

The Point

A newsletter for and about the people of the
**U.S. Army Medical Research
and Materiel Command**
Winter 2011



Medical Support Systems Team Named Winners of the National Security and International Affairs Medal at the “Sammies”

The U.S. Army Medical Materiel Development Activity’s Teri Glass and the Medical Support Systems team won the 2010 National Security and International Affairs Medal at the Service to America Medals awards gala Sept. 15 in Washington, DC.

On behalf of the entire MSS team, the National Security and International Affairs Medal was accepted by Teri Glass, project manager for MSS; Steve Reichard, former project manager for MSS; Jaime Lee, product manager for non-medical systems; James Cromartie, manage-

ment analyst; Mark Brown, chief of the Medical Prototype Development Laboratory; and Sharon Morgan, administrative assistant for MSS.

The MSS team was nominated for the National Security and International Affairs Medal in early 2010 by Col. Russell E. Coleman, commander of USAMMDA for its hard work and positive results in designing, managing, and fielding casualty evacuation conversion kits for Mine-Resistant Ambush-Protected vehicles, High-Mobility Multipurpose Wheeled Vehicles, and helicopters. In May,

the MSS team was named one of four finalists in the category.

“In my opinion, the work that MSS does has been absolutely critical to our military’s mission in Iraq and Afghanistan,” said Coleman. “Unfortunately, this work has not received the recognition it deserves until now.”

Coleman praised the MSS team’s daily work ethic, willpower, and determination expended to develop and deploy the CASEVAC kits that are urgently needed on the battlefield.

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Sammies winners meet First Lady Michelle Obama during a tour of the White House.
Photo courtesy of Chuck Kennedy/The White House



Back Row: James Cromartie; Col. Russell Coleman; Jaime Lee; Greg Vesey, President, Global Power Company, Chevron Corporation; and Steven Reichard
 Front Row: Sen. Benjamin L. Cardin, Maryland; Teri Glass; Sharon Morgan; and Mark Brown
 Photo courtesy of Sam Kittner

“The CASEVAC and medical evacuation capabilities that they have fielded have saved the lives of many of our deployed service members and is an accomplishment worthy of recognition,” said Coleman.

The CASEVAC kits provide a wide range of nonambulatory military vehicles to rapidly convert to CASEVAC/MEDEVAC capable, allowing field medics to transport patients more safely and efficiently from the battlefield to treatment facilities.

“The conversion takes less than one minute to deploy and significantly decreases the amount of time to safely evacuate a casualty,” said Lee.

The CASEVAC kits were developed by the MSS team to address the growing need to evacuate casualties from improvised explosive devices and other battlefield situations. Ambulances were not always immediately available to evacuate casualties. Therefore, nonambulatory vehicles needed to have CASEVAC options.

In addition to being able to convert a standard vehicle to a CASEVAC vehicle in under a minute, the kits supplied the vehicles with the Warrior Aid and Litter Kit, featuring the collapsible handle TALON Litter, pressure dressings, Combat Application Tourniquet, and additional first responder items for far-forward medical care.

In 2008, MSS fielded more than 300 CASEVAC kits in support of Operation Iraqi Freedom and Operation Enduring Freedom. Currently, thousands of CASEVAC kits and WALKs have been fielded on MRAPs. The MSS team continues its efforts to improve and supply CASEVAC kits in support of OIF and OEF.

According to Lee, the CASEVAC kit led the Army Medical Department to work with the PM MRAP office to develop, design, produce, and field a Category 1 and 2 MRAP ambulance. With input from the Directorate of Combat Doctrine Development, Lt. Col. Bill Fuller, and Master Sgt. Chris Reid, the AMEDD

developed a unique MRAP Medical Equipment Set that was battle configured and arranged by critical care functions: airway management, bleeding, O2 therapy, splinting, hypothermia, IV/IO administration, and medication. This provided a battle-configured MES set that was ready for use right out of the box.

“Medic feedback was overwhelming in support of this new MES set, which is now becoming the new standard for medical evacuation sets of the future,” said Lee.

“While Teri and her team gain the most satisfaction from knowing that our products are saving lives every day, this award clearly demonstrates to the world that the Medical Support System Project Management Office specifically and USAMMDA in general are focused on delivering urgently needed medical products,” said Coleman.

The MSS team receiving the National Security and International Affairs Medal includes: Teri Glass, acting project manager of Medical Support Systems; Steve Reichard, former project manager of Medical Support Systems; Jaime Lee, product manager for Non-Medical Systems; James Cromartie, management analyst; Mark Brown, chief of the Medical Prototype Development Laboratory; Murray Swanson, engineering technician (retired); John Cesca, engineering technician (retired); Julia Hanes, budget analyst (retired); Sharon Morgan, administrative assistant; Master Sgt. Christian Reid, combat developer (retired); and Lt. Col. William Fuller, combat developer (retired).

Carey Phillips
 USAMMDA Public Affairs

Medical Support Systems Team Named Winners of the National Security and International...	1	USAIRS Burn Center Officers Facilitate First Moldova Burn Seminar	16
Next-Generation Prosthetic Knee Passes Ocean Test	4	Chung Receives AMSUS Rising Star Award	17
USAMMCE Soldier Joins Operation Provide Hope Team in the Ukraine	5	Mass Reenlistment Ceremony	17
Terrain-Sensing Technology Moves from Robots and SUVs to Wheelchairs	6	Sample Named to Commandant's List	18
Award-Winning Researchers Test the Outer Limits	7	USAMRIID NCO Induction Ceremony	18
A New Approach to Treating Spinal Cord Injury Using Nanotechnologies	8	Mello Retires After 42 Years of Civilian Service	19
First Sergeants Course Prepares NCOs for Success	9	USAMRIID Soldiers Celebrate the Service of Local Veterans	19
USAIRS Nurses' Posters Receive Awards at AMSUS Meeting	9	USARIEM Receives U.S. Patent for Microclimate Cooling Technology	20
Medical Robotic Technologies Take a Step Closer to the Battlefield	10	WRAIR Conducts First Human Trial to Test Malaria Vaccine	20
Novel "Antisense" Therapies Protect Primates from Lethal Ebola and Marburg Viruses	12	USARIEM TBI Researcher Briefs Soldier with TBI	21
USAMMCE Participates in 2010 Land Military Capability Competition	13	USAMRIID Researcher Recognized as the Fort Detrick NCO of the Quarter	21
VIP Visitor at USARIEM	13	USAMRICD Employee Wins Trip to National Conference	22
USARIEM Hosts Nutrition Symposium	14	Awards and Promotions	24
USAMRICD Scientists to Receive Army Research and Development Achievement Award	15	WRAIR Soldiers Receive the Gold German Armed Forces Proficiency Badge	24
Veterans Dinner at Natick Soldier Systems Center	15	WRAIR Recognized as the 2009 Small Library of the Year	24



Next-Generation Prosthetic Knee Passes Ocean Test

This summer in Ocean City, Md., an amputee working in a joint civilian–military research project took the new X3 microprocessor-controlled prosthetic knee for a test on the beach ... and into the Atlantic Ocean to bodyboard.

The Otto Bock HealthCare prosthetics technician joins more than 30 service members and older veterans at the Walter Reed Army Medical Center in Washington, DC, and Brooke Army Medical Center in San Antonio, Texas, who have been testing this line of prostheses since 2009.

The knee is being developed by Otto Bock HealthCare as part of the Military Amputee Research Program. The project is administered by the U.S. Army Medical Research and Materiel Command’s Telemedicine and Advanced Technology Research Center at Fort Detrick, Md.

“While the DoD was already providing service members with the most advanced prosthetic devices available, those were proving insufficient for returning to a quality of life approaching what they experienced before their injury,” said Troy Turner, TATRC Advanced Prosthetics and Human Performance portfolio manager.

He continued, “It was difficult at best for them to take up many activities they had enjoyed prior to their amputation—simple things like walking uphill, downhill, backwards, or even leaning against a wall.”

“We saw that Otto Bock HealthCare wanted to move in directions our service members needed. After working with them on this for the past few

years, what we saw demonstrated in Ocean City was huge. This is a game changer for a lot of people. It not only gives users more capabilities, but it’s the first electronic leg they can use at the beach and ocean, the pool, or even in the mud for that matter.”

The X3 is a ruggedized version of the X2, which gained national attention December 2009 as the first prosthetic knee to enable users to run forward and backward and go up stairs and slopes foot over foot. It was heralded as an improvement over the C-Leg®, an advanced prosthetic also built by Otto Bock.

The X3 uses microprocessors, sensors, a gyroscope, and an accelerometer to sense and control movement. “It automatically changes the flexibility and position of the knee so individuals can walk downhill, take stairs, bike, even body surf or boogie board in the ocean, without worrying about their prosthetic leg and whether it will keep them stable,” said Turner.

The prosthesis can bear more weight than other models. Wearers report that it immediately and significantly reduces back, hip, and knee pain because they do not have to rest their total body weight on the intact side of the body anymore. The X3 also has a longer battery life and is lighter and smaller than other options.

Noted Dr. Joseph Miller, who was present at the ocean trial, “The beauty



Scott Tjaden, a registered technician in prosthetics who works for Otto Bock in Minneapolis, emerges from a test trial of the new X3 microprocessor knee prosthesis in the Atlantic Ocean July 13.

of this government collaboration is demonstrated through this advanced prosthetic device. It offers capabilities for all those with amputation, transcending the generations. It was truly amazing to be part of this innovative process and finally witness a product that sets the new standard.” Miller is the national director of Orthotics and Prosthetics Services for the Veterans Health Administration.

The knees are currently being made available to military amputees, and it is expected that Otto Bock will be offering them to the civilian market sometime this year.

For more on this and other projects in TATRC’s Advanced Prosthetics and Human Performance research portfolio, contact portfolio manager Troy Turner at troy.turner@tatrc.org.

*Barb Ruppert, science and technology writer
TATRC*

USAMMCE Soldier Joins Operation Provide Hope Team in the Ukraine

Staff Sgt. Nathan Lehman, a biomedical service technician with the U.S. Army Medical Materiel Center, Europe joined the Operation Provide Hope team in the Ukraine to inspect and service medical equipment Sept. 17 to Oct. 2, 2010.

The team consisted of four Airmen, two USAMMCE Department of the

Army civilians, and Lehman. With his teammates, Lehman inspected more than 2,000 pieces of medical equipment in several locations. By doing so, they helped the Ukraine increase the standard of health care it provides to citizens and contributed to the success of the mission.

Operation Provide Hope is a humanitarian assistance program to the Newly Independent States of the former Soviet Union sponsored by the Department of State. Most of the supplies and equipment come from the Department of Defense excess program.

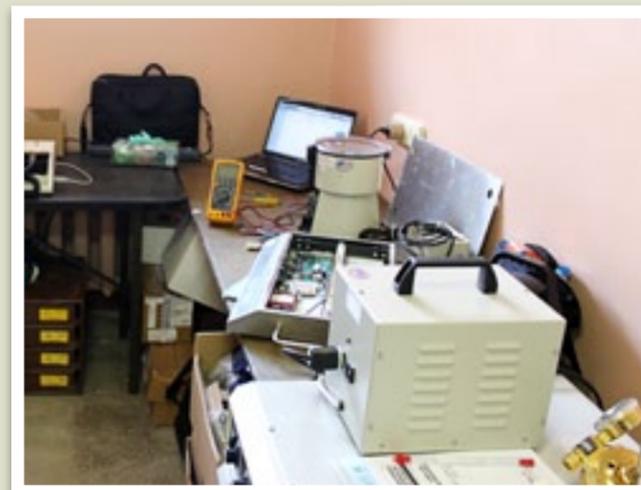
Source information provided by USAMMCE



Staff Sgt. Lehman works on medical equipment.



The Operation Provide Hope team unloads medical equipment.



The Operation Provide Hope team set up a temporary maintenance facility.



Staff Sgt. Lehman works on an incubator.



Terrain-Sensing Technology Moves from Robots and SUVs to Wheelchairs



Researchers are working on technology that will enable electric-powered wheelchairs to detect hazardous terrain and automatically adjust their control settings to maneuver more safely. A laser line striper originally developed for Army use classifies terrain conditions so the wheelchair control system can self-adjust.

Thick gravel, mud, snow, steep ramps, or hills ... they may get a pedestrian a little dirty or out of breath, but to someone in an electric wheelchair, they could mean terrain that is simply too difficult to cross alone.

Engineers have developed automatic terrain-sensing controls for military robotic vehicles, and several four-wheel drive automobiles now on the market include such controls for improved safety. So why not integrate this type of system into electric-powered wheelchairs to provide more mobility and independence for injured Warfighters?

A team from Florida State University and the University of Pittsburgh began experiments this year to add instrumentation based on current driving control systems. The new

technology is designed to enable an electric-powered wheelchair to automatically detect hazardous terrain and implement safe driving strategies while avoiding wheel slip, sinkage, or vehicle tipping.

The U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center saw the promise in this collaboration and has provided funding and guidance for the team to pursue its ideas together. The partnership joins Florida's Center for Intelligent Systems, Control, and Robotics, which has worked extensively with control and guidance of autonomous vehicles, with Pittsburgh's Human Engineering Research Laboratories. This latter group has developed several assistive technologies already in use by wheelchair manufacturers

and rehabilitation hospitals nationwide.

Mechanical engineering professor Dr. Emmanuel Collins directs the Center for Intelligent Systems, Control, and Robotics. He said that, to his knowledge, no one else is working on this type of application. The partnership began when Collins heard a presentation by University of Pittsburgh Rehabilitation Science and Technology Department chair Dr. Rory Cooper, who directs HERL. Cooper has used a wheelchair since receiving a spinal cord injury in 1980 during his service in the U.S. Army. He won a bronze medal in the 1988

Paralympic Games in Seoul and has been recognized nationally for his research and leadership efforts to aid veterans and others with spinal cord injuries.

In his presentation, Cooper mentioned the need for terrain-dependent, electric-powered wheelchair assistance. Collins approached him about working together, and the two of them began developing ideas with other collaborators at the National Science Foundation-sponsored Quality of Life Technology Center, an engineering research center affiliated with HERL that Cooper codirects.

Cooper is also the founding director and a senior research scientist of the Veterans Affairs Rehabilitation Research and Development Center

of Excellence in Pittsburgh. HERL has been collaborating with the VA for 15 years and with the military since 2004 to develop robotic and other advanced assistive technologies. Cooper noted that they have a very good relationship with the orthopedic and rehabilitation departments of the Walter Reed Army Medical Center and the National Naval Medical Center.

Maj. Kevin Fitzpatrick, director of WRAMC's wheelchair clinic, said, "This technology will provide electric-powered wheelchair users with an increased degree of independence that may significantly increase their ability to participate in recreational and functional activities."

The project is part of the Rehabilitation Engineering and Assistive Technology subportfolio recently managed by Dr. Craig Carignan within TATRC's Advanced Prosthetics and Human Performance research portfolio. Said Carignan, "HERL and the Pittsburgh VA center are considered among the top wheelchair testers in the United States and are playing critical roles in developing international wheelchair standards. The researchers on this project are excellent investigators, and we are looking forward to the solution they develop."

Noted Collins, "I'm inspired by the idea of applying technology originally meant for the battlefield to improve the quality of everyday life for injured Warfighters."

Collins estimates that if the team develops a strong commercial partner, this technology could be assisting electric wheelchair users in approximately five years.

Barb Ruppert
TATRC science and technology writer

Award-Winning Researchers Test the Outer Limits

Spaceflight research has long benefited both astronauts and the earth-bound. NASA operates in an environment of extremes—temperature, radiation, physics, and gases. It is precisely these extremes that make space an ideal laboratory for studying cell growth and infection.

Last April, NASA launched the Space Shuttle Discovery on STS-131 Experiment Express, a multipurpose mission bound for the International Space Station. Onboard the shuttle was the Space Tissues Loss payload, centered on the Cell Culture Module, a sophisticated incubator system for cells developed by the Walter Reed Army Institute of Research. This was the 18th and final shuttle mission to have carried the CCM, which tested the effects of microgravity on various cell preparations in space.

WRAIR's latest experiment will help researchers better understand how human cells respond to bacterial infection during spaceflight and how microgravity impacts human cell immune and stress responses. Such experiments may someday lead to solutions for treating and preventing infectious diseases in space and on Earth.

Now, the STL team is in orbit over winning the prestigious 2010 NASA-Ames Honor Award for its work on the CCM aboard STS-131. The U.S. Army Medical Research and Materiel Command team included WRAIR members Col. Kent Kester, Dr. Maryanne Vahey, and Steve Van Albert, and U.S. Army Medical Research Acquisition Activity contracting specialist Donna Blackstone.

"It was quite a surprise," said Van Albert, who managed the project. "The team, comprising 30 plus people from the government, academia, military, and the private sector, worked seamlessly to accomplish this goal in less time and with less money than other standard science payloads. The CCM will retire as the No. 1-rated DoD science payload."

Nicole Rayl, the NASA-Ames project officer, also praised the team in her nomination letter: "The STL project team exemplifies outstanding team collaboration across geographic and organizational boundaries, what it takes to overcome unforeseen challenges and commitment to spaceflight research, and is highly deserving of an Ames Honor Award."

USAMRMC team members each received a certificate commemorating the award. WRAIR is the largest and most diverse biomedical research laboratory in the Department of Defense.

Jill Lauterborn
USAMRMC Public Affairs



The WRAIR patch flew with the STS-131.



A New Approach to Treating Spinal Cord Injury Using Nanotechnologies

Researchers across the nation are exploring emerging technologies to treat spinal cord injury. A promising approach is the use of nanoridge scaffolding to guide and stimulate the regrowth of axons, the thin fibers reaching out from neurons to conduct nerve impulses.

The U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center is playing a key role in coordinating projects into a unified effort that may lead one day to the ability to heal devastating paralysis injuries.

One congressional program funded through TATRC provides seed grants to scientists, engineers, and clinicians from the Houston research community as they collaborate to apply nanotechnology to solve health issues.

Noted TATRC Director Col. Karl Friedl, "This program, the Alliance for NanoHealth, exemplifies TATRC's focus on getting everyone out of their individual funding boxes to advance promising efforts."

Dr. Jiming Bao at the University of Houston recently discussed his ANH-sponsored work on nanoengineered, multichannel scaffolds to support axon regeneration. Bao's team has successfully fabricated scaffolds and observed enhanced and guided axon growth on these surfaces. Their novel technique constructs three-dimensional scaffolds by rolling up membranes with nano-patterned surfaces printed on them.

Explained Bao, "Our approach enables us to create varying sizes and shapes of channels, ridges, and grooves, and uses a wide choice of materials so we

can tune the scaffold design for optimal neuron regeneration. Another advantage is that it is relatively easy to fabricate these scaffolds at a low cost."

A second ANH team, led by Dr. James Tour of Rice University, is exploring the use of nanotubes as scaffolds. The team is focusing on electrically conductive carbon nanomaterials. According to Tour, combining conductive abilities with nanostructured scaffolds could lead to a synergy of electrical and biological stimulation that may better promote axonal growth and synapse formation. The team has successfully developed a nontoxic printing protocol for carbon nanomaterial patterns and demonstrated that graphene, a new material within the past five years, is compatible with neuronal cells for this use.

Tour also is working on a way to transport therapeutic small molecules and proteins across the blood-brain barrier and blood-spinal cord barrier. "Many neuroprotective drugs fail to work in a live model because they can't cross these barriers," he said. The team's development of water-soluble nanotubes for drug delivery has shown promise as a way to protect the stability of a drug while still enabling selective release at the target site.

Said Dr. Eugene Golanov, who manages TATRC's neuroscience portfolio, "Both of these projects are excellent examples of the cutting-edge, early stage nanotechnology research that TATRC is supporting. This is a direction that could lead to significant treatment advances within the next 10 years."

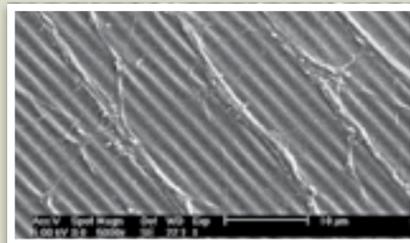
For more on TATRC's neuroscience portfolio, visit www.tatrc.org.

*Barb Ruppert, science and technology writer
TATRC*



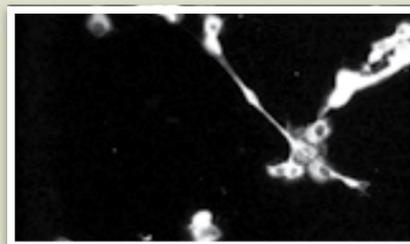
A cross-sectional view that illustrates the concept of rolling up a two-dimensional patterned surface to fabricate a three-dimensional scaffold structure for guiding neural axon growth.

Photo courtesy of Dr. Jiming Bao



A scanning electron micrograph showing the guided growth of axons along nanoridges fabricated by laser holographic lithography.

Photo courtesy of Dr. Jiming Bao



PC12 cells grown on conductive single-walled carbon nanotube-embedded surfaces. There is significant evidence of neuronal differentiation and neurite formation.

Photo courtesy of Dr. James Tour

First Sergeants Course Prepares NCOs for Success

The Army offers training to help Soldiers improve skills while achieving individual and organizational goals. Opportunities include online or distance-learning courses as well as in-class training. The Army always has encouraged Soldiers to take advantage of all available training. In today's Army it is essential to seek self-improvement and to stay competitive for promotions through professional development training courses throughout one's military career.

Soldiers who are sergeants first class and master sergeants strive to complete the First Sergeants Course. Recently, four of the U.S. Army Medical Materiel Agency's senior non-commissioned officers—Master Sgt. Timothy Dess, Master Sgt. Bermorys Matos, Master Sgt. Burchell Stephens, and Sgt. 1st Class Paul Flemings—gradu-



ated from the First Sergeants Course at Fort Indiantown Gap, Pa.

The First Sergeants Course prepares Soldiers to execute all of the duties of a first sergeant. During the course, students had to complete three distance-learning modules with 32

courses, and they conducted a decision and an information brief. The course provided them valuable information essential to becoming a successful first sergeant in today's Army.

*Master Sgt. Burchell H. Stephens
USAMMA*

USAISR Nurses' Posters Receive Awards at AMSUS Meeting

U.S. Army Institute of Surgical Research nurses won awards for writing two posters presented Nov. 2 at the 22nd Annual Karen A. Rieder Research/Federal Nursing Poster Session. The presentation was part of the 116th Annual Meeting of the Association of Military Surgeons of the United States in Phoenix, Ariz.

Taking first place at the Karen A. Reider Research Poster Session was "Value of Oral Care in the Reduction of Ventilator-Associated Pneumonia in Burn Intensive Care Patients" by Capt. Amy Bray, Capt. Kylee Foy,

and Mayra Castillo of USAISR. The poster demonstrated how an aggressive education campaign to improve oral care can significantly reduce VAP in burn patients.

Third place at the Federal Nursing Poster Session went to "Clinical Satisfaction with Computer Decision Support in the Burn Intensive Care Unit" by Maj. David Allen, Maj. Elizabeth Mann, and Lt. Col. Maria Serio-Melvin. The poster highlighted the level of satisfaction experienced at the USAISR Burn Center with two computer decision support systems

that have demonstrated improved patient outcomes.

The TriService Nursing Research Program and the Federal Nursing Service sponsor the Karen A. Rieder Research/Federal Nursing Poster Session. Karen A. Rieder Research posters disseminate scientific nursing research findings while Federal Nursing posters focus on sharing professional nursing knowledge and improving the delivery of health care services.

*Mike Feeley
USAISR Public Affairs*

Medical Robotic Technologies Take a Step Closer to the Battlefield

The best way to see if a remote-controlled robot can reduce risk to combat medics in the field? Let real Soldiers test it.

How do you rescue wounded Soldiers under fire without losing more lives? One answer may be the BEAR™ (Battlefield Extraction-Assist Robot), which would be used to recover a wounded Soldier and bring him or her back to where a combat medic could safely conduct an initial assessment. A motion-capture glove or specially equipped rifle grip would allow a Warfighter to control the robot remotely while still carrying out his or her other tasks.

These technologies have been tested together over the past year by Soldiers at the U.S. Army Infantry Center Maneuver Battle Lab at Fort Benning, Ga.

The U.S. Army Medical Research and Materiel Command's Telemedicine and Advanced Technology Research Center has helped fund the development of Vecna Technologies' humanoid BEAR and has funded integration of AnthroTronix's iGlove and M4 rifle grip controller into the Fort Benning testing. Dr. Gary Gilbert, who manages TATRC's medical robotics portfolio, said the assessments provide a key link between research and actual robots that can be used in the field.

"Our goal with the Battle Lab testing is to get the technology in the hands of the Soldiers, either through simulations or live exercises, and derive from their feedback what tactics,

techniques, and procedures are appropriate for deploying it," explained Gilbert. "These TTPs can then serve as the basis for developing real-world operational capability needs and requirements. It's only once we know how we'll successfully use these technologies that you'll see them put into the field."

A computer simulation of the BEAR was created in 2009 for use in the Battle Lab's OneSAF (One Semi-Autonomous Forces) combat operations simulator. An initial series of platoon-level assaults and clearing operations in both wooded and urban terrain were executed in OneSAF, including casualty extractions using both conventional litter rescues and rescues with the BEAR. The AnthroTronix remote control systems were integrated with the simulation in December 2009. In June 2010, the BEAR and AnthroTronix controllers underwent live characterization studies with Soldiers observing their capabilities in both urban and wooded terrain.

The BEAR is a multimodal, high-degree-of-freedom robot that can reach out with its hydraulic arms to lift and carry up to 500 pounds, complete fine motor tasks with its hands and fingers, maneuver with a dual-track system, stand up and balance, and use cameras and sensors. It gained national media

attention when it was featured in Time magazine's Best Inventions of 2006. Successive versions have increased its capabilities. While the initial control of the BEAR is via a remote human operator, work is under way for more complicated semiautonomous behaviors in which the robot understands and carries out increasingly higher-level commands.

AnthroTronix's iGlove gesture recognition device can control robots remotely through simple hand signals. The Mounted Force Controller is a robot controller device that can be mounted on an M4 rifle so a Soldier does not have to put down his or her weapon to use the device. The iGlove is a low-cost, universally compatible control device that has been available commercially since 2009 as the AcceleGlove™. The company plans to develop a new version with more accelerometers and a digital compass so the user could instruct a robot to disable an improvised explosive device or travel exactly 300 yards west, for example, using signals from the glove alone.

Noted AnthroTronix chief technology officer Jack Vice, a former Force Recon Marine, "One of the most promising outcomes of the Battle Lab simulations and live testing was the fact that Warfighters only required minimal training to learn to operate

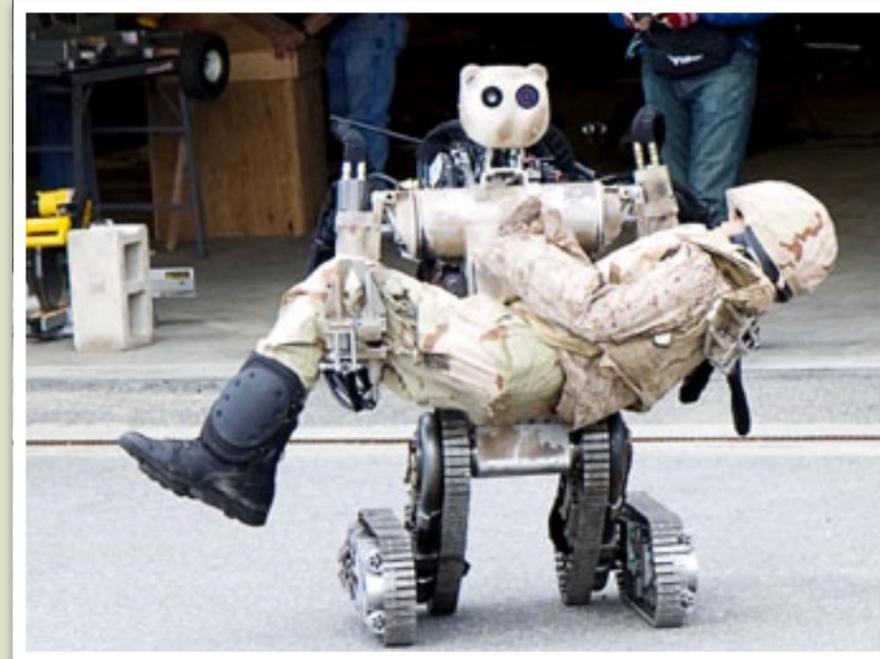
both the iGlove and MFC. Additionally, in comparing the iGlove to traditional controllers, Warfighters favored the simplicity of the iGlove mode switching in which they simply reached out and touched the human joint to control the corresponding robotic joint."

Vice added, "TATRC support has enabled us to fully integrate the controllers with Joint Architecture for Unmanned Systems software, gain invaluable feedback from Soldiers, and develop new control methodologies as we integrate the controllers with high-degree-of-freedom robots such as the BEAR."

For these projects, TATRC has leveraged funding from the Tank Automotive Research Development and Engineering Command, the Joint Ground Robotics Enterprise, the Robotics Systems Joint Project Office, the Army Research Lab, the Small Business Innovative Research Program, and Congressionally Directed Research funds.

Said Gilbert, "The Battle Lab testing process has great potential for overcoming the numerous barriers to transitioning research prototypes or new and emerging technologies to operational systems. Even our initial simulation and live operational assessments point to significant research challenges ahead in developing and fielding unmanned systems for combat casualty care. But this is the technology of the future. If robots could be used in the face of threats, such as urban combat, booby-trapped IEDs, and chemical and biological weapons, it could save medics' and fellow Soldiers' lives."

*Barb Ruppert, science and technology writer
TATRC*



Vecna Technologies' BEAR is an all-terrain, search and rescue humanoid robot that can lift and carry up to 500 pounds yet can grasp fragile objects without damaging them.



The AnthroTronix iGlove enables a Warfighter to easily command and control robotic devices through sensors and controllers built into a standard-issue glove. It can capture all degrees of human hand motion for greatly enhanced control.





Novel “Antisense” Therapies Protect Primates from Lethal Ebola and Marburg Viruses

in which nine rhesus monkeys were challenged with lethal Ebola virus. Treatment was initiated 30 to 60 minutes after exposure to the virus. In these studies, five of eight monkeys survived while the remaining animal was untreated. Further experiments, including a multiple-dose evaluation, also yielded promising results, with three of five monkeys surviving in each of the AVI-6002 treatment groups when they received a dose of 40 mg per kg of body weight.

New studies show that treatments targeting specific viral genes protected monkeys infected with deadly Ebola or Marburg viruses. Furthermore, the animals were protected even when therapeutics were administered one hour after exposure—suggesting the approach holds promise for treating accidental infections in laboratory or hospital settings.

The research, which appears in an online edition of the journal *Nature Medicine*, was conducted by the U.S. Army Medical Research Institute of Infectious Diseases in collaboration with AVI BioPharma, a Washington-based biotechnology firm.

Working with a class of compounds known as antisense phosphorodiamidate morpholino oligomers, or PMOs, scientists first performed a series of studies with mouse and guinea pig models of Ebola to screen various chemical variations. They arrived at a therapy known as AVI-6002, which demonstrated a survival rate of better than 90 percent in animals treated either pre- or post-exposure.

Encouraged by these results, the team conducted proof-of-concept studies

According to first author Travis K. Warren of USAMRIID, antisense drugs are useful against viral diseases because they are designed to enter cells and eliminate viruses by preventing their replication. The drugs act by blocking critical viral genetic sequences essentially giving the infected host time to mount an immune response and clear the virus.

Ebola and Marburg cause hemorrhagic fever with case fatality rates as high as 90 percent in humans. The viruses, which are infectious by aerosol (although more commonly spread through blood and bodily fluids of infected patients), are of concern both as global health threats and as potential agents of biological warfare or terrorism. Currently there are no available vaccines or therapies. Research on both viruses is conducted in biosafety level 4, or maximum containment, laboratories where investigators wear positive-pressure “space suits” and breathe filtered air as they work.

The USAMRIID team next turned its attention to Marburg virus again screening various compounds in mice and guinea pigs to select a candidate for further testing. They settled upon AVI-6003, a drug that consistently conferred a high degree of efficacy (better than 90 percent survival) in both models.

Investigators conducted two pilot studies in cynomolgus monkeys to assess the efficacy of AVI-6003 against lethal challenge with Marburg virus. As with the Ebola studies, treatments were initiated 30 to 60 minutes after infection. All 13 animals receiving AVI-6003 survived. Additional research provided important information about the optimal therapeutic dose range of the compound with a 40 mg per kg body weight dose protecting 100 percent of the monkeys following challenge.

“This report of successful early post-exposure treatment of filovirus hemorrhagic fever is significant on its own,” said Colonel John P. Skvorak, USAMRIID commander, “but the drug characteristics of these PMOs also support investigation of potentially broader therapeutic applications.”

Senior author Sina Bavari said USAMRIID has been collaborating with AVI BioPharma since 2004. In February of that year, an institute scientist working in a biosafety level 4 laboratory stuck her thumb with a needle while treating Ebola-infected mice with antibodies. As a precaution, USAMRIID medical experts recommended the investigator be

isolated for 21 days to ensure that she had not been infected.

Coincidentally, earlier that same day, Dr. Patrick Iversen from AVI BioPharma had presented a seminar at USAMRIID concerning the efficacy of novel antisense drugs against a range of viruses. When he found out that a USAMRIID scientist had potentially been exposed to Ebola virus, the company volunteered to design and synthesize compounds against the virus to treat her if the need arose.

The team at AVI worked for four straight days to generate human-grade anti-Ebola compounds. In the meantime, their regulatory staff worked with USAMRIID physicians to gain emergency approval from the U.S. Food and Drug Administration to use the compounds if necessary. Five days after the exposure, AVI delivered the compounds to USAMRIID’s medical team.

Fortunately, the scientist had escaped infection with Ebola virus so the compounds were never used. However, USAMRIID went on to test them in animal models and has been collaborating with AVI ever since.

According to the authors, the investigational new drug applications for AVI-6002 and AVI-6003 have been submitted to the FDA, and they are now open to proceed with clinical trials.

Collaborating on the study were Travis K. Warren, Jay Wells, Kelly S. Donner, Sean A. Van Tongeren, Nicole L. Garza, Donald K. Nichols, Lian Dong, and Sina Bavari of USAMRIID; Kelly L. Warfield and Dana L. Swenson, formerly of USAMRIID; and Dan V. Mourich, Stacy Crumley, and Patrick L. Iversen of AVI BioPharma.

Caree Vander-Linden
USAMRIID Public Affairs

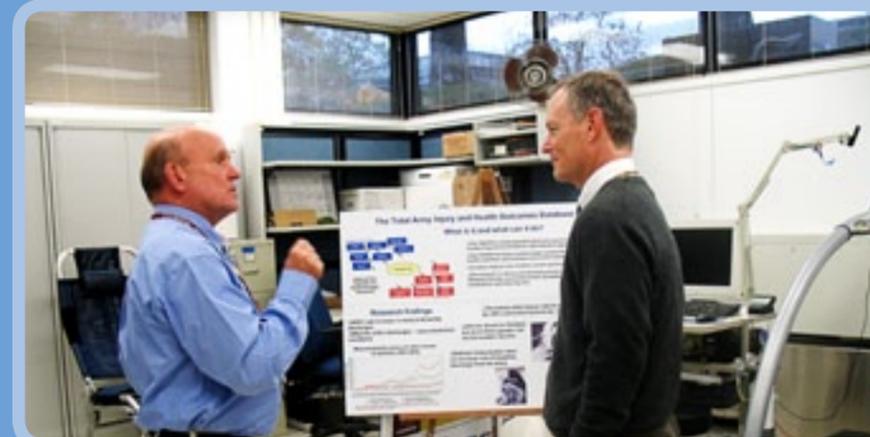
USAMMCE Participates in 2010 Land Military Capability Competition



Staff Sgt. Maria Negrete, Staff Sgt. Jason Bullock, Staff Sgt. Jose Martinez, and Cpl. Grady Clark participated in die Auswertung zum Landesvielseitigkeitswettbewerb 2010 (Land Military Capability Competition) Sept. 10 in Kusel, Germany, a mobile artillery base.

The U.S. Army Medical Materiel Center, Europe finished 12th overall in the competition.

VIP Visitor at USARIEM



Dr. Scott Fish (right), Army chief scientist, Deputy Assistant Secretary of the Army (Research and Technology), visited with U.S. Army Research Institute of Environmental Medicine scientists during his orientation visit to the Natick Soldier Research, Development and Engineering Center Nov. 9. Dr. Edward Zambraski (left), chief, Military Performance Division, describes the use of the Total Army Injury Health Outcomes Database as a research tool to help understand injury epidemiology within the U.S. Army.

Photo Credit: Terry Rice, USARIEM Public Affairs



USARIEM Hosts Nutrition Symposium

The U.S. Army Research Institute of Environmental Medicine hosted the 2010 Dietitians in Uniformed Services Nutrition Symposium at the Natick Soldier Systems Center Nov. 4–5, 2010. With representatives from the Army, Navy, Air Force, U.S. Public Health Services, and the Veterans Administration, it was the most highly attended symposium for this group of dietitians.

Lt. Col. René Jacob, Nutrition program manager, U.S. Army Reserves, Medical Command, Fort Sam Houston, has organized the symposium for the past few years and announced on the first day, “We’ve broken the attendance record with over 100 attendees.”

The agenda included presentations on professional updates within each service and discussions related to ongoing dietary issues within the Department of Defense. In opening remarks, Col. Gaston Bathalon, USARIEM commander, said, “We dietitians have had this ‘joint’ concept going on since our inception 11 years ago. I am thrilled that you are all here, and please know we are ahead of the game because we’ve been working jointly on nutrition and dietary issues for a long time.” He thanked them for their service and their work in the nutrition field.

Of special interest to many of the attendees was having the opportunity to tour both USARIEM and the Combat

Feeding Directorate, also located on NSSC. They could see firsthand the unique collaboration between the ration developers, who are part of the Army Materiel Command, and the input from USARIEM’s scientific research (U.S. Army Medical Research and Materiel Command) that results in meals and combat rations designed to optimize the nutritional needs of the Warfighter.

*Terry Rice
USARIEM Public Affairs*



Col. George Dilly, U.S. Army chief dietitian, assistant chief of the Army Medical Specialist Corps, and Army Medical Department Nutrition program manager at MEDCOM welcomes attendees to the symposium.



Attendees are in line to be served as part of a ration-sampling demonstration.

Photo Credit: Stratcom, Natick Soldier Research, Development and Engineering Center

USAMRICD Scientists to Receive Army Research and Development Achievement Award

The Army Research and Development Achievement Awards for calendar year 2009 were recently announced, and among the winners for outstanding technical achievement are two scientists at the U.S. Army Medical Research Institute of Chemical Defense at Aberdeen Proving Ground, Md. The institute is a subordinate activity of the U.S. Army Medical Research and Materiel Command, Fort Detrick, Md.

Dr. Patrick McNutt, who until recently was a major in the Army’s Medical Service Corps, and Capt. Mariano Mesngon were recognized for their research project entitled “Development of Embryonic Stem Cell–Derived Neurons as a Tissue Culture Platform for Botulinum Research.”

“This is both an advancement for botulinum neurotoxin research and a valuable alternative that can be further developed to replace the use of animals with an in vitro cell system,” said Col. Peter J. Schultheiss, USAMRICD commander.

Botulinum neurotoxins are extremely poisonous bacterial enzymes considered by the Centers for Disease Control and Prevention to have a high potential for use as a weapon of bioterrorism. Exposure to BoNT disrupts neuronal control over skeletal muscle, including the muscles that control breathing, leading to a paralytic state that rapidly causes death by asphyxiation unless immediate medical care is provided. The toxin remains active for weeks to months meaning that victims must stay under constant supportive care in an intensive care unit until they regain muscular control. Despite decades of research—there is no pharmacological treatment to rescue intoxicated patients.

In 2004, a panel convened by the National Institute of Allergy and Infectious Diseases of the National Institutes of Health identified a need in BoNT therapeutics research for a cell-based system in which the effects of poisoning were similar to those exhibited in animal models that could be cultured in the quantities required for screening therapeutics and that could be modified genetically to provide flexibility

in the drug discovery process. McNutt designed a research protocol with the objective of evaluating whether neurons derived from mouse embryonic stem cells could be “a highly sensitive, genetically tractable, biologically relevant cell culture platform for BoNT research and drug discovery.”

To date his and Mesngon’s results have confirmed that mESC are a flexible cell culture model that satisfies the protocol objective with sensitivities to BoNTs that are equivalent to motor neurons. “We anticipate,” said McNutt, “that this embryonic stem-cell derived neuron model will enable the identification and validation of novel therapeutic targets and accelerate drug discovery.” The next step in the project is to begin screening candidate compounds for their ability to inhibit BoNT.

Award winners will receive an official plaque that will be forwarded to the organization’s command for presentation.

*Cindy Kronman
USAMRICD*



Veterans Dinner at Natick Soldier Systems Center

Col. Gaston Bathalon, commander of the U.S. Army Research Institute of Environmental Medicine, thanks a veteran for his service at a dinner hosted by the U.S. Army Garrison, Natick, Nov. 11. The dinner honored past and present service men and women from the installation and the town of Natick.

Photo Credit: Dave Kamm, Stratcom, Natick Soldier Research, Development and Engineering Center



USAISR Burn Center Officers Facilitate First Moldova Burn Seminar

The first Moldova Burn Seminar was conducted Aug. 24–26, 2010, in Chisinau, Republic of Moldova, and was facilitated by three officers from the U.S. Army Institute of Surgical Research Burn Center at Brooke Army Medical Center, Fort Sam Houston, Texas. Col. Evan M. Renz, M.D., director of Clinical Division; Maj. Mario A. Rivera, critical care Army nurse and former chief flight nurse of the Special Medical Augmentation Response Team-Burn; and Maj. Mark E. Lester, chief of the Rehabilitation Department, were invited by the Republic of Moldova to present topics like fluid resuscitation and principles of burn wound management.

“The Moldova Burn Seminar provided a unique opportunity to exchange concepts on the clinical management of burned patients while fostering new professional relationships with Eastern European counterparts,” said Renz.

The seminar identified a number of similarities in the management of burned patients in both the United States and Moldova, such as the importance of a multidisciplinary approach.

“To provide optimal burn wound care, burn surgeons, medical intensivists, burn nurses, and physiotherapists must coordinate their individual patient care efforts toward one common goal, closing the wound as soon as possible,” said Dr. Octavian Cirimpei, medical director of the Adult Thermal Trauma Section at the Republican Trauma and Orthopedic Hospital in Chisinau.



Dr. Evan Renz (left) confers with burn surgeons at the Republican Trauma and Orthopedic Hospital in Chisinau, Moldova.

Photo credit: Maj. Mario A. Rivera, Army nurse

At the same time, several differences were recognized. Specialized medical personnel and equipment, such as the SMART-B, have allowed the rapid aeromedical evacuation and surgical management of critically ill burned casualties in the United States. In contrast, Moldova’s socioeconomical circumstances will not permit the initial mobilization of severely burned patients. These patients must be stabilized for several days in smaller medical treatment facilities prior to transport.

The seminar offered an exceptional opportunity for health care providers from the Republic of Moldova and the United States to discuss the significance of early rehabilitation to maximize the burned patient’s potential for returning to a productive life. Although differences in clinical practices were acknowledged, a strong foundation for future collaborations through the U.S. European Command was established.

Maj. Mario A. Rivera
USAISR Army nurse

Chung Receives AMSUS Rising Star Award



At the Nov. 116th Annual Meeting in Phoenix, the Association of Military Surgeons of the United States recognized Maj. Kevin Chung, M.D., with the 2010 Rising Star Award. The honor is given to individuals who early in their careers have demonstrated success in federal health care delivery or management and are clearly on an ascending path to an executive leadership role.

Chung celebrates numerous achievements as medical director of the Burn Intensive Care Unit at the U.S. Army Institute of Surgical Research Burn Center, Fort Sam Houston, Texas. His highly successful work in

continuous renal replacement therapy is associated with decreased mortality in combat burn patients and has led to a \$3 million American Burn Association multicenter trial under his leadership. He also has had a direct impact on current battlefield care through the development of the Indirect Source Review Rule

of 10 to minimize morbidity often associated with over-resuscitation of combat burn casualties.

In addition, Chung is a prolific writer and lecturer, having authored numerous articles in peer-reviewed journals and spoken at national and regional medical meetings. He is at the forefront of telemedicine, and his work in robotic telepresence has been featured in multiple media outlets, including the Associated Press as well as CNN.

In nominating Chung for this award, Col. Lorne Blackbourne, commander of the USAISR said, “Maj. Chung

is the epitome of a hard-charging professional Medical Corps officer. He is always looking to learn, to help others to learn, to improve the care of our wounded Warriors, and to deliver the very best care possible to his patients.”

In accepting the award, Chung said, “I believe that this award is really about setting a high expectation for things to come. There is so much more to be done in the care of combat wounded. I sincerely hope I can live up to this honor.”

AMSUS comprises medical professionals serving in the full spectrum of health care disciplines from the U.S. Army, Navy, and Air Force to the U.S. Public Health Service and Department of Veterans Affairs. The organization provides up-to-date information and services to more than 9,000 members.

Mike Feeley
USAISR Public Affairs



Mass Reenlistment Ceremony

There was a mass reenlistment ceremony Oct. 4 in the Headquarters conference room. Soldiers from the U.S. Army Medical Research and Materiel Command Headquarters; U.S. Army Institute of Surgical Research; U.S. Army Medical Research Institute of Chemical Defense; U.S. Army Medical Research Institute of Infectious Diseases; Walter Reed Army Institute of Research; U.S. Army Medical Materiel Agency; U.S. Army Medical Materiel Center, Europe; and U.S. Army Research Institute of Environmental Medicine recited the reenlistment oath and told Maj. Gen. James Gilman, commanding general of USAMRMC and Fort Detrick, and other guests why they decided to stay in the Army. “The Army’s been good to me. I would like to continue to serve,” said Spc. Solomon Nena, a Soldier at WRAIR.



Sample Named to Commandant's List

Staff Sgt. Floretta Sample, from Hopewell, Va., was selected to the Commandant's List while attending the U.S. Army Medical Department's Senior Leader Course held July 22–Aug. 20. Initially, Sample was scheduled to attend SLC in November, but she took the initiative and entered early as a walk-in.

The noncommissioned officers class included 60 senior leaders (15 staff sergeants and 45 sergeants first class). For the first two weeks, Sample served as a squad leader, and by the third week, her peers recognized her leadership abilities and selected her to serve as platoon sergeant.

SLC course requirements included a distance-learning program with three Career Management Field Module Exams and two written assignments. Sample provided military briefings to her classmates on the Medical Education and Training Campus, and she re-

ceived high praise for her professional manner and timely presentations.

Sample also received overall superior ratings on all written assignments. She displayed exceptional abilities interpreting information, projecting confidence, and demonstrating technical proficiency. Her peers then selected her to join a four-person leadership team during field operations of SLC. Her final leadership responsibility was serving as the executive officer and a member of S2 during the Command Post Exercise.

At the completion of the course, Sample met the requirements to be named to the prestigious Commandant's List—only the top 10 percent of each class makes the list. Individuals who achieve this high honor are noncommissioned officers who have consistently displayed exceptional leadership skills, knowledge, and attributes. They must receive a first-



time “go” on all evaluations, attain a grade point average of 90 percent, and secure a recommendation by their leadership with concurrence from the Commandant.

*Sgt. 1st Class Roland G. West
USAISR*

USAMRIID NCO Induction Ceremony



The U.S. Army Medical Research Institute of Infectious Diseases conducted an NCO Induction Ceremony Nov. 5. The guest speaker for the event was retired Command Sgt. Maj. Curtis Callender from the Telemedicine and Advanced Technology Research Center. A total of eight new NCOs were inducted. This was the first NCO Induction Ceremony held at USAMRIID since 1997.

Mello Retires After 42 Years of Civilian Service



Photo Credit: U.S. Army

Robert P. Mello, a research physiologist in the Military Performance Division at the U.S. Army Research Institute of Environmental Medicine, retired on Sept. 30 after 42 years of civilian service. His career at USARIEM began Nov. 4, 1968, after receiving a master's degree in allied health science from Northeastern University, Boston, Mass.

Highlights of Mello's career include supporting the 1975 Field Study in Korea and the 1977 Translocation Study in Germany. Mello was a primary author or coauthor on more than 60 publications.

“Bob's real contribution was in support of dozens of investigators and probably hundreds of studies. Many of the studies he supported were overseas,” commented Dr. Ed Zambraski, chief of MPD, in notes read by deputy

commander, Lt. Col. William Latzka. Zambraski expressed his gratitude to Mello for staying onboard long enough to help him build MPD upon his own arrival at USARIEM seven years ago.

Referring to the knowledge base and technical skill sets of young students and Soldiers who come to work at USARIEM, Mello said in his farewell remarks, “Over the years, I've had the pleasure of working with some very talented investigators and research support staff at USARIEM, and I see that trend continuing.”

Along with a retirement pin and certificate, Mello received a Commander's Award for Civilian Service from Col. Gaston Bathalon.

*Terry Rice
USARIEM Public Affairs*

USAMRIID Soldiers Celebrate the Service of Local Veterans



Soldiers from the U.S. Army Medical Research Institute of Infectious Diseases had breakfast with local veterans at the College View Center Nov. 11. This is the seventh year of the ongoing tradition. U.S. Army Medical Research and Materiel Command Sgt. Maj. Kevin Stuart joined the Soldiers in recognizing the accomplishments of veterans and their families. USAMRMC Soldiers broke bread, shared stories, and enjoyed the camaraderie.

*Source information provided by
USAMRIID*



USARIEM Receives U.S. Patent for Microclimate Cooling Technology



vehicles, but cooling limitations and power and weight restrictions make them impractical when Soldiers are mobilized on foot. Traditional MCC approaches involve constant skin cooling with liquids at low temperatures and high flow rates. As a result, MCC power, size, and weight requirements are large. A solution was needed that increased the efficiency of heat transfer from the human body to the MCC system.

U.S. Army Research Institute of Environmental Medicine scientists, with the help of Natick Soldier Research, Development and Engineering Center engineers, discovered that over cooling the skin actually can slow heat loss while under cooling the skin results in greater strain on the heart. Both problems were minimized by allowing skin temperature to fluctuate narrowly using skin temperature to automate cooling.

The patent award for body temperature regulation using skin temperature feedback is an MCC methodology for

Microclimate cooling technologies have been successful in alleviating heat strain for Soldiers confined to

maximizing heat flux, minimizing physiological strain, and conserving battery power. Sensors within an MCC garment signal the need to provide or withdraw cooling based on an optimal skin temperature range determined empirically from laboratory experiments. A series of studies demonstrated that with this approach, heat extraction is optimized (similar to constant cooling), but power consumption is reduced by 40 to 50 percent. The patent was awarded Nov. 23, and the U.S. Army Medical Research and Materiel Command paid the issue fee. Bill Eshelman, patent attorney, was essential in getting this patent approved.

The application and integration of this MCC method will decrease the size and weight of future MCC systems and make possible effective MCC for Soldiers mobilized on foot.

*Scott Montain and Sam Chevront
USARIEM*

WRAIR Conducts First Human Trial to Test Malaria Vaccine



The Walter Reed Army Institute of Research is conducting the first human trial to test a vaccine against *Plasmodium vivax*, a widespread strain of malaria. The trial launched early November with 33 volunteers, all under the careful watch of experts. More than 3 billion people worldwide are at risk of contracting malaria with 300 million reported cases and 1 million deaths. For now, insecticides and nets are the

most dependable ways to prevent infection by avoiding exposure. *P. vivax* has been a serious threat to troops serving in Afghanistan. Trial results will assist in developing better vaccines, which can be a protracted and expensive process sometimes costing millions over the course of several decades.

*Source information provided by
WRAIR*

USARIEM TBI Researcher Briefs Soldier with TBI



Sgt. Kyle Sill listens to Dr. Kristin Heaton describe current research efforts on TBI.

Photo Credit: Dave Kamm, NSRDEC

Sgt. Kyle Sill, a graduate of the Warrior Salute Program, was a guest speaker for a program celebrating National Disability Employment Awareness Month Oct. 20 at the Natick Soldier Systems Center in Natick, Mass. Sill was wounded in action in Afghanistan and suffers from a traumatic brain injury resulting from an improvised explosive device blast. During his visit, Sill participated in a discussion with Dr. Kristin Heaton, a research psychologist, on current TBI research efforts within the Military Performance Division at the U.S. Army Research Institute of Environmental Medicine. Heaton described various research collaborations with local hospitals, universities, and Vet-

erans Affairs and detailed the use of standard and innovative techniques, including magnetic resonance neuroimaging and neuropsychological assessments, to study brain injuries. Heaton also described how the Total Army Injury Health Outcomes Database is used to address TBI-related injury questions.

Sill also received a briefing on blast and ballistics protection technologies and initiatives from Michael Maffeo of the Natick Soldier Research, Development and Engineering Center, another organization of the NSSC.

*Terry Rice
USARIEM Public Affairs*

USAMRIID Researcher Recognized as the Fort Detrick NCO of the Quarter



Sgt. Esther Collins was recognized Sept. 10 as the Fort Detrick NCO of the Quarter (3rd quarter) by garrison commander Col. Judith Robinson and Command Sgt. Maj. James Shaheen for her achievements.

She is the section NCOIC for the Center of Aerobiological Sciences at the U.S. Army Medical Research Institute of Infectious Diseases. Her duties consist of assisting research principal investigators with the execution of aerobiological research and the development/progression of her Soldiers. Not only is she dedicated to her mission and her Soldiers, she sets the example for others to emulate by competing and winning unit/garrison NCO boards.

Collins said she is preparing for the Fort Detrick NCO of the Year competition.



USAMRICD Employee Wins Trip to National Conference

A McConnell Group contract animal care technician at the U.S. Army Medical Research Institute of Chemical Defense, Jessica Fry, was selected as the Lab Products Animal Technician Award winner from the American Association for Laboratory Animal Science District 3, which encompasses Maryland and Virginia. Winners, one from each of eight U.S. AALAS districts and Canada, were given the opportunity, courtesy of Lab Products, to attend their first national AALAS meeting. The annual meeting was recently held in Atlanta, Ga., and included an evening reception sponsored by the company.

"I learned a lot and met a lot of people from all over the country," says Fry of the experience.

While at the meeting, she attended several workshops and seminars on animal welfare and enrichment and is now preparing to share this information with her coworkers.

"I am working on a presentation about all the new things I learned," explains Fry, "so that our enrichment strate-

gies here can be better evaluated and maybe updated/changed according to the new findings that were presented at the national meeting." Fry also will be giving a presentation on her experience at the upcoming 2011 AALAS National Capital Area Branch annual meeting in Washington, DC.

Her "appetite for learning" and her readiness "to embrace and share new and better methods" were two traits that her nominator, Eric Adams, felt made her an ideal candidate for winning the opportunity to attend the AALAS meeting. Adams is the McConnell Group's deputy project manager in USAMRICD's Veterinary Medicine and Surgery Branch, Research Support Division.

"No nominee would take more home from this meeting than Jessica Fry," Adams stated in his nomination letter for Fry "and no program would benefit more than ours if she were to be selected for this honor."

"Although relatively new to the laboratory animal medicine field, Jessica has a penchant for learning that

keeps her engaged and expanding her knowledge of all aspects of our specialty," stated Lt. Col. Shannon Stutler, USAMRICD's attending veterinarian and chief of the Research Support Division, one of several of Fry's coworkers and members of USAMRICD's scientific staff who submitted letters of support with the nomination.

The nominating documents also highlighted Fry's dedication and professionalism in the accomplishment of her duties.

Adams cited Fry's willingness to "always accept responsibility given to her and perform any and all duties to the absolute best of her ability," while Stutler, said of Fry, "she performs all tasks at or above standard; she constantly goes above and beyond to assist the investigators and her coworkers while accomplishing her daily responsibilities."

As an example of her "dedication to the health and welfare of the animals within our institute," Adams recalled how during the second blizzard of 2010 Fry "volunteered as a member

of the three-person team to stay at our institute 24/7 until normal operations and normal staffing could resume." During this time Fry worked relentlessly to provide the necessary care, performing work that, according to the nomination, "under normal operations is accomplished by two or three full-time staff members."

Dana Anderson, a research biologist as well as a former chairman of USAMRICD's Institutional Animal Care and Use Committee, described Fry as "attentive to the needs of both the animals and the science" and said that "her attention to detail in the care of the laboratory animals helps investigators to make the best use of animals on their protocols."

Another common thread in the nominating documents was Fry's effervescent personality, her enthusiasm, and her ability to motivate her coworkers.

"Jessica is a natural leader with a wonderfully friendly and outgoing personality, a cheerful disposition, and a professional way of interacting with our customers," said Stutler.

Adams also considers her a natural leader adding that she "is always the one to get the rest of her team on the move" while Anderson described Fry as "always...cheerful and greets everyone with a smile."

In her letter of support for Fry, Meredith Moyer, McConnell Group project manager in the VMSB, said Fry was a "pleasant and cheerful person that is easy to get along with" as well as someone who was "intelligent and well respected by her peers."

"Jessica appears to enjoy what she does, and this is greatly reflected in the quality of her work and dedication

to the animals," added Moyer.

Fry has been working at USAMRICD for approximately two and a half years. She currently is certified at the laboratory animal technician level and is scheduled to take her laboratory

animal technologist exam in 2011. Fry also holds a bachelor of science degree in biology from Towson State University.

*Cindy Kronman
USAMRICD Public Affairs*





WRAIR Awards

Army Commendation Medal

Staff Sgt. Randolph W. Duriel
Spc. Sandra Mirabal
Staff Sgt. Decole R. Russell

Army Achievement Medal

Spc. Justin F. Auschwitz
Spc. David E. Lyons
Sgt. Kelly K. McWhirter
Sgt. Derrick R. Polk
Sgt. Rubinel Rivera

Commander's Award

Marcia Wolf

Certificate of Achievement

Elizabeth Jacobson

35 Years of Service Award

Calvin Ashcraft
Jesse W. Brogan
Reginald C. Johnson

10 Years of Service Award

Dr. Evelina Angov

Special Act Award

William Anderson
Calvin Ashcraft
Doris A. Cassidy

Jason. J. Copen
Linda Davis
Taneika T. Dawkins
Nickole Elliott
Roy L. Hardy
Roosevelt Harris
Availeo Hubbard
Reginald C. Johnson
Albert A. Kabbara
Richard Millward
Sherlita L. Phillips
Don Porter
Janak Rajani
Andrew Rogalski
Fran Tyson

Beverly Vaughn
Armand L. Wallace
Columbus Watson, Jr.
David R. West
Cynthia Whitaker

Special Service Award

Margaret Bell

Service Award

Jerrie Moore
Walter Sanders

On-the-Spot Cash Award

Kevin Diggs

USAARL Awards

September 2010

Army Commendation Medal

Staff Sgt. Eduardo Alegria
Sgt. David Allen
Sgt. 1st Class George Spann

USAMRMC Coin and Letter from Maj. Gen. James K. Gilman

Staff Sgt. Eduardo Alegria
Sgt. David Allen
Sgt. 1st Class George Spann

Recognized for Service as Chief, Vision Branch

Dr. Leonard Temme

Promotions

Staff Sgt. Jessica Anderson
Lt. Col. Steven Gaydos
Sgt. Bradley Wilson

October 2010

NCO of the Year

Sgt. Ebony Wiggins

NCO of the Quarter

Sgt. Ebony Wiggins

Soldier of the Year

Spc. Adam Thompson

Soldier of the Quarter

Spc. Nikkeyla Barbee

November 2010

Army Achievement Medal

Spc. Adam Thompson
Lt. Col. Lynne Walters
Sgt. Ebony Wiggins

Certificate of Achievement

Spc. Nikkeyla Barbee (2 certificates)
Sgt. Craig Berlin (2 certificates)
Sgt. Arlene Breaux
Elmaree Gordon
Staff Sgt. David Lopez
Spc. Daniel Lopez
Spc. Adam Thompson

Commander's Award for Civilian Service

Catherine Machen
John Ramiccio
Dr. Lori St. Onge

USAMRMC Awards

August 2010

Legion of Merit

Col. Jeffrey M. Unger

Meritorious Service Medal

Maj. Kevin K. Chung
Sgt. Maj. Eugene L. Larkins, Jr.
Maj. Kendra L. Lawrence
Capt. Vanessa R. Melanson
Capt. Tracee J. Rose
Lt. Col. Shannon M. Wallace

September 2010

Legion of Merit

Col. Roger K. Martin

Meritorious Service Medal

Capt. Amy B. Bray
Lt. Col. Teresa L. Brininger
Maj. Robert Carter III
Master Sgt. Charles P. Cuneo
Lt. Col. Mark W. Dick
Capt. Jeffrey W. Froude II
Lt. Col. Booker T. King
Staff Sgt. Jeromy T. Moorehead
Maj. Travis D. Pamerter
Staff Sgt. Sabrina Y. Shivar
Sgt. 1st Class Stephanie L. Truss
Capt. Richard E. Wood

October 2010

Army Achievement Medal

Spc. Tymara B. Burnley
Sgt. Matthew A. Mellott
Spc. David L. White

Army Commendation Medal

Sgt. 1st Class Nejla J. Matthews

Meritorious Service Medal

Col. Leopoldo C. Cancio
Maj. Charla E. Gaddy
Sgt. 1st Class Harold L. Johnson
Lt. Col. Lamont G. Kapec
Chief Warrant Officer 3 Kimberly D. Oliver
Capt. Sarath P. Rednam
Sgt. 1st Class Gesele Thomas
Sgt. 1st Class Criscelia Tucker
Sgt. 1st Class Carlos D. Wright

WRAIR Soldiers Receive the Gold German Armed Forces Proficiency Badge



Nine Soldiers from the Walter Reed Army Institute of Research in coordination with the Bundeswehr Command Headquarters in Reston Va., completed the 12 kilometer Road March in time to be awarded the Gold German Armed Forces Proficiency badge Sept. 28. The Soldiers completed all tasks prior to the culminating Ruck March event to include pistol qualification, shot put, swim testing, and 1,000- and 100-meter runs.

WRAIR Recognized as the 2009 Small Library of the Year



The Gorgas Memorial Library at the Walter Reed Army Institute of Research has been recognized as the Federal Library and Information Center Committee's 2009 Small Library of the Year. Capt. Benjamin Kirkup and a colleague use an online database in the library.

USARIEM Awards

September 2010

Army Commendation Medal

Capt. Steven Jackson

Army Achievement Medal

Spc. Matthew Dickson
Spc. Jessica Morley

Military Outstanding Volunteer Service Medal

Sgt. Ryan Regalia

October 2010

Army Achievement Medal

Spc. Matthew Dickson
Sgt. Jay O'Hara
Spc. Bodunrin Shobayo

Promotions

Spc. James Akers
Sgt. 1st Class James Costin
Spc. Robert Curtis
Spc. Sarah LaBrada

Reenlistments

Spc. Pedro Claro
Cpl. Luis Leandry

November 2010

Promotions

Staff Sgt. Mark Kryskow
Sgt. Jessica Morley

Civilian Awards

September – November 2010

Commander's Award for Civilian Service

Robert Mello (Retired)

Achievement Medal for Civilian Service

Michael Blaha

Special Act Award

Bobbie Furbay
Carol Migliaccio

Time-Off Award

Laurie Blanchard

On-the-Spot Award

Ingrid Sils