The Point

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

Inside

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MRMC Soldier saves seaman from drowning

Although not serving in combat, a U.S. Army Medical Research and Materiel Command Soldier stationed at Great Lakes Naval Station, Ill., still found a way to save a servicemember's life this summer.

While working at his off-duty job as a lifeguard at the station's community swimming pool, Sgt. Anthony Bush, a dental researcher at MRMC's U.S. Army Dental & Trauma Research Detachment, noticed a man holding his breath under the surface of the water.

Since many Navy seamen come to the pool to practice the technique for their training, it didn't shock Bush – at first. But thankfully for the young seaman, who just graduated from his basic training, Bush kept a vigilant eye on him.

After about 30 seconds in the water, Bush said he saw blood coming from the servicemember. The lifeguard in Bush took over, and he jumped into action.

"I immediately brought him to the surface and called 911," said Bush, who is a 25-year lifeguard veteran. "He was practicing holding his breath and had a seizure."

Bush said he stabilized the near-drowning victim until emergency medical services arrived, and after two days in the hospital the seaman was released.

His heroic act drew recognition from the Naval station commander, Capt. D.A. Schnell as well as others.

"Your selfless response provided a clear indication of your strong character and commitment to your duties as a lifeguard," said Schnell in an appreciation letter to Bush.

Although he's not comfortable with the public acknowledgment, Bush said it did feel good saving someone's life and enjoys the responsibilities of the part-time job.

U.S. Army Dental & Trauma Research Detachment's Sgt. Anthony Bush scans the Great Lakes Naval Station, Ill., pool for swimmers in need. His vigilance as a part-time lifeguard helped him save a servicemember's life this summer.

"Life guarding is something in my blood; I love to do it," said Bush.

This isn't the first time he was called to action to save someone. When he was life guarding in college at Kentucky State University, he saved a kid from drowning by throwing him a buoy. And it probably won't be his last since Bush said he wants to work as a lifeguard for many more years.

"I'm planning on it being my retirement job," he said.

—Sarah Maxwell, MRMC Public Affairs

New dressings to improve battlefield care

The Army continues to improve medical care on the battlefield by sending two new first-aid products into theater that will potentially save more Soldiers' lives, said Army medical officials at a Pentagon press conference in October.

Test results from the U.S. Army Medical Research and Materiel Command's Institute of Surgical Research showed the field bandage Combat Gauze and the WoundStat granular powder both demonstrated marked improvements over what's currently used in the field said Col. Paul Cordts, Office of the Army Surgeon General.

"These products improve survival, result in less blood loss and improved post-injury blood pressures," said Cordts.

Excessive blood loss is the No. 1 killer on the battleground. Both products are hemostatic and have the ability to stop bleeding or hemorrhaging quickly in wounds where tourniquets can't be used, said Cordts.

Measuring three inches by four yards, the gauze uses an organic powder of kaolin to stop the bleeding and the WoundStat is a package of granules that reacts with the blood to form a barrier, preventing more bleeding.

In this conflict more than 92 percent of wounded troops survive their injuries in combat – the highest percentage of any war, according to the U.S. Army Medical Department.

Master Sgt. Horace Tyson, a combat medic, said he attributes the high number of people being saved to the advanced tools the Army provides medics, like hemostatic dressings.

Having recently returned from a 15-month assignment in Iraq as the senior enlisted manager in a battalion aid station in the heart of Baghdad, he said he saw first hand the benefits of dressings with blood clotting capabilities.

"I categorize these products as life-savers for us," said Tyson, who now works as a senior operations manager for MRMC.

A servicemember can "bleed out," or hemorrhage to death, Tyson explained, within minutes of being hurt.

"The bandages make the difference between a (Soldier) having no chance of living because he'll bleed out in five minutes versus me getting him to an aid station within 20 minutes and him staying alive," said Tyson. "Without the bandages he could be dead."

With 19 years of experience and four deployments in conflict areas under his belt, Tyson said he's seen the Army's scientific research drastically improve medics' tools and training.

"If we're going to get something else better for the battlefield, that's great," he said.

About 270,000 Combat Gauze bandages were ordered and are expected to be in theater by the end of the year, said Lt. Col. Sean Morgan from Program Executive Office Soldier, the agency fielding most of the bandages.

More than 17,000 packages of WoundStat will also be working their way to the field.

Not only are the new dressings expected to save more lives, they also bring significant cost savings to the government, said Cordts. Combat Gauze is less than $30 per dressing

See "Dressings" page 4

USARIEM on top of altitude sickness research

Looming in the distant skyline of Colorado Springs, Colo., Pikes Peak is one of the nation's most popular tourist destinations, hosting hundreds of thousands of visitors on its 14,110 foot summit each year.

What most vacationers don't know as they peer across the serene landscape is that just a few hundred feet away researchers from the U.S. Army Research Institute of Environmental Medicine are sharing the summit to advance military medicine.

For years research physiologists from the U.S. Army Medical Research and Materiel Command's USARIEM and research volunteers have spent their summers above the tree line to study ways of improving servicemembers' capabilities in high altitude environments at the Maher Memorial Altitude Laboratory.

"The Army is very interested in any means to accelerate acclimatization," said USARIEM research physiologist Dr. Allen Cymerman. "We're obligated to have our troops knowledgeable and experienced in how to handle their environments."

Although the lab has been home to physiological research since it was placed on the Peak in late 1960s, the altitude sickness studies became even more relevant when troops were deployed to the mountains in Afghanistan after the Sept. 11 attacks.

The mobility of the U.S. Army was sometimes faster than the Soldiers' bodies could keep up.

"We scoop them up on helicopters, drop them off in the mountains, and they can become susceptible to problems," said USARIEM research physiologist Dr. Steve Muza, who's spent the last few summers on the Peak.

Most people need time to acclimate to the lower levels of oxygen available the higher they go, Muza said, or they run the risk of developing Acute Mountain Sickness or even more severe health issues.

"Our goal is to understand how the lack of oxygen affects Soldiers biologically and physiologically, and then take the information to mitigate or reduce them getting sick."

The effects of AMS run from minor annoyances of light headedness and a treatable headache

See "Altitude" page 8

Pikes Peak hosts the USARIEM altitude research laboratory. (Photos by Sarah Maxwell)

MRMC prepares to fight infections

Army medical professionals from across the globe met at the U.S. Army Medical Materiel Development Activity Force Health Protection Branch's training, "Implementing Contingency Protocols," in Frederick, Md., in September to better understand how to use investigative medicines in case of a biological emergency.

Contingency protocols are countermeasures used to fight infectious diseases but might not have the readily available FDA references since they don't have commercial uses, said James "Nick" Koterski, chief of the USAMMDA FHP Branch, which falls under the auspices of the U.S. Army Medical Research and Materiel Command. Because the drug information isn't easily accessible, the training ensured medical professionals know which drugs are best to use for certain biological threats and how they should be administered.

"In order to accomplish this we must dovetail the efforts of a wide variety of people and institutions," said Koterski. "This conference is an attempt to gather as many of these folks as possible to discuss the complex process of activating a contingency protocol."

Principal investigators, sub investigators, medical monitors and pharmacists, from the USAMMDA FHP Branch, along with professionals from military hospitals in South Korea and Germany gathered at the training.

"We all have to work together in the event there's an incident," said Koterski. "This training greases the wheels."

Using modern technology is useful when communicating everyday, but according to Col. Curtis S. Hansen, Medical Service Corps, U.S. Army director, Department of Pharmacy chief, Landstuhl Regional Medical Center, it doesn't take the place of face-to-face contact.

"Every year the folks at USAMMDA reach out to those of us in Europe and those of us in Korea, and that keeps our connection strong," said Hansen. "Otherwise, people forget about how these protocols work, and USAMMDA makes sure we don't. That's a very important aspect."

This year's training focused on

See "Protection" page 5

"Dressings" from page 2

compared to currently-used HemCon bandage that uses chitosan from shrimp shells to stop blood and costs $88 per bandage. WoundStat is also less expensive than the QuikClot granules it replaces.

The Army plans to equip combat lifesavers to carry three gauzes, and eventually every Soldier will have one in their Improved First Aid Kits. Combat medics, who are highly trained in emergency trauma will also be given three gauzes, but will be the only ones to carry WoundStat since it requires more medical expertise to use, said Cordts.

Although the new hemostatic dressings are promising great improvements, Dr. David Baer, ISR's director of surgical research, said it doesn't mean the Army isn't still looking for the next line of products that could offer even more improvements.

ISR scientists looked into 20 to 25 other products in the last few years before they discovered the Combat Gauze and WoundStat, and they will continue their efforts for even more cutting-edge products to save lives.

"The way I think about it is the HemCon was better than the plain gauze, this (Combat Gauze) is better than the HemCon, and it can get incrementally better," said Baer.

—Sarah Maxwell, MRMC Public Affairs

MRMC helps improve casualty evacuations

Battlefield protection comes in many different forms and MRMC is ensuring Soldiers have the best evacuation medical care possible.

The MRMC's U.S. Army Medical Materiel Development Activity worked with the Joint Program Office, the agency fielding the Mine-Resistant Ambush Protected Vehicle, to design casualty and medical evacuation kits to be retrofitted in the vehicles.

With the support of other agencies, USAMMDA helped to develop two MRAP ambulance variants and five CASEVAC kits for vehicles currently being fielded to both OIF and OEF theaters.

In addition to having CASEVAC as a main requirement for the MRAP program, MEDEVAC is also a requirement needed in theater. Currently, two MRAP ambulance variants have also been produced: The Navistar 2-litter Category I ambulance, known as CAT I, and the BAE RG-33 3-litter CAT II ambulance. These vehicles provide safe and timely evacuations of casualties with current medical equipment, medical equipment sets, and medics on board.

Several thousand MRAP vehicles are deployed in Iraq and Afghanistan.

—Carey Phillips, USAMMDA

"Protection," from page 4

reviewing diseases and the product protocols that treat the diseases.

Attendees were presented information about infectious diseases, such as anthrax, smallpox, botulism and viral hemorragic fever. Following the brief on the diseases, the FHP product managers reviewed their product protocols.

"The learning experience was a two-way street," said Maj. Max Teehee, product manager and deputy chief, USAMMDA FHP branch. "The medical community learned how to better implement the treatment protocols. (They) learned how treatment protocols could be changed to better meet the needs of the (patients)."

The training is traditionally held in the late summer or fall in Germany or Korea but the decision was made to hold it near Fort Detrick, which allowed for the unique, interactive style conference.

"The USAMMDA FHP folks were extremely hospitable – a great crew," said Hansen. "They should be complimented for putting something together that would be very complex, and their hospitality and organization made it very understandable and very effective."

— Carey Phillips, USAMMDA

Israel, US collaborate to improve care

About four years ago Lt. Col. Rachel Evans, a physiologist at the U.S. Army Institute of Environmental Research, tried to find information about the effects of stress fractures on women Soldiers. Through her research she kept finding the same Israeli Defense Force scientists' names – for good reason.

"Their names kept popping up and popping up," said Evans who was also the director of the U.S. Department of Defense's Bone Health and Military Readiness program at the time. "They are the leading stress fracture researchers in the world, and they're one of the few countries where women are a large part of the military."

Evans tapped into Israel's unique research and military culture and asked them to combine forces with her own bone density research studies.

"They said they'd love to collaborate," she said. "Research really is a team effort, and our teams just happened to click."

The four-year relationship with Evans and her experienced Israeli counterparts resulted in "common ground gained for both" with the results of the collaborative research still going through the analysis process.

But, her relationship with the Israeli Defense Forces' medical researchers couldn't have happened if the path to partnership wasn't clear-cut by many before her.

Solidifying a decades-old cooperative union, the American and Israeli Army medical researchers meet every couple years to share knowledge at the Shoresh Conference on ways to protect Soldiers in both nations.

Most recently the two countries shared research in Baltimore during a week-long meeting in September.

Lt. Col. Yossi Mandel, head of Medical Research and Foreign Affairs Directorate for the Israeli military, said there are already medical research interactions between the two countries, and the Shoresh is "like an uncle to the relationship."

Starting in the 1980s, the first meetings were primarily focused on just chemical and biological defense, but the Shoresh has grown to collaborations in the six pillars of military medicine—chemical and biological defense, trauma and combat casualty care, psychological stress, infectious diseases, and laser safety issues, said Mandel.

"I think it's always very interesting to see how the interest and the gaps (in research) of the two different countries are so alike," said Mandel. "It's always amazing to see how much this (relationship) does."

Symbolically meaning "root" the Shoresh conference's name derived from the town the first meeting took place, according to Mandel.

"We see it as a root to a mutual interest for Soldiers' health and safety," said Mandel.

Like Evans shared the expertise of the researchers in her field, Mandel said, the Israelis can benefit from MRMC's large laboratory structure.

"Everything is smaller (in Israel)," said Mandel. "We have several labs, but not on the same scale. MRMC is more like a research institute."

Tapping into each other's expertise

"They are the leading stress fracture researchers in the world, and they're one of the few countries where women are a large part of the military ... Research really is a team effort, and our teams just happened to click."

—lt. Col. Rachel Evans, U.S. Army Institute of Chemical Defense

See "Shoresh" page 9

Throughout the summer and fall of this year, the U.S. Army Medical Research and Materiel Command welcomed new commanders and directors for nearly all of its directorates. Below is a list of the new and existing leadership and the organizations they manage:

Col. John Skvorak
U.S. Army Medical Research Institute of Infectious Diseases

Col. Kent Kester
Walter Reed Institute of Research

Col. Jeff Unger
U.S. Army Medical Materiel Agency

Col. Mitchell Brew
U.S. Army Medical Materiel Center, Europe

Col. Joseph McKeon
U.S. Army Aeromedical Research Laboratory

Col. Lorne Blackbourne
U.S. Army Institute of Surgical Research

Col. Harry Slife
U.S. Army Medical Research Institute of Chemical Defense

Col. Kevin Keenan
U.S. Army Research Institute of Environmental Medicine

Col. Bradley Dunbar II
U.S. Army Health Facility Planning Agency

Lt. Col. Joseph Bentley
U.S. Army Medical Information Technology Center

Col. Brian Lukey
U.S. Army Medical Materiel Development Activity

Paul Michaels
U.S. Army Medical Research Acquisition Activity

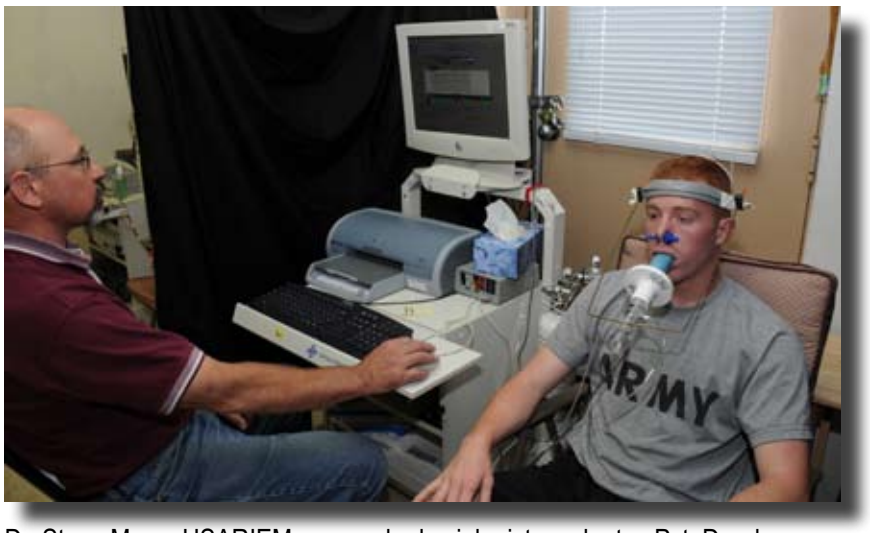
"Altitude," from page 3

to severe nausea. According to Cymerman, about 75 percent of people who venture above 8,000 feet without taking a few days to let their bodies adjust along the way will get some form of AMS. Less than 10 percent of people will react even stronger with life-threatening illnesses.

"Everyone has the same basic physiology," said Cymerman. "But some people can just adapt faster for unknown reasons."

Some of the medical breakthroughs from previous research on the Peak have led to the Federal Drug Administration's only approved altitude sickness prevention medicine, understanding nutrition and hydration affects as well as other usable information for Soldiers in the field.

"For instance we demonstrated that we can improve performance by 25 percent by eating more carbohydrates," said Muza. "We're now in the process of developing carbohydrates supplement packages."



Dr. Steve Muza, USARIEM research physiologist, evaluates Pvt. Derek Adcock's biological response to the high altitude at the Maher Memorial Altitude Laboratory on top of Pikes Peak, Colo.

This year's research focused on determining the effects of hypoxic chambers in preparing for the Peak's altitude. The low-oxygen chambers are used by world-class athletes to help condition their bodies to perform better, and 20 Soldiers and three civilians volunteered to sleep in them for seven days at USARIEM headquarters in Natick, Mass.

They were then flown up to Colorado for a five-day stay on the Peak to see if the chambers, which gave them the equivalent of 8,000 feet acclimatization, actually improved their performance and adjustment to the altitude.

Adapting faster may have been on the mind of Pvt. Scott Caine, a Soldier who had a choice of studies he could be involved in. Obviously not feeling well on his second day at the Peak with a pale, greenish hue to his skin, he explained why he volunteered for something he was warned would make him sick, if only for a short time.

"This is one of the main studies I wanted to do," said Caine. "I'm heading to the 10th Mountain Division, which is deployed right now. If they can alleviate some of these problems before I get there, it would be great."

Volunteers and medical staff enjoy the day room at the USARIEM research laboratory on the mountain. The walls of the trailer-style lab are graffitied with years of previous volunteers' names, greetings and medical paraphernalia.

See "Pikes Peak" page 9

"Pikes Peak," from page 8

Caine and the other volunteers were tested both at Natick and on the Peak for how sick they became, what kind of physical work performance they had, their mental performance, and their physiological response to the altitude. Under the watchful eye of a doctor, researchers and other medical professionals, the volunteers usually adapted to the environment after a few days.

With people involved, the researchers can't take their responsibility to the volunteers lightly, said Cymerman.

Every year the scientists are required to get the projected research signed off by an Institutional Review Board and an approving official, which can be a three-month review process, to ensure the volunteers are at a minimal health risk.

"Although we are in a natural environment, it's not normal to take a Soldier and very rapidly place him at more than 14,000 feet," he said. "If (someone) wants out of the study, we take him out. We make sure volunteers are protected."

While the USARIEM researchers were protecting their volunteers, Caine said he was thinking about how his participation with the project was going to protect other Soldiers.

"This is great to be a part of," he said in between one of his physical endurance tests. "A little bit of discomfort is OK because the help we're giving to the Soldiers outweighs anything I'm feeling right now."

—Sarah Maxwell, MRMC Public Affairs

Research volunteer Sarai Cavallo completes one of two seven-mile physical endurance tests at the U.S. Army Research Institute of Environmental Medicine Maher Memorial Altitude Laboratory on Pikes Peak in Colorado while researcher Eric Lammi monitors and documents her distance, heart rate and hydration.

The Research Institute of Environmental Medicine Maher Memorial Altitude Laboratory shares the summit of Pikes Peak with only a visitor's center.

"Shoresh," from page 6

and resources, about 150 medical professionals attended the latest conference.

"It was excellent," said Mandel. "It was well organized, a lot of mutual knowledge came out, and (the researchers) defined a lot of subjects that we'd like to collaborate. We had some already, but we found a potential for more as well."

After a week of discussions and sharing of information, the efforts culminated in the researchers of each country setting the goals of collaboration for the next two years until the next meeting.

MRMC Commander Maj. Gen. George Weightman addressed the key medical collaboration groups at the end of the conference and congratulated the researchers on working well together to find common objectives.

"These meetings are only as good as you make them," Weightman said. "The world is a dangerous place, and there are a lot of challenges we can collaborate on. We're realizing the potential of synergy of our two countries' intellectual (capabilities)."

—Sarah Maxwell, MRMC Public Affairs

People in the News

Animal care tech recognized by industry

An animal care technician at the U.S. Army Medical Institute of Chemical Defense was awarded 2008 National Capital Area Branch of the American Association of Laboratory Animal Science Technician Award by the Scientists Center for Animal Welfare.

Erica Weaver was selected to receive the award based on her submission on "why the animal care technician is an important part of the research team."

In her submission, Weaver called animal care technicians "the foundation for any successful research mission" because their daily diligence in caring for the animals, observing the health of the animals, and monitoring for problems in their environment is the key to preventing the introduction of "unwanted variables…into an experiment, potentially making the final outcome invalid."

"Valuable time, effort and the lives of animals could be wasted as a result of these variables," wrote Weaver.

In a congratulatory e-mail to Weaver, Col. Peter Schultheiss, ICD's deputy commander and a Veterinary Corps officer expressed his appreciation for Weaver's accomplishment.

"To be recognized this way speaks volumes about your knowledge and dedication ... Thank you for your daily devotion to your work and also for your beautiful articulation of the difference technicians make to this institute and to the animals," said Schultheiss. "You make us all proud."

As part of the award, SCAW provided Weaver with one registration for the two-day 34th National Capital Area Branch of AALAS Seminar held in September.

Additionally, the national AALAS is considering the possibility of including Weaver's paragraph in their upcoming revision of the Assistant Laboratory Animal Technician Manual.

Erica Weaver received the 2008 National Capital Area Branch of the American Association of Laboratory Animal Science Technician Award.

"These training manuals are used around the world to help prepare laboratory animal care technicians for AALAS technician certification," explained Maj. Shannon Stutler, chief of ICD's Veterinary Medicine and Surgery Branch.

According to Weaver a strong desire to work with animals led her to apply for an animal care technician job she saw advertised in the newspaper shortly after graduating from high school in 2001. She didn't realize at the time that she was making a career choice.

"While working in this field I began to realize just how important animal research really is," said Weaver. "I also became aware of how important the animal caretaker's role is in making sure that each and every animal receives the best care possible."

That first job was at the National Institute of Drug Abuse in Baltimore, Md. In 2005, Weaver accepted a position as a breeder technician at The National Institute of Aging, also in Baltimore. She began working under contract at ICD in January 2007.

—Cindy Kronman, ICD

People in the News

ICD's winning poster

Members of the U.S. Army Medical Research Institute of Chemical Defense's poster took home the blue ribbon and also won the Best Format award at the 34th annual National Capital Area Branch American Association for Laboratory Animal Science Seminar.

Meredith Moyer, Staff Sgt. Jennifer Devorak, Staff Sgt. James Barclay, and Lt. Col. Ann Schiavetta, of the Veterinary Medicine and Surgery Branch of the US Army Medical Research Institute of Chemical Defense, in conjunction with Theresa Tezak-Reid and Stephanie Froberg from the institute's graphics department, worked together to prepare an award-winning poster presentation, "Comparison of Phlebotomy Techniques for Serial Bleeds in Common Marmosets (Callithrix jacchus jacchus)," for display at the 34th. The authors also presented the poster at the National AALAS meeting this fall.

ICD promotions, selections

Dr. William Smith is president elect for the Society for In Vitro Biology.

Lt. Col. Shirley Tuorinsky received a Meritorious Service Medal

The following military received awards for the change of command ceremony:

Staff Sgt. Jeromy Moorhead - Army Achievement Medal

Spc. Felix Fu - AAM

Spc. Stephen Robinson - AAM

Capt. Gleeson Murphy - Certificate of Achievement

Staff Sgt. Melinda Rodriguez - COA

Sgt. Nicholas Rogers - COA

The following civilians received Certificates of Appreciation for the contribution to the change of command:

Ken Snyder
Kevin Webb
Dr. William Smith
Anthony Osborne
Steven Otto
Alan Otto
Denise Hott
Tom Hott

Sgt. Emily Willis returned in August from a 15-month tour in Iraq, where she served as a laboratory noncommissioned officer.

Spc. Nydia Conder re-enlisted in August.

Staff Sgt. Bountieng Somsamayvong was promoted July 2008

Sgt. Nickolas Rogers received an Army Achievement Medal for his assistance with a protocol from the U.S. Army Research Institute of Environmental Medicine.

Several other long-time employees of the ICD retired at the end of the fiscal year: **Dr. Robert Werrlein, Dr. Steven Baskin, Luanne Kraus, and Linda Kaiss**.

Associate editor appointment

ICD's **Dr. Michael Adler**, a research pharmacologist was appointed as one of two associate editors to a new scientific journal.

Inderscience Publishers recently introduced a new scientific print and web periodical, The Botulinum Journal.

"The TBJ is devoted to reporting all aspects of botulinum toxin, a powerful bacterial neurotoxin, including state of the art laboratory research, tracking and investigation of outbreaks, and publication of editorials and policy papers to guide the development of small molecule therapeutics," said Adler, who has spent the last 16 years of his career at ICD doing research to develop drugs to reverse the muscle paralysis that occurs in patients intoxicated with botulinum toxin.

Adler and his team made significant progress toward developing a treatment drug that is designed to inhibit the actions of botulinum neurotoxin inside the nerve endings that control voluntary muscles and restore normal muscle function.

Unlike the antitoxin that is the currently approved medication for botulism, the treatment being developed by Adler and his team would not have a time restriction for effectiveness. As a result of his research efforts and collaborations, Adler has authored or coauthored 34 journal articles and book chapters on botulinum toxin.

The journal will be published quarterly, and the first issue recently became available on line at www.inderscience.com/tbj.

People in the News

HIV/AIDS research

Dr. Tiffany E. Hamm serves as the chief, Department of International HIV Prevention, Care, and Treatment for the Division of Retrovirology, Walter Reed Army Institute for Research, U.S. Military HIV Research Program. The USMHRP is a multi-dimensional project dedicated to HIV vaccine development, prevention, disease surveillance, care and treatment for HIV.

In 2003, Hamm's role expanded when, during the State of the Union Address, President Bush launched his emergency plan for AIDS Relief to combat global HIV/AIDS—the largest commitment, $15 billion over five years (2003–2008), by any nation to combat a single disease in history. Hamm now serves as the primary U.S. Government representative for the Department of the Army to PEPFAR under the Office of the Global AIDS Coordinator.

She also serves on several multi-agency groups including OGAC support teams for the countries of Kenya, Nigeria and Tanzania and the palliative technical working group.

On July 30, President Bush reauthorized the program by signing in the U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act which will dramatically increase the financial commitment to this fight—authorizing up to $48 billion to combat global HIV/AIDS, tuberculosis and malaria.

Resource-limited countries with high HIV/AIDS prevalence rates receive the highest priority for PEPFAR assistance. Those 15 "focus countries" include Botswana, Côte d'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Vietnam and Zambia.

New post for researcher

Dr. Dennis E. Kyle, a retired colonel from WRAIR, was named the new co-director of the Florida Center of Excellence for Biomolecular Identification and Targeted Therapeutics at the University of South Florida.

Kyle is a professor in the Department of Global Health, one of Florida's top three research universities.

During his almost 21 years in the military and at WRAIR, he held positions as chief, Malaria Research Laboratory, chief, Antiparasitic Drug Discovery, chief, Department of Parasitology, and as deputy director (Antimalarial Drug Discovery), Division of Experimental Therapeutics.

Kyle received his B.A. from the University of Tennessee at Chattanooga, his doctorate degree from Clemson University and completed a postdoctoral position at the University of Georgia.

Kyle is the author of more than 130 publications in peer-reviewed journals, has six patents, and was named the 2006 Scientist of the Year by Malaria Foundation International.

Kyle also serves in several capacities for the World Health Organization Program for Tropical Diseases Research, to include Chair of the Steering Committee on Genomics and Drug Resistance, Chair for the Compound Evaluation Network, and a coordinator for the WHO/TDR network for transfection technology for drug screening and immunological studies in tropical parasitic diseases.

A current research focus in the Kyle Lab at the university is determining how the malaria parasite evades the action of artemisinin drugs and the discovery of new compounds for the treatment of malaria, leishmaniasis, and primary amoebic meningoencephalitis.

—Dr. Debra Yourick, WRAIR

People in the News

Mentoring future leaders

This summer, 12 Reserve Officers' Training Corps cadets from universities across the country participated in a three-week research internship at the U.S. Army Aeromedical Research Laboratory as part of the Army career survey program. The program introduces cadets to the multitude of career fields available to them. Capt. David Turner, USAARL, provided guidance to the cadets and assigned them to various research projects.

While the cadets assisted with various research-related tasks throughout the laboratory, the USAARL military and civilian investigators mentored the future military leaders and researchers.

An Army cadet assigned to the U.S. Army Combat Readiness/Safety Center and an Air Force cadet interning at USAARL, were an integral part of a sustained operations protocol led by Dr. Arthur Estrada and Bradley Erickson of the Warfighter Performance and Health Division.

Cadet Charity Masaitis was one of the two who participated in a "dry run" of the study in order for the staff of research technicians to be fully prepared for data collection and analysis with aviators. She participated in a two-day sleep deprivation period during which she was engaged in a series of cognitive processing and reaction time assessments.

U.S. Army Reserve Officers' Training Corps Cadet Charity Masaitis prepares for a portion of the sustained operations study protocol rehearsal at USAARL.

As Masaitis reported in the October 2008 (Vol. 2) issue of Knowledge: The Official Safety Magazine of the U.S. Army, "Seeing the effects of fatigue on my own body helped me realize it can play a major role in decision-making and lead to errors, and possibly, a preventable accident."

Internship programs, such as the Army career survey program, not only provide hands-on research experience in the field of aviation medicine but also give cadets an opportunity to learn about different research career opportunities in the military.

—Loraine Parish St. Onge, USAARL

Safety collaboration

In July, Chief Warrant Officer Herman Morgan, aviation safety officer and chief of the USAARL Aviation Life Support Equipment Retrieval Program deployed to Afghanistan, as part of a U.S. Army Combat Readiness Center/Safety Center team investigating the RG-31 MRAP vehicle rollover that resulted in a canal drowning of three Special Forces Soldiers.

Morgan and the USACRC team of investigators spent nine days in Afghanistan and retrieved several vehicle components, such as seat and occupant restraint systems, which were returned to USAARL for analysis.

Through this collaborative effort ALSERP was able to contribute valuable life support equipment expertise and testing capabilities to the USACRC's ground vehicle accident investigation report.

The results of this investigation also support the USAARL element of the U.S. Army Medical Research and Materiel Command Joint Trauma and Prevention of Injury in Combat Program research program which seeks to reduce combat-related injuries to deployed Army Soldiers.

—Loraine Parish St. Onge, USAARL

People in the News

Scientist gives nearly six decades of service

As the new fiscal year began Oct 1, the U.S. Army Medical Research Institute of Chemical Defense wasn't quite the same place it had been just days before.

MRMC Commander, Maj. Gen. George Weightman, presented Dr. Margaret Filbert with a bound volume of all of her publications at the 2008 Medical Defense Bioscience Review.

Missing from its hallways, from its staff, was Dr. Margaret Filbert, who retired at the end of September after 58 years of federal service.

Filbert worked all of those 58 years at the institute, beginning at the laboratories out of which the ICD developed: the Medical Research Division in the 1950s and the Biomedical Research Laboratory in the 1960s and 70s.

She was one of the last remaining employees from these eras and was for the institute a very personal link to its history and its development as a world leader in medical chemical defense research.

"ICD is a real family with a great history," said Dr. John Petrali, who in 1959 began his career as a medical corpsman private assisting Filbert.

"We got where we are now by standing on the shoulders of giants," continued Petrali. "Marge is one of those giants."

Her long career is one of not only scientific achievements, but also professional development and growth. Tenacity and perseverance were the words current commander, Col. Harry Slife, said came to mind whenever he thought to describe Filbert.

Indeed, today when there is a lot of talk about women in the political arena putting cracks in the glass ceiling, Filbert, in the field of science, had been there and done that.

"The glass ceiling at ICD has a hole in it the shape of Margie," noted Petrali.

Discouraged from attending medical school after earning her bachelor's in the late 1940's from the University of Maryland—because the general opinion was that a woman would probably end up dropping out to start a family—Filbert decided instead to earn a master's in physiology.

She began her federal career as a general schedule 7 rank in 1950 when she was hired by Clinical Research Division, MRL, at Edgewood Arsenal. She was left largely to her own devices, however, with little effort on the part of her division chief to provide mentoring or direction.

He later excused his lack of assistance by saying that she was only working "to earn enough money to buy carpeting and draperies." Finally, she approached other scientists, who asked her to develop assays for their research.

Despite her many research contributions over the succeeding years, Filbert didn't rest on her laurels. At a time in life when many would be considering retirement, Filbert chose to pursue her doctorate degree.

See "Filbert" page 16

Lean Six Sigma

Improving warehouse preparations

Members of the USAMMCE Lean Six Sigma project team.

The United States Army Medical Materiel Center Europe, or USAMMCE, improved warehouse business operations under its first Lean Six Sigma project.

As a subordinate unit of the Medical Research and Materiel Command, USAMMCE provides class VIII medical logistics supply and support to more than 1,300 EUCOM, CENTCOM, AFRICOM and Department of State customers.

When goods specifically designated for one of USAMMCE's customers arrived, the products flowed through a manual process wrought with duplicative work and transportation delays. The goods frequently were stacked on pallets and the work environment was stressful.

"Our customers called every day looking for their shipments. We could not meet their expectations and my staff disliked working in that section," said Marina Steinbach, a supervisor in the Distribution and Transportation division.

Steinbach was a key member of the project team. Her expertise and ability to implement change through manpower assignments and work processes was vital to the success of the Lean Six Sigma program.

The eight-month project concluded in May 2008, with the new process being implemented in April. Throughput in this section decreased by 70 percent and the annual cost savings realized exceeds $560,000. The installed shelves provide an organized work flow and eliminated several redundant steps in the process.

"The project team enhanced communication between departments. Now, employees are working together to improve the service we provide to our customers. My staff actually looks forward to working in the redesigned section because the streamlined process eliminated the extra labor," said Steinbach.

Another Lean Six Sigma project investigating purchasing procedures is in progress. The USAMMCE green belt project leaders said they are enthusiastic about identifying additional opportunities to improve overseas medical logistics support.

—Maj. Kevin Ridderhoff, USAMMCE

"Filbert," from page 14

With new academic achievement, Filbert took on her own projects and continued to mentor junior scientists, most significantly Dr. Gerald Ballough, who came to the institute under a National Research Council postdoctoral research associateship. Together they examined neuroprotective properties of drugs having the potential to prevent or reverse the seizure-related brain damage initiated by the nerve agent soman.

They continued their research partnership for 10 years and were able to demonstrate proof of concept for neuroprotection against seizure-related brain damage. Together they demonstrated the efficacy of a synthetic, non-psychoactive cannabinoid as a neuroprotectant against nerve-agent-induced, seizure-related brain damage and hold the patent for the use of this compound as a countermeasure against chemical threat agents.

Ballough said Filbert was "the best boss I've ever had" and said working with her was a "real honor and pleasure."

She has my highest respect and love, he said.

In 1994, she agreed to serve as acting chief of one of the research branches and served in the position for over a year. Later, in 1997, accepted the position of chief, Research Operations Division, taking on the responsibility for overseeing the institute's entire research program and becoming the first female civilian division chief at the ICD and only the second woman at the institute to hold such a position of responsibility. More recently, with reorganization at ICD, Filbert stood up the Office of Consultative Research.

Over the course of her long career, she authored or co-authored more than 35 open literature publications, one book chapter, and 12 technical reports; she served as the contracting officer's representative on 55 grants, and as the associate editor for the Medical Aspects of Chemical Warfare volume of the Textbook of Military Medicine.

Filbert helped forge the way for women in chemical defense research after being discouraged from going to medical school in the 1950s.

Filbert was instrumental in the development and implementation of The Journal of Medical Chemical, Biological and Radiological Defense, an on-line journal available free of charge to the scientific community worldwide. She also serves as a special advisor to the journal editors.

Since 1998, Filbert planned and executed six biennial medical defense bioscience reviews.

Among Filbert's other contributions to the institute is the initiation and organization of a scientific informative program of seminars, giving a positive impression of the institute and a forum for scientific interaction among the ICD scientists.

For those at ICD, Filbert's retirement is truly an end of an era. For Dr. Robert Werrlein she was the historian who could bring to life the scientists and research projects highlighted in the ICD archived films he selected for Sigma Xi lunchtime seminars.

"(She) will always be here in our hearts and in our memories," said Werrlein.

—*Cindy Kronman, ICD*