



THE INNOVATOR

OPTIMIZING COMBAT CASUALTY CARE



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Rice retires after 32 years of service

Page 3

Inside This Issue

- CDR's Corner 2
- Company Notes..... 4
- Capt. Juarez Takes Charge 5
- BRIT Meets at USAISR 7
- College Student Interns at USAISR..... 8
- Safety Notes/Employee in the Spotlight 10
- Health News 11
- Team View at BICU 12
- Around the ISR 13
- NEW Section "Celebrating Science"..... 14-17
- Back When 18
- Awards/Library News..... 18



Scan 2-D code for USAISR Website link

Page 7



Convertino Inducted Into the Senior Executive Service

Page 9



FDA Approves Cold-Stored Platelets for Resuscitation

CDR's Corner



Col. (Dr.) Michael D. Wirt
Commander, USAISR

"Optimizing Combat Casualty Care"

Greetings ISR,

Can you believe it's already August. Just like the past few months, July was another extremely busy month at the Institute and it's not going to slow down any time soon. Later this month many ISR staff members will attend the Military Health System Research Symposium in Florida. I'm looking forward to seeing the advancements made in combat casualty care and having you highlight the great work that is done here every day.

Someone that we won't be seeing there or here on a regular basis is Sgt. Maj. Quinton Rice Jr. As you may know Sgt. Maj. Rice retired July 30 after 32 years of dedicated service to the Army and Army Medicine. Sgt. Maj. Rice, thank you once again for your service to our country. We wish you and your wife the very best as you begin the next chapter of your life.

I would like to congratulate Dr. Vic Convertino who officially received his Senior Executive Service Corps

Science and Technology flag and pin during a ceremony on July 30. As our commanding general Maj. Gen. Brian Lein said during the ceremony—his bio speaks for itself and with no doubt, I believe that he has earned this honor. Once again, congratulations Dr. Convertino.

As we move through this month I know that many of you will be taking that last vacation before school starts. As always, I ask that you always keep safety at the forefront of your mind. Enjoy your much deserved time off this summer.

If you're looking for that coveted three-day weekend during the month of August... well unfortunately, you won't find one. But there are some interesting monthly observances like: American Artists Appreciation Month, Bystanders Awareness Month,

National Breastfeeding Month, National Traffic Awareness Month, and What Will Be Your Legacy Month. Some weekly observances include World Breastfeeding Week from August 1-7; National Fraud Awareness Week on August 2-8; National Motorcycle Week August 9-15; and Be Kind to Humankind Week August 25-31. Some daily observances are National Night Out on the 4th; National Root Beer Float Day on the 6th, International Youth Day on the 12th, and National College Colors Day on the 28th—is the last Friday in August.

I can't say this enough—thank you for all that you do at the Institute every day. Your work is making a world of difference for our Wounded Warriors and their families. Be safe and enjoy the summer weather.

Serving to Heal... Honored to Serve!



Chapa retires after 46 years of Civil Service

Col. (Dr.) Michael Wirt presents Maria Chapa with a command coin during her retirement ceremony July 28. Chapa worked for the U.S. government for 46 years--43 years at the USAISR.



ARMY MEDICINE
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Rice retires after 32 years of service in the Army



Maj. Gen. Brian C. Lein, Commanding General, U.S. Army Medical Research and Materiel Command and Fort Detrick and Deputy for Medical Systems to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology presents Sgt. Maj. Quinton Rice Jr. with the Legion of Merit during his retirement ceremony July 30.

Story and photos by Steven Galvan
USAISR Public Affairs Officer

During a time-honored ceremony July 30, Sgt. Maj. Quinton Rice Jr., the

U.S. Army Institute of Surgical Research Sergeant Major retired from the Army after 32 years of service at Fort Sam Houston, Texas. Guest speaker at the retirement ceremony was Maj.

Gen. Brian C. Lein, Commanding General, U.S. Army Medical Research and Materiel Command and Fort Detrick and Deputy for Medical Systems to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.

“For me it’s a very bitter/sweet day because I’ve been with Sgt. Major Rice for a long, long time,” said Lein. “It’s a bitter/sweet day for me because today I am saying farewell to a friend, a mentor, and to somebody who has coached and taught officers, non-commissioned officers and Soldiers.”

Rice enlisted in the Army in 1983 as a wheeled vehicle mechanic and then retrained to become a medical specialist and later a pharmacy specialist where he has since held numerous leadership positions at Fort Hood, Korea, Germany, Hawaii and San Antonio to name a few.

As the commander of Landstuhl Medical Center in Germany, Lein recalled meeting Rice in 2007 when he took over as the hospital Sgt. Major there.

“It’s hard to say goodbye to him because he has been a true friend, colleague and someone that I have looked

SGM continues on page 15



Maj. Gen. Brian C. Lein presents Camille Rice with a Certificate of Appreciation during Sgt. Maj. Quinton Rice Jr.’s retirement ceremony July 30.

On the Cover

 A photograph showing Sgt. Maj. Quinton Rice Jr. on the left, in a dark blue uniform, receiving a folded flag from Sgt. Andrew Ludescher on the right. Staff Sgt. Joel McVay is standing between them, saluting. The scene is indoors, likely at a retirement ceremony.

Sgt. Maj. Quinton Rice Jr. is presented with a flag flown over the U.S. capital. Staff Sgt. Joel McVay, saluting, and Sgt. Andrew Ludescher presented Rice the flag during his retirement ceremony July 30. Rice retired after 32 years of service to the U.S. Army.

Company Notes



Company Commander
Capt. Jose A. Juarez

First Sgt. and I would like to welcome the following Soldiers to the ISR family: Lt. Col. Jennifer Gurney, Maj. Kelly Kafka, Spc. Sagar Bonde, Spc. Peter Johnson, Spc. Logan Leatherman, Spc. Ryan Kriner, Pfc. Chelsea Cates, Pfc. Eric Force and Pfc. Matthew Durant. We would like to say farewell to the following Soldiers: Sgt. Maj. Quinton Rice, Sgt. Micah Korff, Sgt. Polly Bushman and Spc. Vanessa Zugg; thank you for your contributions to the organization and best wishes in your future endeavors.

Congratulations to Spc. Shawn Lackey for his selection as the Soldier of the Month for July. His photo will be displayed in the Company area. We would like to also congratulate Staff Sgt. Olarewaju Magreola for graduating from the Master Fitness Trainer Course and Spc. Courtney Charleson for graduating from the Warrior Leaders Course. Job well done!

Welcome back from deployment Col. (Dr.) Booker King!

Thank you to Staff Sgt. Connie Hinrichs, Staff Sgt. Floretta Drummond and all of the Soldiers who were instrumental in planning and executing the retirement ceremony for Sgt. Maj. Rice. It was a nice ceremony enjoyed by Sgt. Maj. Rice, his family and all in attendance. We would also like to thank Sgt. 1st Class Shawna Stover and Sgt. Mylah Joy

Freeman for preparing and executing the flag ceremony for Dr. Victor Conventino.

As my first month as your Company Commander comes to a close, I can honestly say, I'm very pleased with what I see, I have had the chance to

talk to many of the enlisted soldiers and you too should be excited to be part of the ISR! Also, First Sgt. and I would like to thank all the Soldiers and Civilians of the ISR for what they do, day in and day out. Thank you! Serving to Heal... Honored to Serve!



Soldier of the Month
Spc. Shawn Lackey



Spc. Isaiah Land uses the aspheresis machine to draw blood from Sgt. Andrew Ludescher at the USAISR Research Blood Bank. The aspheresis machine will remove platelets from the blood and return the blood back into the Ludescher's system. The platelets will be used for research by the Coagulation and Blood Research Program scientists at the USAISR.

Juarez takes charge of USAISR Company



Capt. Jose A. Juarez is the U.S. Army Institute of Surgical Research Company Commander.

Photo and story by Steven Galvan
USAISR Public Affairs Officer

“The best thing about my position is the fact that I have the ability to affect a lot of young lives and to be part of their growing process in the military,” said Capt. Jose A. Juarez, U.S. Army Institute of Surgical Research (USAISR) Company Commander. Juarez took command of the USAISR Company June 26 and said that he is impressed with the entire staff and is looking forward to the challenges that come with his job.

“I intend to build a team that can withstand constant change by coaching and mentoring NCOs and Soldiers into effective, passionate leaders and Soldiers,” he said.

With 20 years of service in the Army, Juarez credits his success to the support and love of his family. His wife Letisia has been at his side since he joined the Army and they are the proud parents of four children between the ages of 20 and 14.

“My family has always supported

every decision that I’ve made, good or bad,” said Juarez. “My wife and kids are both my biggest fans and biggest supporters. Letty has been the one to always push me to go that extra mile. Without her I would not be where I am

today in my career or in my life.”

Juarez would like the ISR Soldiers and staff to know that he is a very easy going person who is easy to get along with and easy to approach.

“I love to joke around,” he said. “But at the same time, don’t confuse my niceness with weakness.”

Soldiers at this command can expect Juarez to be fair, honest and transparent in everything that he does. He, on the other hand expects the ISR Soldiers to fully support their leaders and the command wholeheartedly. He believes that by doing this it will improve unit morale and pride. His goal while being the ISR Commander is to build an effective team by constantly stating the importance of effective communication.

“Also, to be an effective team we have to earn each other’s respect and build trust for one another,” said Juarez. “And in order to do this we have to maintain our integrity, both individually and as a unit, and live the Army values.”

Juarez knows that he has some work to do in order to meet his goal. He

JUAREZ continues on page 18



Capt. Jose A. Juarez took command of the U.S. Army Institute of Surgical Research during a Change of Command ceremony June 26.

Convertino inducted into the Senior Executive Service

Story and photo by Steven Galvan
USAISR Public Affairs Officer

The newest member of the Army's Senior Executive Service corps in Science and Technology, Victor "Vic" Convertino, Ph.D., was presented with his official flag and pin during a ceremony July 30 at the U.S. Army Institute of Surgical Research at Fort Sam Houston, Texas. The physiologist/researcher has served at the USAISR for the last 13 years as the tactical combat casualty care research task area program manager and is now the Combat Casualty Care Research Senior Scientist.

Maj. Gen. Brian C. Lein, Commanding General, U.S. Army Medical Research and Materiel Command and Fort Detrick and Deputy for Medical Systems to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology presented Convertino with his flag, equivalent to a one star general/admiral, and praised him for his contributions to research and combat casualty care throughout his career.

"His bio speaks for itself," said Lein. "More research has come out of this organization over the course of the last 15 years that directly impacts the care of Soldiers on the battlefield and he has been a huge part of that."

Convertino earned a bachelor's in Mathematics and Physical Education at the California State University at San Jose, a master's in Exercise Science and a Ph.D. in Physiology at the University of California at Davis. Before coming to the USAISR he was at NASA's Ames Research Center, the Stanford University School of Medicine, the University of Arizona, NASA's Kennedy Space Center, and the U.S. Air Force Research Laboratory.

During his remarks Convertino talked about the passing of Dr. Norman McSwain who was a member of the Committee of Tactical Combat Casualty Care, "and a huge contributor to critical care medicine for trauma patients," he said.

"If he knew you he would come up to you and start the conversation with



Dr. Vic Convertino and his wife Barbara display his ST flag with their daughters and grandchildren during his Senior Executive Service corps in Science and Technology flag and pin ceremony July 30. Convertino is the Combat Casualty Care Research Senior Scientist at the U.S. Army Institute of Surgical Research.

"what have you done for the good of mankind, lately," recalled Convertino. "In that context, I believe that there's not a person in this audience that can't say 'I come to work every day and I support the research and clinical mission to advance our capabilities to treat our wounded warriors and save lives on the battlefield.'"

"I am truly humbled and grateful to have the opportunity to continue to work with all of you to meet our mission," said Convertino. "Our mission, I believe, is very important and that is optimizing combat casualty care."

Convertino has collaborated in numerous areas of research nationally and internationally. His accolades are numerous and include the 2013 Outstanding Distinguished Alumnus Award from the College of Biological Sciences at the University of California at Davis, the 2013 Emergency Medical Services Top Ten Innovator Award, and the 2014 Texas Regional American College of Sports Medicine Career Award. He was also inducted into the Space Foundation Technology Hall of

Fame in 2008.

"Dr. Convertino's extensive research experience and established position as a leader in the greater scientific community positions him to be an ideal advisor to the Army on scientific and technological problems, said Col. (Dr.) Michael D. Wirt, USAISR Commander. "We all expect great things from Dr. Convertino as he looks to position Army research to meet challenges of the future."

The SES was created in 1978 by Congress to form a corps of executives selected for their leadership credentials and are charged with leading the ever-changing American government.





BRIT consortium holds quarterly meeting at USAISR

Story and photo by Steven Galvan
USAISR Public Affairs Officer

The Burn Research in Texas (BRIT) consortium composed of the five burn centers in Texas held its quarterly meeting July 14 hosted by the U.S. Army Institute of Surgical Research (USAISR) Burn Center at Fort Sam Houston, Texas. All five burn centers are American Burn Association verified and include the USAISR Burn Center in San Antonio; University of Texas Southwestern Medical Center Parkland Hospital Burn Center in Dallas; University of Texas Medical Branch (UTMB) Truman G. Blocker Burn Center in Galveston/Shriners Hospitals for Children - Galveston; John S. Dunn Burn Center at Memorial Hermann-Texas Medical Center in Houston; University Medical Center Timothy J. Harnar Regional Burn Center in Lubbock; and recently, burn researchers from the University of Tex-

as Health Sciences Center San Antonio have joined the consortium.

“Independently, each of these five burn centers have a proud and long history of leading the world in research and innovation in the field of burn care,” said Lt. Col. (Dr.) Kevin Chung, USAISR Director of Research. “The BRIT was established in 2012 to continue this long tradition and to synergize our efforts to help accelerate future advances in burn care.”

According to Celeste Finnerty, Ph.D., Associate Professor at UTMB and Associate Director for Research at the Shriners Hospital for Children-Galveston, the meetings rotate through each of the centers in order to all staff and trainees from each site to participate in the consortia efforts.

“The meetings include educational components, project updates and planning sessions for developing new initiatives,” said Finnerty.

Finnerty added that the meeting at

the USAISR was exciting and productive. The group of 43 burn clinical and scientific experts reviewed the progress of the clinical trials that are already underway within the consortium—many of which are funded by the Department of Defense.

“Additionally, we were able to identify several areas of investigation that the group will now focus on, leveraging the expertise and resources within BRIT in order to obtain additional funding,” she said.

Some of the current projects that the BRIT consortium is collaborating on include a multi-center study to evaluate oil and gas related injuries in Texas; aggressive exercise regimen for burn rehabilitation; early inflammatory markers in burn related sepsis (life-threatening complications due to infection); and burn resuscitation studies involving automated decision support systems.

UMD College Park student interns at USAISR



University of Maryland, College Park student Cynthia Njatcha (center) is participating in a 10-week summer internship program at the U.S. Army Institute of Surgical Research at Fort Sam Houston, Texas, sponsored by the Oak Ridge Institute for Science and Education. Njatcha was selected to team up with research physiologist Luciana Torres, Ph.D. (right) and her husband Ivo Torres, Ph.D., who is also a research physiologist and doctor of medicine.

Story and photo by Steven Galvan
USAISR Public Affairs Officer

When University of Maryland, College Park student Cynthia Njatcha enrolled for college classes during her freshman year, her ambition was to become a medical doctor. Soon after she began her studies, she learned of an educational program that made her change her mind about being a doctor because she felt that this other program would be more beneficial to her native country of Cameroon.

"I realized that I don't want to treat people when they are sick," said Njatcha. "I want to help them and educate them before they get sick."

At the age of 14, Njatcha's family moved to the U.S. Having witnessed firsthand the diseases and health issues in Cameroon—many of which she feels can be eliminated with the proper training and education of the general population.

Now as a college senior, when she

returns for classes after the summer break she will continue to study for a bachelor's degree in Public Health Science. But before she continues her studies as an undergraduate student, Njatcha is participating in a 10-week summer internship program at the U.S. Army Institute of Surgical Research (USAISR) at Fort Sam Houston, Texas sponsored by the Oak Ridge Institute for Science and Education (ORISE).

"This program exposes students to the lab environment and provides them with invaluable research experience," said David M. Burmeister, Ph.D., USAISR combat casualty care research scientist and lead intern mentor. "This program also helps students to clarify their educational goals and enables them to reach those goals."

"The program also provides an opportunity to not only use and develop science-related knowledge and skills, but to enhance some of the skills that are transferable to any professional work setting," said Luciana Torres,

Ph.D., research physiologist at the USAISR Damage Control Resuscitation task area.

Njatcha is one of 11 interns from colleges and universities from throughout the U.S. selected to conduct research with a USAISR mentor and research team. Njatcha was selected to team up with Luciana and her husband Ivo Torres, Ph.D., who is also a research physiologist and doctor of medicine. The research that she'll be involved in is designed to determine how some plasma proteins are associated with changes in the microvascular system after hemorrhagic shock.

"She will also learn various aspects of the daily work routine at our research lab," said Ivo. "This includes experiment preparation, performance and data analysis. She will also conduct her own project, under the supervision of experienced investigators."

Njatcha said that this is a great experience for her and thinks that her mentors are awesome. She also believes that this summer internship confirms that she is studying for the right degree.

"I love working in the lab and I know that this is what I want to do," she said. "I believe that this experience will someday help me do research so that I can prevent people from getting sick in Cameroon."

"I have been positively impressed with her work, especially with her motivation and determination," said Luciana. "I believe Cynthia's perseverance and enthusiasm will continue inspiring her to create new ideas, embrace great opportunities, and make the best decisions about the direction of future career in public health."

Ivo said that he was just as impressed with Njatcha and believes that she may go in any career path that she chooses.

"She is a very determined person. She has shown immediate interest in all activities that she has been exposed to," he said. "Being selected to this very competitive program is testament to her tenacity and resolve."

FDA approves cold-stored platelets for resuscitation

Story and photo by Steven Galvan
USAISR Public Affairs Officer

The Food and Drug Administration announced June 29 the approval of cold-stored apheresis platelets for the resuscitation of bleeding patients. The agreement by the FDA allows storage of apheresis platelets for three days at refrigerator temperature (between 1 to 6 degrees Celsius or 33.8 to 42.8 degrees Fahrenheit). Apheresis platelets are removed from a donor's blood that has been passed through a device that separates the platelets and returns the blood back to the donor. The change is welcomed by military researchers at the U.S. Army Institute of Surgical Research at Fort Sam Houston, Texas who see this as a first step to further development of cold-stored platelets for treatment of combat wounded warriors on the battlefield.

"This was a very important decision from the FDA," said Dr. Heather Pidcoke, research physiologist and deputy task area manager of the Coagulation and Blood Research Program at the USAISR.

According to Pidcoke, research conducted at the USAISR on platelets collected by apheresis and stored in the cold shows that the platelets retain blood clotting qualities longer and are less likely to be contaminated by bacteria than the current standard-of-care room temperature stored platelets.

"We found that platelets were active and functional in the cold up to 14 days, whereas we found much diminished aggregation response in the platelets stored at room temperature after day three," said Pidcoke.

"We will now be able to conduct research on extending the FDA-approved storage time of cold-stored apheresis platelets to beyond three days," said Lt. Col. (Dr.) Andrew Cap, chief of the USAISR Coagulation and Blood Research Program.

"That's where our research is focusing on now," added Pidcoke.

Before the change by the FDA,



Armando Rodriguez draws platelets to prepare them for a series of tests to determine platelet function at the U.S. Army Institute of Surgical Research, Fort Sam Houston, Texas.

bleeding patients could only be transfused with apheresis platelets stored at room temperature, which circulate in the body for longer periods of time than cold-stored platelets, but lose most of their blood clotting function during storage. According to FDA regulations platelets can be stored at room temperature for only five days, because of the increased risk of bacterial growth in room temperature products. This risk forces hospitals to quarantine platelets for bacterial testing before transfusion.

"That takes two days," Pidcoke said. "If nothing is growing on day two, then it can be transported or used on or after day three when the results are known. In essence, room temperature platelets only have a three day functional shelf life – like cold-stored platelets."

Cold storage of apheresis platelets will make them safer and will allow them to be used immediately without bacterial testing, like red blood cells. Pidcoke added that there are other

benefits to cold storage of apheresis platelets.

"Cold-stored platelet bags can be added to red blood cell and plasma bags in a chilled 'Golden Hour' blood transport box. This makes it practical to give platelets on the battlefield."

Another benefit of cold-stored platelets is that the need for a machine to shake the room temperature stored platelets is eliminated, "which reduces the footprint or equipment needed in a battlefield operating room," said Pidcoke.

Platelets are a vital component in blood that combines with red blood cells and plasma to form clots that stop or minimize blood loss. Trauma patients with severe bleeding can be transfused with platelets to assist with coagulation.

"If you don't have platelets for trauma patients, you are going to have a hard time saving lives," said Pidcoke. "The research here at ISR has taken a major step forward in trying to achieve that goal."

Safety Notes

By Stephanie L. Truss
Health, Safety and Environmental Specialist



August is Back to School Safety Month

As summer draws to a close, back-to-school season is in full effect. Remember to safely share the roads with school buses, pedestrians and bicyclists, and provide children with the necessary knowledge to stay safe at school. It's hard to wave goodbye to your children as they set off for another year in school. All you can do is hope that they stay strong, do their best, and try to learn as much as possible. But what many parents don't realize is that the learning needs to begin before the shoes are tied and the lunches are made. With organizations such as the National Safety Council there is a plethora of safety tips to guide you in your preparations and plans.

In an effort to help parents and kids avoid injuries at the end of summer, August has been designated Back-to-School Safety Month. Here just a few back-to-school safety tips to help your child avoid the most common types of school-related injuries:

Backpack Safety

- Choose the right backpack. Your child's backpack should fit well, have shoulder and back padding, offer many compartments, and have at least some reflective material so he or she can be seen in the dark.
- * Try it out. Have your child

In the Spotlight

Spc. Shawn C. Lackey

Job title: Medical Laboratory Specialist

How long have you worked at the ISR? 7 months

What or who has been an inspiration to you in your work? The motivation of my team.

What is your favorite part of your work? My team! Budgeting.

What is your proudest achievement? My children.

Short- and long-term goals: Bachelors in Nuclear Engineering. Earn the title of SGT. Get a masters in Nuclear Engineering. Retire from the Army.

Hobbies: Soccer, and bike riding.

Favorite book: *I Am Number Four* by Pittacus Lore

Favorite movie/TV show: *The Matrix/Supernatural*

Favorite quote: "The supernatural is the natural not yet understood."
Elbert Hubbard



load his or her books and supplies in the backpack. If he or she hunches over, struggles to put it on, has shoulder pain or red marks on the skin, the load is probably too heavy.

- Remember the rules. Encourage your child to wear both straps, make multiple locker trips to lighten the load, and use his or her leg muscles when lifting or bending to pick up the backpack.

Walking to School Safety

- Plan your route. If your child walks to school, you can help keep him or her safe by determining the safest sides of the road for their children to walk.. Once you have determined a route, make sure your child always walks the same way home in case he needs to be found quickly.
- Safe crossing. Teach your children to use crosswalks whenever possi-

ble if they need to cross the street. Everyone should know to look "left-right-left" before crossing and that they should stop talking to their friends while crossing the road.

- Review the rules. Make sure your child always walks on the sidewalk, and knows how to behave while crossing the road and walking between parked cars.

Riding a Bike to School

- Helmets on. All children who ride their bikes to school should have well-fitting helmets that are securely fastened and worn for every ride.
- Heads up! Discourage your children from wearing headphones or listening to music while riding their bikes. These are dangerous distractions that could cause a child to miss important traffic

SAFETY continues on page 18

Health News

By Maria G. Dominguez, R.N. COHN-S/CM Occupational Health



Back to school events are here!

Back-to-school

sales! That means back packs, lunch kits and shots! Oh my! It is a prime time for ensuring that children are up-to-date on all their immunizations. Why is it important to be vaccinated? "Vaccinations are the most effective protection against disease," says Lt. Col. Laura Pacha, disease epidemiology program manager at the U.S. Army Public Health Command. Not only should adults be vigilant in their vaccinations to prevent spreading diseases to their children and others, but the children themselves need the protection. Additionally, health experts say that when individuals choose not to get immunized, outbreaks of a disease can occur.

Measles is just one example. According to the CDC, there were multiple outbreaks of measles across the United States in 2014, almost 600 cases. In 2013, Texas experienced the highest number of pertussis cases since 1959 with over 3,900 cases; another myth is that 'natural infection' is preferable to vaccine-induced immunity. "Natural infection is unpredictable and risky; severe or even fatal illness could result," said Pacha. "Preventing illness and its complications are precisely the reasons vaccines were developed."

If your child has special health needs or a chronic health concern like asthma, food allergies, or diabetes that require ongoing monitoring and special provisions at school, make sure to work with the school nurse to

develop a plan that accommodates the child's needs—for instance, keeping an inhaler, or blood glucose monitoring kit accessible at school. Good communication and teamwork between you and school personnel are the keys to keeping your child safe and learning at school, and importantly, making sure that your child has access to the same education as other children.

August also brings Medic Alert Awareness Month to remind us in critical situations instant access to medical information shaves off precious time. Ensuring that a first responder, emergency room doctor or law enforcement officers have vital medical information and have it swiftly can be the difference between life and death. Children with special health care needs such as asthma, cerebral palsy, diabetes, spina bifida, hemophilia or various genetic diseases would also benefit wear medical tags or bracelet.

For the moms going back to work or staying at home, World Breastfeeding Week campaign is in August as well. This year's theme is "Breastfeeding and Work - Let's Make it Work." It's all about looking back at the 1993-Mother-Friendly Workplace Initiative - but there's still work to be done to highlight the importance of the promotion and support of breastfeeding. Breastfeeding is essential for your baby because it provides the child with all the antibodies and nutrients she or he needs to stop from getting ill in the future. The American Academy of Pediatrics places great emphasis on increasing breastfeeding in the United States. And talking of work! Do chemicals in the environment pass to infants through breast milk? Should women exposed to environmental toxins breastfeed? The toxicity of chemicals may be most dangerous during the prenatal period and the initiation of breastfeeding. However, for the vast majority of women the benefits of breastfeeding appear to far outweigh

the risks.

Reproductive toxicity includes adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in offspring. Substances and mixtures with reproductive and/or developmental effects are assigned one of two hazard categories, "known or presumed" and "suspected." Category 1 has two subcategories for reproductive and developmental effects. Materials which cause concern for the health of breast-fed children have a separate category. Category 2: Known or presumed human reproductive toxicant.

To date, effects on the nursing infant have been seen only where the mother herself was clinically ill from a toxic exposure. A statement on the transfer of drugs and chemicals into human milk was first published in 1983, with revisions in 1989 and 1994.

So when should a mother avoid breastfeeding? Health professionals agree that human milk provides the most complete form of nutrition for infants, including premature and sick newborns. However, there are rare exceptions when human milk is not recommended. Under certain circumstances, a physician will need to make a case-by-case assessment to determine whether a woman's environmental exposure or her own medical condition warrants her to interrupt or stop breastfeeding.

Troops and military family members are newly able to receive any manual, electric or hospital grade breast pump for free, provided they have a prescription under a new coverage policy issued by Tricare. The pumps may be purchased at any store, according to the new policy.

So as you wrap up your summer and get ready for back to school, Child Eye Health and Safety Month, Friends for Sight reminds you to include an eye examination as part of your back to

HEALTH continues on page 18

Communication tool valuable to staff/family members



Keith Thompson, a critical care nurse at the U.S. Army Institute of Surgical Research Burn Center at Fort Sam Houston, Texas, writes a note on the Team View board which is used as a communication tool at the Burn Intensive Care Unit.

Story and photo by Steven Galvan
USAISR Public Affairs Officer

Communication among staff members in a complex and challenging environment like a burn intensive care unit is critical to providing optimal medical care. With that in mind, a communication tool was designed by staff members to improve communication between all healthcare team members at the U.S. Army Institute of Surgical Research (USAISR) Burn Center Intensive Care Unit (BICU) at Fort Sam Houston, Texas. The communication tool is called “Team View” and is located outside of the patient’s room. This dry erase board is detailed with important information about a patient’s condition and activities important to the team. The tool is updated throughout the day and used during rounds for the staff to communicate and stay aligned with patient’s treatments, medications, rehabilitation, etc.

While designed as a communication tool for the BICU staff, patient’s family members have also found the Team View to be helpful.

“It’s an awesome tool,” said Kimla Holk, the mother of a BICU patient. “It allows us to see how he is doing and to keep informed of his condition. It also prompts us to ask questions when the board changes.”

Lt. Col. (Dr.) Jeremy Pamplin, BICU medical director and interim task area manager for Clinical Trials in Burns and Trauma helped create the Team View poster with input from the BICU staff for as part of a research project. The poster is part of a “Phases of Illness Paradigm” study that is designed to create valid checklists to support clinical decision making and improve communication among the multidisciplinary staff.

“We can stay in constant communication by writing notes that everyone can see,” he said. “For family members, they are able to visually see the condi-

tion of their loved one and to be better informed which can prompt them to ask questions.”

“It keeps us from harassing the staff, and what I mean by that is asking too many questions,” said Holk. “It’s brilliant and hard to believe that something this simple is so informative and useful.”

Research nurse and task area research coordinator for the Systems of Care for Complex Patients task area, Sarah Murray is working with Pamplin on this research project and said that an area on Team View that family members look at every day is at the top of the poster colored red, yellow and green. During rounds the staff determines the condition of the patient by placing a dot within the colors—a dot in the red indicates the patient is not doing very well and in the green, the patient is doing really well.

“It allows family members to see right away how sick their loved one is,” said Murray. “Nurses have told me that the family always asks them what made the dot change. I’m not sure if they would be prompted to ask those questions of the nurse without this tool.”

Murray added that this is the first real feedback that she has received from a family since starting the research project in October 2014, possibly due to changes in how the healthcare team updates the tool that now keep the tool consistently more complete.

“Overall they love the tool and are very impressed that we would spend time working on improving our communication,” she said. “They perceive the tool as a way the team is communicating to them. Even though they get anxious when the patient is getting sicker, they still appreciate the tool.”

“We need communication at all levels,” said Holk. “This type of communication is proof that we are getting the ultimate care from a staff that is courteous, compassionate and caring.”

Around the ISR

Top right: Col. (Dr.) Booker T. King gives a tour of the Burn Center July 16 to military officers from around the world attending the Medical Strategic Leadership Program at the U.S. Army Medical Department Center & School.

Center right: Retired Army Col. Dr. Russ Kotwal poses July 14 with former Secretary of Defense, Robert Gates, former Joint Theater Trauma Registry Director, retired Air Force Col. Dr. Warren Dorlac and Jeffrey Howard, Ph.D. after doing a brief on prehospital data.

Bottom: Lt. Col. Thomas Rountree and Lt. Col. John Melvin greet members of the 5th Medical Recruiting Battalion Center of Influence Educator Tour July 15 for a tour of the Burn Center.

Center left: CD Peterson gives a tour of the Burn Center July 29 to Air Force nursing students at the Military Educational Training Center.





CELEBRATING SCIENCE

In this new section we endeavor to celebrate the dissemination of generalizable knowledge in the form of published manuscripts. One of our core missions is translation of knowledge gained through pre-clinical and clinical experiments in an effort to optimize combat casualty care. It is important to acknowledge and recognize the collective work of our investigators during this process. Hence, we plan on “celebrating science” on a regular basis.



* PubMed listed articles

TOP THREE PAPERS IN JUNE

Resuscitation

Acute blood loss during burn and soft tissue excisions: An observational study of blood product resuscitation practices and focused review.



Heather Pidcoke



Lt. Col. Andrew Cap

Pidcoke HF, Isbell CL, Herzig MC, Fedyk CG, Schaffer BS, Chung KK, White CE, Wolf SE, Wade CE, Cap AP.

J Trauma Acute Care Surg.

Carter R 3rd, Hinojosa-Laborde C, Convertino VA.

Physiol Rep.

The authors characterized blood product transfusion techniques during burn and soft tissue surgery and reviewed the published literature regarding intraoperative coagulation changes. Consented adult patients were enrolled into a prospective observational study. Number, component type, volume, and age of the blood products transfused were recorded during burn excision/grafting or soft tissue debridement. Results concluded that blood product resuscitation during burn and soft tissue excision is not hemostatic and would be insufficient to address hemorrhage-induced coagulopathy.

Burn depth

Utility of spatial frequency domain imaging (SFDI) and laser speckle imaging (LSI) to non-invasively diagnose burn depth in a porcine model.

Burmeister DM, Ponticorvo A, Yang B, Becerra SC, Choi B, Durkin AJ, Christy RJ.

Burns



David Burmeister



Robert Christy

Surgical intervention of second degree burns is often delayed because of the difficulty in visual diagnosis, which increases the risk of scarring and infection. Non-invasive metrics have shown promise in accurately assessing burn depth. This paper examines the use of spatial frequency domain imaging (SFDI) and laser speckle imaging (LSI) for accurate assessment of the severity of burn wounds in real time.

Heterotopic ossification

Locally Delivered Nonsteroidal Anti-inflammatory Drug: A Potential Option for Heterotopic Ossification Prevention.

Rivera JC, Hsu JR, Noel SP, Wenke JC, Rathbone CR.

Clin Transl Sci.



Maj. Jessica Rivera

Oral nonsteroidal antiinflammatory drugs (NSAIDs) are prescribed for heterotopic ossification prophylaxis following at-risk injuries and procedures. The researchers cultured osteoblasts with three commercially available NSAIDs. Results concluded that locally delivered NSAIDs may be useful for heterotopic ossification prophylaxis due to effects on osteoblast viability and lack of negative effects on wound healing

TRANSLATIONAL RESEARCH

Resuscitation

Blood far forward: Time to get moving!
 Cap AP, Pidcock HF, DePasquale M,
 Rappold JF, Glassberg E, Eliassen HS,
 Bjerkgvig CK, Fosse TK, Kane S,
 Thompson P, Sikorski R, Miles E, Fisher
 A, Ward KR, Spinella PC, Stranden G.
J Trauma Acute Care Surg.



Lt. Col. Andrew Cap

Fungal treatment

Variable Effects of Proton Pump Inhibi-
 tors on Voriconazole: an in vitro Study.
 Niece KL, Boyd NK, Akers KS.
Antimicrob Agents Chemother



Lt. Col. Kevin Akers

Blood plasma

All plasma products are not created
 equal: Characterizing differences be-
 tween plasma products.
 Spinella PC, Frazier E, Pidcock HF,
 Dietzen DJ, Pati S, Gorkun O, Aden JK,
 Norris PJ, Cap AP.
J Trauma Acute Care Surg.



Lt. Col. Andrew Cap

Antibiotics

A Preliminary Method for Direct Quan-
 tification of Colistin Methanesulfonate
 by Attenuated Total Reflectance Fourier
 Transform Infrared Spectroscopy (ATR
 FT-IR).

Niece KL, Akers KS.
Antimicrob Agents Chemother



Lt. Col. Kevin Akers

Memory

Mammalian Target of Rapamycin
 (mTOR) Tagging Promotes Dendritic
 Branch Variability through the Capture
 of Ca²⁺/Calmodulin-dependent Protein
 Kinase II α (CaMKII α) mRNAs by the
 RNA-binding Protein HuD.
 Sosanya NM, Cacheaux LP, Workman
 ER, Niere F, Perrone-Bizzozero NI,
 Raab-Graham KF.
J Biol Chem.



Natasha Sosanya

Critical care management

Update on Severe Burn Management for
 the Intensivist.
 Lundy JB, Chung KK, Pamplin JC,
 Ainsworth CR, Jeng JC, Friedman BC.
J Intensive Care Med.



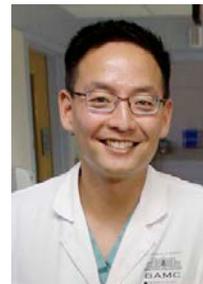
Maj. Jonathan Lundy

Advances in burn research

Burn wound healing
 and treatment:
 review and advance-
 ments.
 Rowan MP, Cancio
 LC, Elster EA,
 Burmeister DM,
 Rose LF, Natesan S,
 Chan RK, Christy
 RJ, Chung KK.
Crit Care



Matthew Rowan



Lt. Col. Kevin Chung

CLINICAL RESEARCH

Vital signs

Improving the prediction of mortality and the need for life-saving interventions in trauma patients using standard vital signs with heart-rate variability and complexity.



Nehemiah Liu



Jose Salinas

Liu NT, Holcomb JB, Wade CE, Salinas J. *Shock*

Mechanical ventilator practices

A Survey of Mechanical Ventilator Practices Across Burn Centers in North America.

Chung KK, Rhie RY, Lundy JB, Cartotto R, Henderson E, Pressman MA, Joe VC, Aden JK, Driscoll IR, Faucher LD, McDermid RC, Mlcak RP, Hickerson WL, Jeng JC.

J Burn Care Res.



Lt. Col. Kevin Chung

Biofilms

Clinical infectious outcomes associated with biofilm-related bacterial infections: a retrospective chart review.

Barsoumian AE, Mende K, Sanchez CJ Jr, Beckius ML, Wenke JC, Murray CK, Akers KS.

BMC Infect Dis.



Lt. Col. Kevin Akers

Skin graft

A novel approach to graft loss in burn using the CelluTome™ epidermal harvesting system for spot grafting: A case report.

Howarth AL, Bell BE, Peterson WC, Renz EM, King BT, Chan RK.

Burns



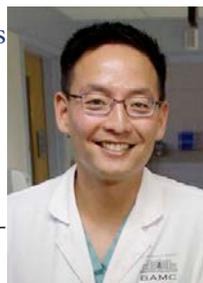
Rodney Chan

Biomarkers for risk prediction

The potential utility of urinary biomarkers for risk prediction in combat casualties: a prospective observational cohort study.

Stewart IJ, Glass KR, Howard JT, Morrow BD, Sosnov JA, Siew ED, Wickersham N, Latack W, Kwan HK, Heegard KD, Diaz C, Henderson AT, Saenz KK, Ikizler TA, Chung KK.

Crit. Care



Lt. Col. Kevin Chung

Blood loss

Sex comparisons in muscle sympathetic nerve activity and arterial pressure oscillations during progressive central hypovolemia.

Carter R 3rd, Hinojosa-Laborde C, Convertino VA.

Physiol Rep.



Vic Convertino

Data quality indices

Data quality of a wearable vital signs monitor in the pre-hospital and emergency departments for enhancing prediction of needs for life-saving interventions in trauma patients.



Nehemiah Liu



Jose Salinas

Liu NT, Holcomb JB, Wade CE, Darrah MI, Salinas J. *J Med Eng Technol*

EXTRAMURAL COLLABORATION

The effects of combat-related mild traumatic brain injury (mTBI): Does blast mTBI history matter?

Kontos AP, Elbin RJ, Kotwal RS, **Lutz RH, Kane S, Benson PJ**, Forsten RD, Collins MW.
J Trauma Acute Care Surg.

Fluid restriction during exercise in the heat reduces tolerance to progressive central hypovolaemia.

Schlader ZJ, Gagnon D, Rivas E, **Convertino VA**, Crandall CG.
Exp Physiol.

Tranexamic acid as part of remote damage-control resuscitation in the prehospital setting: A critical appraisal of the medical literature and available alternatives.

Ausset S, Glassberg E, Nadler R, Sunde G, **Cap AP**, Hoffmann C, Plang S, Sailliol A.
J Trauma Acute Care Surg.

Needle thoracostomy for tension pneumothorax: the Israeli Defense Forces experience.

Chen J, Nadler R, Schwartz D, Tien H, **Cap AP**, Glassberg E.
Can J Surg.

Coagulation function of stored whole blood is preserved for 14 days in austere conditions: A ROTEM feasibility study during a Norwegian antipiracy mission and comparison to equal ratio reconstituted blood.

Strandenes G, Austlid I, Apelseh TO, Hervig TA, Sommerfelt-Pettersen J, **Herzig MC, Cap AP, Pidcoke HF**, Kristoffersen EK.
J Trauma Acute Care Surg.

A transient cell-shielding method for viable MSC delivery within hydrophobic scaffolds polymerized in situ.

Guo R, Ward CL, Davidson JM, Duvall CL, Wenke JC, Guelcher SA.
Biomaterials

Combat-Related *Pythium aphanidermatum* Invasive Wound Infection: Case Report and Discussion of Utility of Molecular Diagnostics.

Farmer AR, Murray CK, **Driscoll IR**, Wickes BL, Wiederhold N, Sutton DA, Sanders C, Mende K, Enniss B, Feig J, Ganesan A, Rini EA, Vento TJ.
J Clin Microbiol.



Top Paper in June Winner

David Burmiester, Ph.D., center, displays a command coin presented to him by Col. (Dr.) Michael Wirt, right, July 28. Burmiester was the winner of the Top Three Papers in June. Burmiester poses for this photo with Col. Wirt and Lt. Col. (Dr.) Kevin Chung, the interim director of research.



Back When...



Can you guess who this ISR staff member is? This photo was taken in 1989 when she was a Pvt. at U.S. Special Operations Command, MacDill Air Force Base, Fla.

Submit your photo for publication in upcoming issues.

Last Month's Answer:



Calvin L. Cooper
Webmaster

SAFETY continued from page 10
cues.

- Rules of the road. Make sure your children know the biking rules of the road. They should ride all the way to the right side of the street (with traffic), use proper hand signals, and always come to a complete stop at an intersection.

Riding the Bus

- Getting on and off. Teach your child the safest way to get on and off the bus, including standing six feet from the curb, waiting for the bus to stop completely, and using the handrail to climb the steps.
- No zones. The areas surrounding the bus cannot always be easily seen by the driver. Teach your child to keep 10 feet of space around the bus when crossing in

- front or in back of the bus, and both your child and the bus driver should be able to each other.
- Bus behavior. Children who are talking loudly, fighting, or singing on the school bus can cause distractions to a bus driver. Encourage your child to stay in his seat, keep his hands to himself, and talk quietly with the friends around him.

JUAREZ continued from page 5

also knows that while he's taking care of the Company that he has to take care of himself as well—both professionally and personally. His short-term goal is to earn his Masters Degree in Hospital Administration from the University of the Incarnate Word. But, ultimately he wants to set himself up to someday retire from the Army knowing that he took advantage of every opportunity the Army presented him, which in his mind would signify a successful career. For now he looks forward to his tour at the ISR.

"I feel both blessed and honored to have been selected to command the ISR Company," Juarez said. "I just want to make sure that the Institute Commander, Soldiers, and Civilians understand my gratitude for having the awesome opportunity, in leading such a unique place."

SGM continued from page 3

up to," said Lein. "He has been a friend to me and my family, but most importantly he has been a mentor to thousands of junior Soldiers, noncommissioned officers all along the way. The impact that he had on the generations of Soldiers that came up underneath his leadership, underneath his counseling, mentorship and taking care of his subordinates has been the sole focus of his career."

Rice was presented the Legion of Merit and an American flag that had been flown over the U.S. capital. During his remarks, Rice thanked everyone in attendance and several leaders who he said made an impact on his career.

"I've been exposed to some of the best leaders in Army Medicine," said Rice. "Soldiering has always been deep in my heart for me and I've considered it an honor and a privilege. It was truly and honor and a blessing working with you."

HEALTH continued from page 11

school check list. Common signs of vision troubles in children include: frequently rubbing eyes, squinting, tilting or turning head to look at objects, wandering eyes, or squeezing eyes. If your child (or grandchild) displays any of these symptoms, schedule an appointment to have their eyes checked. The inability to see clearly effects academic and athletic performance and self-esteem.

Stay cool, hydrated and safe. Watch out for the school zones!