duncan at Fort Detrick, Md., April 8.

“USACEHR has been in good hands and will remain in good hands,” said Schultheiss while thanking both commanders for their hard work.

Outgoing commander Stahl served two years as commander from May 2009 to April 2011. Her next assignment won’t be far. She will be the new deputy commander of the U.S. Army Medical Research Institute of Infectious Diseases.

“This is a bittersweet day for me,” said Stahl, and “It is with great difficulty that I say goodbye to such a great organization.”

USACEHR personnel and guests came out to say farewell and good luck to Stahl as she moves to her new assignment.

Duncan served as the deputy commander for USACEHR for 8 months and now looks forward to taking the reins as commander.

“It is always a privilege and honor to take command and more so when it is such an excellent organization like USACEHR. The unit has many accomplishments due to the hard work of the professionals of the organization. I am extremely pleased to be the next commander,” said Duncan, “I was familiar with USACEHR and



Col. Peter J. Schultheiss passes the USACEHR flag to Lt. Col. Richard P. Duncan during the change of command ceremony.

Photo by Dave Rolls

its mission, but the unit is expanding into new areas.”

As deputy commander, Duncan learned more about USACEHR, its people, and accomplishments.

Duncan was born in Bay Shore, N.Y., and raised in Amesbury, Mass. He had many assignments before coming to USACEHR. His first assignment was at Schofield Barracks, Hawaii, where he served as medical platoon leader, Headquarters and Support Company, 84th Engineer Battalion. Other assignments include the William Beaumont Army Medical Center where he served as deputy chief of the Department of Clinical Investigation up until his selection for a nominative assignment to be the medical research and development officer at the U.S. Army Science and

Technology Center-Europe, located in Wiesbaden, Germany. Duncan also moved to Aberdeen, Md., to be the director of laboratory sciences at the U.S. Army Center for Health Promotion and Preventive Medicine (now the U.S. Army Public Health Command).

What does Duncan expect in the future?

“I expect the excellence of the past to continue. We are expanding with a new ‘systems biology’ mission, which will add personnel and research areas to the center. This will be a challenge, but one that we can meet,” said Duncan.

*Melissa Miller
USAMRMC Public Affairs*

USAMRMC Names Winners of 2010 “Best Warrior” Competition

The U.S. Army Medical Research and Materiel Command recognized winners and finalists in a ceremony April 29 at Fort Detrick for the 2010 “Best Warrior” Noncommissioned Officer and Soldier of the Year Competition.

Sgt. Matthew Dickson of the U.S. Army Research Institute of Environmental Medicine in Natick, Mass., was named 2010 Noncommissioned Officer of the Year while Spc. Adam Thompson of the U.S. Army Aeromedical Research Laboratory in Fort Rucker, Ala., won 2010 Soldier of the Year.

The arduous three-day competition tested contenders’ physical endurance, weapons and combat skills, land navigation know-how, bearing, and discipline. Just to measure up, each had to reach beyond their personal best.

“You’re not really competing against the person sitting next to you,” said Command Sgt. Maj. Kevin Stuart of USAMRMC during the ceremony. “There’s nothing you can do to prevent that person from doing his or her best.” With a look of pleasant surprise, he added: “But from the first day, these competitors were encour-

aging one another—you normally don’t see that.”

Bolstered by camaraderie, competitors faced mental and physical challenges designed to sharpen warrior skills and hone combat readiness.

“These Soldier development programs are like a long-term, strategic investment,” said Stuart. “[Leaders] take the time and energy to train, mentor, coach, inspire, and motivate our Soldiers in such a way that they want to stay in our military. It’s an investment for our country, an investment for our Army.”

From left, Maj. Gen. James Gilman, commanding general, U.S. Army Medical Research and Materiel Command and Fort Detrick, presents 2010 Soldier of the Year Spc. Adam Thompson of the U.S. Army Aeromedical Research Laboratory and 2010 Noncommissioned Officer of the Year Sgt. Matthew Dickson of the U.S. Army Research Institute of Environmental Medicine each with a trophy and an Army Commendation Medal.

Photos by Dave Rolls





Thompson, having been with the Army nearly three years, understands how healthy competition and rivalry can bring out the best in Soldiers.

“This competition is very important to readiness,” said Thompson. “You can train other Soldiers and teach them how to work hard. This competition develops future leaders.”

Dickson, with the Army nearly four years, underscored the value that support and encouragement played while he trained his mind and body for competition.

“It helps to have a command that supports what you’re going to do,” said Dickson. “[USARIEM] allowed me time to train for that, to study and to get in the gym, and to get hands-on time with the weapons.”

Joining Dickson at the ceremony were noncommissioned officer runners-

up Staff Sgt. Jason Bullock, Sgt. Ester Collins, Staff Sgt. Michael Longfoot, Sgt. Patrick Omara, and Sgt. William McGilberry. Attending with Thompson were Soldier runners-up Spc. Carlos Diaz-Rivera, Spc. Ryan Hewlett, Spc. Stephen Mason, Pfc. Jason Roth, and Spc. Dennis Scofield. Finalists represented eight subcommands at the competition.

All competitors received certificates of achievement, Commander coins, as well as gifts from GEICO and the USAMRMC Retention Office. Winners Dickson and Thompson received Army Commendation Medals and trophies, a plaque from the National Museum of Civil War Medicine, and gifts from GEICO and the Thrift Shop.

For a moment at least, Stuart’s high praise outshone the trophies and gifts: “You stepped up to the plate. You

said, ‘I’m ready to do this,’ and I know you’re going to be a better Soldier and NCO for this.”

Thompson and Dickson readily agreed.

“You should always try to achieve the next step and that means getting outside of your ‘box,’” said Dickson. “Put yourself ahead. And Soldier of the Year/NCO of the Year is a great way to accomplish that.”

Thompson said: “Great competition. Great training. I would encourage everyone to do this event.” Laying aside rivalry, he smiled and thoughtfully added, “I feel like in the last three days I’ve known these guys for years.”

*Jill Lauterborn
USAMRMC writer*

Competitors face off in a contest of combat skills during the 2010 “Best Warrior” Competition.

Photo by Dave Rolls



USAMRIID Begins Clinical Trial of New Vaccine to Protect Against Ricin Toxin

A clinical study to evaluate a new vaccine against ricin toxin is under way at the U.S. Army Medical Research Institute of Infectious Diseases. The trial is a Phase 1 study, meaning it will look at the safety of the ricin vaccine and its ability to elicit an immune response in a small number of people. Based on the results of this study, the next step would be to continue to evaluate the product in a larger pool of volunteers.

The first volunteer was vaccinated on April 5 and the second was vaccinated April 11, according to investigators in the Department of Clinical Research within USAMRIID's Division of Medicine. To date, both subjects are doing well.

Currently, there is no vaccine or therapeutic intervention (other than supportive care) available to prevent or treat the effects of ricin, a toxin derived from the castor plant. Grown throughout the world for commercial purposes, approximately one million pounds of castor beans are used each year in the process of manufacturing castor oil.

When inhaled as a small-particle aerosol, ricin produces severe respiratory symptoms followed by respiratory failure within 72 hours. When ingested, ricin can cause severe gastrointestinal symptoms followed by vascular collapse and death.

Given its ready availability and its relatively high levels of toxicity—particularly when delivered as an aerosol—ricin is considered a significant potential agent of biological warfare or terrorism. USAMRIID, the

Department of Defense's lead laboratory for medical research to counter biological threats, has been working for many years to develop a promising ricin vaccine candidate.

According to Dr. Leonard Smith, senior research scientist, the clinical study marks an important chapter in that effort.

"In the recent past, the DoD acquisition strategy involved USAMRIID's developing medical products to a specified maturity and then handing them off to another agency for advanced development," said Smith. "Now, we have been able to do the initial production of the vaccine under clinical Good Manufacturing Practices, as well as the Phase 1 clinical trials, right here at USAMRIID. This early product evaluation in-house saves both time and money."

In 2004, a USAMRIID team led by Smith and Dr. Mark Olson published the results of its work—using a combination of molecular modeling and protein engineering—to design a new vaccine called RTA 1-33/44-198. The product was essentially a fragment of the ricin protein called the A-chain, which had been modified to make the protein nontoxic and more stable while retaining its immunogenicity—that is, its ability to elicit a protective immune response.

That vaccine, now known as RVEc, was shown to be fully protective in mice exposed to lethal doses of ricin toxin by the aerosol route. Further studies, in both rabbits and nonhuman primates, were conducted to evaluate the vaccine's safety as well

as its immunogenicity. Based on the success of those studies, Smith said, the next step was to evaluate the safety and immunogenicity of the vaccine in humans. An Investigational New Drug application was filed and accepted by the U.S. Food and Drug Administration Dec. 1, 2010.

The study calls for a total of 30 volunteers to be vaccinated in three groups of 10. Three doses of vaccine will be given over a period of about two months, and the vaccine recipients will receive medical follow-up for 9 to 12 months.

"The clinical trials team is very excited about the launch of this 'first in humans' study," said Dr. Ronald Reisler, a research physician with Ke'aki Technologies, LLC, a USAMRIID contractor. "A great deal of preclinical work has preceded the Phase 1 launch, and a great deal of work remains to be performed in the path forward to licensure of a prophylactic vaccine."

Study volunteers are being recruited from the Fort Detrick community and the surrounding area. Among the screening criteria participants must meet are to be in good general health, between 18–50 years of age, weighing at least 110 pounds, and to be non-smokers with no history of lung disease.

To evaluate the vaccine's safety, investigators will assess local and systemic reactions among the volunteers. Local reactions could include such things as redness or tenderness at the injection site while systemic reactions may include fever and head-



ache. Other more serious symptoms associated with the original toxin are not expected to occur.

To evaluate the vaccine's ability to elicit an immune response, participants will give a total of 20 blood samples over a one-year period. The blood samples will then be tested for antibodies to ricin toxin to determine if the levels are consistent with antibody levels that correlate to protection observed in animal models.

“This clinical study is a good example of USAMRIID’s capability to take a product all the way from concept to early clinical trials,” said Col. John P. Skvorak, commander of USAMRIID. “It would not have been possible, however, without the support we’ve received from the Joint Science and Technology Office for Chemical and Biological Defense.”

The IND and clinical study are sponsored by the U.S. Army Medical Materiel Development Activity under the Office of the Surgeon General, Department of the Army and funded by the JSTO-CBD, part of the Defense Threat Reduction Agency.

USAMRIID, located at Fort Detrick, Md., is the lead medical research laboratory for the DoD’s Biological Defense Research Program and plays a key role in national defense and in infectious disease research. The institute conducts basic and applied research on biological threats resulting in medical solutions (such as vaccines, drugs, and diagnostics) to protect the Warfighter. While USAMRIID’s primary mission is focused on the military, its research often has applications that benefit society as a whole.

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For more information, visit www.usamriid.army.mil.

Caree Vander Linden
USAMRIID Public Affairs



USARIEM Celebrates 50 Years

The U.S. Army Research Institute of Environmental Medicine in Natick, Mass., marks five decades of vital research in environmental medicine since 1961. We acknowledge this important milestone in the following retrospective, highlighting the institute's resolve to improve Soldier health.

Mission

USARIEM's mission is to conduct basic and applied research to determine how exposure to extreme heat, severe cold, high-terrestrial altitude, occupational tasks, physical training, deployment operations, and nutritional factors affect the health and performance of military personnel.

History

Recognizing the importance of environmental and operational contingencies for the health, performance, and effectiveness of troops in training or combat, USARIEM was activated in 1961 as a research laboratory under the U.S. Army Medical Research and

Development Command. The institute was created from a composite of elements associated with a number of outstanding federal and academic laboratories, including:

- Harvard Fatigue Laboratory in Cambridge, Mass.
- Armored Medical Research Laboratory at Fort Knox, Ky.
- Climatic Research Laboratory in Lawrence, Mass.
- Quartermaster's Environmental Protection Research Division and Earth Sciences Division in Natick, Mass.

USARIEM's research focus in the early 1960s included effects of heat- and cold-induced stress and temperature regulation and effects of altitude exposure. In 1967, the Arctic Medical Research Laboratory at Fort Wainwright, Fairbanks, Alaska, was opened and specialized in research on frostbite, hypothermia, and other injuries associated with cold weather

military operations. The laboratory subsequently closed in 1978.

USARIEM moved to a permanent space of 76,000 square feet in 1968. This facility contains two altitude chambers (added in 1969), five biophysical evaluation chambers, a biomechanics laboratory, 13 environmental chambers, and a water immersion laboratory. In 1978, USARIEM reorganized under missions—altitude research, exercise physiology, heat research, health and performance, military ergonomics, and experimental pathology (including cold research). USARIEM currently is organized into four research divisions: Biophysics and Biomedical Modeling, Military Nutrition, Military Performance, and Thermal and Mountain Medicine. The John T. Maher Memorial Altitude Research Facility at Pikes Peak, Colo., is also part of the USARIEM laboratory (see "Research Highlight") as is the USARIEM/Womack Medical Research Facility in Fort Bragg, N.C.

USARIEM's Altitude Research Facility on Pikes Peak, Colo.

Photo by the U.S. Army





Historical Highlight

USARIEM has long been recognized internationally as a Center of Excellence in environmental (climatic) physiology and occupational medicine. USARIEM personnel were consultants on the establishment of the Olympic Training Center in Colorado Springs, Colo.

Research Highlight

Pikes Peak Lab

The John T. Maher Memorial Altitude Research Facility, also known as the Pikes Peak Lab, is a medical research laboratory that assesses the impact of high altitude on human physiological and medical parameters of military interest. It is a satellite facility of USARIEM. The Pikes Peak Lab is at the summit of Pikes Peak (4,304 meters or 14,110 feet) in central Colorado. The summit is approximately 5 acres of relatively flat, rocky terrain and is directly and easily accessible by automobile via the Pikes Peak Highway. The laboratory has been maintained by USARIEM since 1969 and has 2,267 square feet of floor space divided into a kitchen and dining/day room, common area/bathroom and shower, common area/sleeping quarters accommodating up to 16 research volunteers, a wet laboratory, a research area, and a mechanical room housing steel storage tanks for water and sewage. The building is well insulated and protected from the elements, supplied with electrical power, and heated by natural gas.

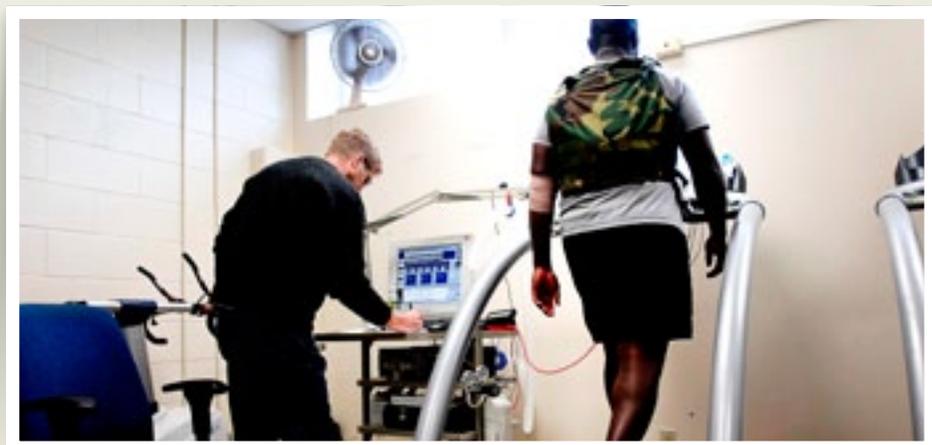
To learn more about USARIEM's research and products, visit <http://www.usariem.army.mil>.

Source information provided by USARIEM



The USARIEM building at the Natick Soldier Systems Center in Natick, Mass.

Photo by the U.S. Army



Test subject and investigator during performance testing in the exercise physiology laboratory.

Photo by the U.S. Army



Command Center of the Altitude Laboratory at USARIEM.

Photo by the U.S. Army

Contractor Celebrates Laying Final Piece of Steel on USAMRICD Facility



Photo by Darrell Jensonis, USAMRICD

Clark Construction, the prime contractor for the U.S. Army Medical Research Institute of Chemical Defense facility, hosted a “Topping Out” ceremony and luncheon May 25.

The event took place on the construction site of the new facility in the Edgewood area. Clark welcomed employees, subcontractors, members of the USAMRICD community, U.S. Army Health Facility Planning Agency, Aberdeen Proving Ground community, and their partners in the project from the U.S. Army Corps of Engineers to join in this momentous occasion.

The ceremony, as is tradition, marks the completion of the facility’s

superstructure and involves placing the final piece of structural steel.

Representatives from USACE, HFPA, USAMRICD, and Clark Construction spoke at the ceremony, thanking participants and highlighting the project’s uniqueness.

Gary Schilling, chief of the USACE Integrated Program Office, discussed the solid working relationship between Clark Construction, APG, and USACE.

“The Baltimore District is pleased with the progress and very proud of what has been done thus far,” said Schilling. “We are optimistic of this group’s ability as they have proven themselves to date, and we

look forward to the completion of the project in 2013.”

Greg Colevas, division president for Clark Construction, echoed Schilling’s comments on the strong partnership his company has with USACE, noting that this is just one of the many successful projects that they have completed together. He said there are more than 45 project engineers from Clark (not including subcontractors) working on this project and about 275 trades people report to the site for work daily.

“The project is on schedule, within scope, and remains within budget,” said Colevas. “We are eager to complete this project with a satisfied customer and look forward to the USAMRICD community moving into their new facility.”

USAMRICD is the U. S. Department of Defense’s lead laboratory for conducting medical chemical defense research. Scientists began studying the effects of chemical warfare at APG in the Edgewood area, then Edgewood Arsenal, as early as 1922 under an organization called the Medical Research Division.

By the 1960s, the organization’s name changed to the Biomedical Laboratory and in 1981, it became known as USAMRICD. According to the mission statement, USAMRICD works “to discover and develop medical countermeasures to chemical warfare agents for U.S. military and U.S. citizens; to train and educate personnel in the medical management of chemical casualties; and to provide subject matter expertise in developing Defense



and National policy and in proper crisis management.”

Not only do researchers work to prevent chemical injuries, they also study the effects of numerous chemical warfare agents, including both long- and short-term effects. The information helps scientists to develop and experiment with various methods of medical treatment. They assess the use of preemptive treatments that can be given before exposure to chemical agents to lessen or prevent the harmful effects as well as the use of treatments after exposure and their ability to reverse the effects.

After 9/11 and similar incidents, senior leaders and government officials at the highest levels saw a need to reevaluate and enhance research programs that counter national threats such as chemical weapons, said Matt McGovern, on-site project manager with HFPA. White House support was given to the recapitalization of U.S. medical research and laboratory facilities including the USAMRICD project.

There is difficulty in completing cutting-edge research while working in antiquated facilities, explained McGovern. The USAMRICD replacement facility will improve the institute’s mission with the availability of brand new, state-of-the-art, functional/collaborative research laboratories and modern supporting facilities focused on logistical analysis as well as administrative areas to include space for facilitating USAMRICD’s teaching mission.

McGovern attended the ceremony representing HFPA. HFPA is responsible for the Army’s health care replacement facility program, and it reports directly to the Medical Command chief of staff. McGovern commented on the uniqueness of this project noting that “the new building is a complex laboratory facility that will have over 500,000 square feet in space and will be unlike any other facility in the world.”

McGovern noted that the time line of the project demonstrates the precision and dedication that went into this project.

“From the beginning of the planning effort to a fully operational new lab facility is greater than a decade,” said McGovern.

Ceremony attendees were invited to sign their names to the commemorative steel beam, forever locking their participation on the project into place within its structure. A unique touch to this “Topping Out” ceremony was the addition of six commander’s coins that were attached to the beam. The coins were contributed by Maj. Gen. James Gilman, commander of the U.S. Army Medical Research and Materiel Command; Brig. Gen. Timothy K. Adams, commander of the U.S. Army Center for Health Promotion and Preventive Medicine and former USAMRICD commander; Col. Harry F. Slife, military deputy for Research and Technology, USAMRMC, and former USAMRICD commander; Col. Peter J. Schultheiss, commander of USAMRICD; Col. Stephen Wooldridge, commander of the

U.S. Army Medical Command, HFPA; and Col. David Anderson, commander of USACE, Baltimore District.

“We felt honored to participate in the topping out celebration for the new MRICD,” said Schultheiss. “As the previous commander, the past commander, and the present commander, Brig. Gen. Adams, Col. Slife, and I were thrilled to contribute coins that will remain a part of the institute for as long as it continues to stand.”

He noted his excitement at seeing the progress of the building and thanked everyone who contributed to the project, commending them for their “amazing contribution to society, country, and nation.”

“Celebrating the contributions of everyone involved in planning, building, and outfitting this architectural gem of Aberdeen Proving Ground was one of those career highlights that each of us will always fondly remember. It was a great and very special Army day,” said Schultheiss.

While a small portion of the funding for USAMRICD is from the Base Realignment and Closure program, the facility is not under strict regulation to meet the BRAC completion deadline of Sept. 15, 2011. Completion of this project is expected in 2013.

*Nicole Cawthern
Garrison Transformation Office*

WRAIR

Awards

Meritorious Service Medal

Maj. Kristen M. Bauer
 Capt. Edgie-Mark A. Co
 Lt. Col. Melanie L. Guerrero
 Maj. Sarah B. Hinds
 Maj. Richard Jarman
 Maj. Charlotte A. Lanteri
 Sgt. 1st Class John H. Simms
 Lt. Col. Stephen J. Thomas
 Maj. Stuart D. Tyner

Promotions

April

Sgt. Justin Franz Auschwitz
 Spc. Theresa Elizabeth Bettger
 Sgt. Frank James Fiorito
 Pfc. Ashlie Marie Strickland
 Staff Sgt. Ladonna Shante Tolbert

May

Lt. Col. Kristen M. Bauer
 Maj. Kevin Michael Cron
 Maj. Aatif Mohammed Hayat
 Staff Sgt. Victor Manuel
 Martinez, Jr.
 Pfc. Shawn Byron Mcloughlin
 Lt. Col. Viseth Ngauy
 Staff Sgt. Patrick Robert Omara
 Staff Sgt. Jason Richard Wilson

June

Sgt. Reginald Deshawn Acklin
 Spc. Jesus Alonzo Castro
 Col. James Francis Cummings
 Sgt. 1st Class Chester Allan
 Stugus, Jr.

USAMMDA

Awards

Meritorious Service Medal

Maj. Kirsten S. Smith
 Lt. Col. Max L. Teehee

USAMRICD

Award

Meritorious Service Medal

Lt. Col. Shannon A. Stutler

Promotion

June

Spc. Erik Byron Eaton, Jr.

USAMMA

Promotion

May

PV2 Carlos A.Vega, Jr.

6MLMC

Award

Meritorious Service Medal

Master Sgt. Marjorie C. Jackson

USAARL

Awards

April

Command Sergeant Major

Hustle Award

Andrew Alvarado
 Staff Sgt. Jessica Anderson
 Spc. Kathleen Kelley
 Staff Sgt. David Lopez
 Edna Rath
 Mindy Vasbinder

Command General and Command Sergeant Major Coin of Excellence

Spc. Elise Corrado
 Spc. Corey Zeigler

May

Meritorious Service Medal

Lt. Col. Steve Gaydos

Army Commendation Medal

Sgt. David Allen

June

Legion of Merit

Col. Joseph McKeon

Commanding General's Coin

Spc. Elise Corrado
 Sgt. Kathleen Kelley
 Spc. Summer Nomura
 Spc. Hilary Phillips

Master Army Aviation Badge

Lt. Col. Brian Almquist

Aviation Safety Excellence Award

USAARL

NCO of the Quarter

Sgt. Kathleen Kelley

Soldier of the Quarter

Spc. Jinyong Bae

Commander's Award for Civilian Service and Superior Civilian Service Award

Jameela Montgomery

Certificate of Appreciation

Stacey Brunson

Promotions

April

Staff Sgt. Craig Berlin
 1st Lt. Clinton R. Irvin

June

Sgt. Kathleen Kelley
 Spc. Summer Nomura



USAMRIID

Awards

Meritorious Service Medal

Maj. Tonia D. Ashton
Maj. Robin L. Burke
Maj. Romico D. Caughman
Lt. Col. Jennifer L. Chapman
Maj. Rupal M. Mody
Maj. Lawrence N. Petz
Lt. Col. Carl I. Shaia

Promotions

April

Spc. Pedro Francisco Cuevas
Spc. Ryan Patrick Gallagher
Pfc. Amy Mieko Hasegawa
Pfc. Ashlei K. Molina
Staff Sgt. Chad Richard Thornton
Spc. Nilay Ocal Yurt

May

Sgt. Stephen Allen Mason
Sgt. 1st Class Panagiotis Emm
Mouzourakis
Staff Sgt. Scott Alan Peters
Lt. Col. Bryony Wingyan Soltis
Sgt. Maj. Thomas Harold Tuttle

June

Sgt. Michael Garrett Lavorgna
Staff Sgt. Anita J.S. Teadt

USAISR

Award

Meritorious Service Medal

Col. Lorne H. Blackbourne

Promotions

April

Maj. Karla R. Clarke

May

Staff Sgt. Charles Quincy
Goodwater

USAMRMC

Awards

Meritorious Service Medal

Warrant Officer 1 Arthur D. Ford
Lt. Col. James S. Estep
Col. Chris E. Hanson

Promotion

June

Sgt. 1st Class Keith Charles Hall

USARIEM

Awards

March

Army RD Achievement Award

Laurie Blanchard
Thomas Endrusick
Julio Gonzalez

April

Army Commendation Medal

Spc. Sarah La Brada

Commander's Award for

Civilian Service

Karen Speckman
Robert Wallace

Safety Award

Heather Sullivan

On-the-Spot Award

Tony Karis
Adam Potter
Karen Speckman

May

Meritorious Service Medal

Capt. Jarrett Heffner

Promotions

April

Sgt. Roger David Hanstine, Jr.

May

Sgt. Martha Joy Alinovi
Staff Sgt. Andrew John Coggins
Sgt. Dennis Edward Scofield
Sgt. Reeshemah Chiquita Ward
Lt. Col. Edward Weinberg

Deployed Dentists Test Lightweight, Mobile X-Ray System

It can sometimes be difficult for deployed Soldiers to access conventional dental treatment, but Army dentists at Kandahar Airfield, Afghanistan, are testing a portable x-ray system that could change this.

“A lot of the dentists in [Afghanistan] are not working in a fixed facility, they don’t have the luxury of mounting an x-ray system to the wall because they’re in a tent,” said Col. Chris Evanov, general dentist, 257th Dental Company.

The Nomad Pro, an x-ray system that weighs 5.5 pounds, captures digital x-ray images and does not require a darkroom. This allows dentists to operate in remote environments.

“I’ve been in the military for over 20 years, and I was a little suspicious of the device, but it didn’t take more than a day or two for me to realize that this was great,” said Evanov, a Chicago native.

During the testing phase, dentists are judging the Nomad Pro system on the quality of the image, the weight of the system, and its durability.

“We’re trying to do what we can to get the best product here,” said Maj. Gina Adam, medical science and technology advisor for Field Assistance in Science and Technology. “We want to get the best medical materiel for the Warfighter.”

The ability to x-ray Soldiers’ teeth is vital to providing dental treatment. With a digital image, dentists can almost instantly see the patient’s teeth and can make a determination on what

specific care the individual needs.

“The truth is there are a lot of things we can’t see, and you can’t treat what you can’t see,” said Evanov. “You can open up your mouth and you might have all 32 of your teeth, but all I can see are your crowns, we don’t have that Superman vision.”

Once all testing is complete on the Nomad x-ray system, the headquarters for Field Assistance in Science

and Technology will decide if the system has met the needs of the dentist and the Soldier.

“It’s really exciting to think we’re doing something that will help improve the health care of the Soldiers,” said Adam, a Boston native.

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16th Mobile Public Affairs
Detachment*



Squadron leader Colin Pratt, general dentist, Royal Air Force Leuchars, captures a digital x-ray image of his patient’s teeth April 6. The system weighs 5.5 pounds, more than 20 pounds lighter than older systems. Unlike previous systems, the Nomad Pro captures digital x-ray images and does not require a darkroom.

Photo by Spc. Jonathan Thomas