



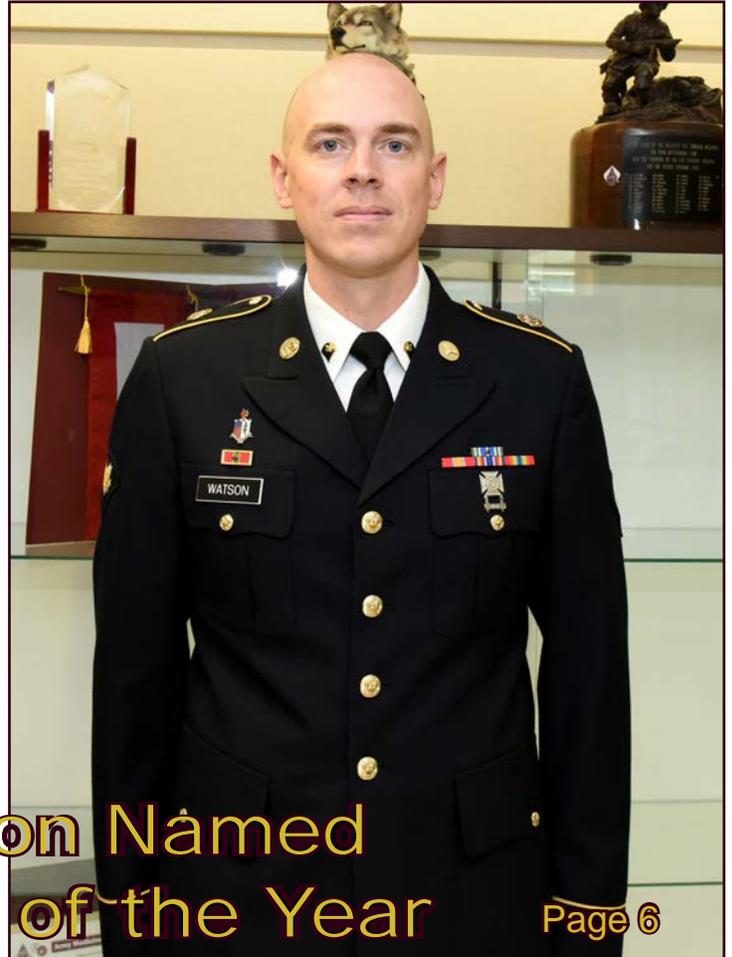
# THE INNOVATOR

OPTIMIZING COMBAT CASUALTY CARE



APRIL 2016

THE NEWSLETTER OF THE U.S. ARMY INSTITUTE OF SURGICAL RESEARCH



## Kim, Watson Named NCO/Soldier of the Year

Page 6

Inside This Issue

Page 12

- CDR's Corner ..... 2
- SGM Says ..... 3
- Company Notes..... 4
- Pie in the Face..... 5
- Adopt *Stop the Bleed*..... 7
- Safety Notes/Employee in the Spotlight ..... 8
- Health News ..... 9
- Around the ISR..... 10-11
- Celebrating Science ..... 13-15
- Back When/Library News ..... 16



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## Sierra First USAISR Soldier Selected for SAMA

# CDR's Corner



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

## "Optimizing Combat Casualty Care"

Greetings ISR,

Spring is here and changes are taking place all around us. The weather is getting nicer, the landscape is getting green. While everything around us seems to be changing, the one constant remains ever present: your tireless motivation and dedication to combat casualty care. The proof is in the numerous reviews that I've completed while getting your abstracts, presentations, and posters submitted for the upcoming Military Health System Research Symposium. It has been a true pleasure as every one of your submissions has one thing in common: people working together as a team to generate high quality research. Your team work and collaboration across task areas, within MRMC and with academia has really impressed me. Teamwork and collaboration is what has gotten us to where we are today and will catapult us into the future enabling us to continue

our critical mission of saving lives on the battlefield. Thank you just doesn't seem to give justice to how grateful I feel toward your efforts day-in and day-out. That said, I would still like to thank each of you for what you do here every day.

I would also like to thank everyone who was involved in coordinating, setting up, and executing our highly successful USAISR Organization Day. I appreciate all of you participating in the various events and activities for our staff and family members throughout the day and hope you enjoyed the BBQ that was served for lunch. Successful events like this don't just happen—you're efforts before, during, and after made it possible. So a big thank you to those individuals who helped make it happen and thank you to the staff that came out to support the occasion. I know that our ongoing mission

was the culprit for some of you who couldn't make it out to enjoy the festivities, but I hope that at the minimum you were able to enjoy lunch.

As I mentioned earlier, MHSRS is on the horizon. The dates and location are still in the works, but as soon as the details are confirmed I will let you know as well. I'm looking forward to another successful symposium where we can highlight and share our combat casualty care research.

As always, the month of April starts off with April Fool's Day on the 1st, which happens to be National Fun Day/Fun at Work Day. April also brings a dreaded day for some of us—tax day. This year it will be on the 18th since the 15th is on a Friday, so you get an extra weekend to finish your taxes. The 3rd Monday in April is when we observe Patriot's Day to commemorate **CDR continues on page 9**



Col. (Dr.) Michael Wirt, right, welcomes Col. (Dr.) Iain Gibb, UK's Defense Consultant Advisor in Radiology to the Institute for a brief and a tour of the facility March 10.



# ARMY MEDICINE

Serving To Heal...Honored To Serve

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SGM Says



Sergeant Major James L. Devine



USAISR leaders with the 2016 NCO and Soldier of the Year. Left to right: Sgt. Maj. James Devine, Col. (Dr.) Michael Wirt, NCO of the Year Sgt. Tae Kim, Soldier of the Year Spc. David Watson, Capt. Jose Juarez and 1st Sgt. Natasha Tsantles.

Greetings ISR,

Spring is here and old man winter has past, new beginnings. I would like to congratulate LTC Mann-Salinas as she celebrated her promotion to Colonel. Congratulations to SSG Rose as he celebrates his promotion to Sergeant First Class. Well deserve to the both of you senior leaders. Thank you to their Soldiers and Staff, TEAMWORK.

Congratulations to Staff Sgt. Pablo Sierra for becoming the first Institute of Surgical Research noncommissioned officer to be recommended to be inducted to receive the coveted the Sgt. Audie Murphy Award and become a member of the Joint Base San Antonio Sergeant Audie Murphy Club. Well-deserved Staff Sgt. Sierra, pay it forward. Your accomplishment will inspire and motivate many others.

Congratulations to Sgt. Tae Kim and Spc. David Watson for represented the ISR last month in the 2016 Medical Research and Materiel Command Noncommissioned of the Year and Soldier of the Year Competition. You represented the ISR very well.

On March 24 the ISR conducted its own Organization Day. Thank you to all who participated and support this great event. I think that it will be the first of many more to come. Thank you to Stephanie Truss, Staff Sgt. Gina

Chang and the event NCOICs for orchestrating such a wonderful unit event.

The ISR will continue moving forward to new levels and it will not get

there without its PEOPLE. Thanks to the Clinical, Research and Administrative Staffs because without you none of the ISR success would be possible. "One Team, Team ISR"!



On the Cover

Sgt. Tae Kim, left, was selected as the USAISR 2016 Noncommissioned Officer of the Year and Spc. David Watson was selected as the USAISR 2016 Soldier of the Year during an awards ceremony March 10. Kim and Watson competed at the next level for the title of U.S. Army Medical Research and Materiel Command's Soldier and NCO of the Year which was held at Fort Detrick, March 28 through April 1.

# Company Notes



Company Commander  
Capt. Jose A. Juarez

First Sergeant and I would like to acknowledge that we did not have any Soldiers report to the organization this month. But, we do want to take a moment to welcome something that we have all missed dearly: Spring! We would like to say farewell to the following Soldier: Sgt. Nguvan Uhaa; thank you for your contributions to the organization and best wishes in your future endeavors. Your presence will most definitely be missed!

A congratulation to Staff Sgt.(P) Dustyn Rose, as his sequence number has come up for promotion to Sergeant First Class in April. This is a momentous transitional promotion for

noncommissioned officers as this is the first promotion from the semi-centralized system to the Department of the Army centralized system. Congratulations are also in order for Sgt.(P) Patricia Brodbeck as she will be promoted to the rank of Staff Sergeant! When you see both of these NCOs, please stop them and congratulate them on their success. Terrific job and kudos on your accomplishments!

The 2016 NCO of the Year Competition was held March 7-11 at various locations on JBASA and Camp Bullis. The competition was stiff, but there were only two victors that emerged from this competition: Sgt. Tae Kim is the NCO of the Year and Spc. David Watson is the Soldier of the Year. They will be the unit representation at the MRMC Best Warrior Competition, and we know that they will represent the unit well! Please congratulate them as you see them around the organization. Thank you to the entire Cadre that made the event possible.

We held our NCO and Soldier of the Month competition for March and the victors were Sgt. AliceAnn Meyer and Spc. Raymond Calzada! Please congratulate these leaders on their enormous success! Their photographs will be on display in the company area.

Upcoming events: April is Sexual Assault Awareness and Prevention Month. I urge everyone to enjoy the events that'll be set up at SAMMC and here within the ISR. Our SHARP team will be involved in coordinating multiple events, with more detailed information to follow. April also brings us many other events throughout the month. The largest event of the month, at the company level, is the Semi-Annual APFT which is going to be conducted April 11-15. We know that everyone has been working extra hard to surpass their previous scores. Go out, have fun, and do your best! April 14 begins the start of Fiesta here in San Antonio. This is a time of celebration and excitement. Please ensure that you take time to enjoy the many festivities that this great city has to offer (it ends on the 24th)! The month of April will

**COMPANY continues on page 5**



NCO of the Year  
Sgt. Tae Kim



Soldier of the Year  
Spc. David Watson



NCO of the Month  
Sgt. AliceAnn Meyer



Soldier of the Month  
Spc. Raymond Calzada

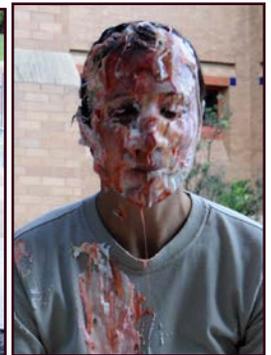
**COMPANY continued from page 4**

also hold our 2nd QTR FY16 Soldier and NCO of the month competition. There will be more to follow on the details.

Always challenge yourselves and try to step outside of your comfort zones by seizing new opportunities. Carpe Diem!

Thank you all for everything that you all do every day. It never gets old telling you that it is truly an honor serving as your Commander and First Sergeant! Army Strong!

*Pie in the Face*



The USAISR Special Events Committee held a *Pie in the Face* fundraiser March 11 to raise funds for the Institute's Organization Day and other special events throughout the year. Top: Bobbie Mills and Sgt. Jacqueline Mason. Center right: Spc. Daniel Oladejo and 1st Sgt. Natasha Tsantles. Bottom right: Spc. Daniel Oladejo and Sgt. 1st Class D. Keith Lowe. Bottom left: Capt. Jose Juarez and Sgt. Maj. James Devine. Center left: Lt. Col. Ammon Brown and Bobbie Mills. Top left: Staff Sgt. Tiffany Baldwin and Sgt. 1st Class Burt Hensley.

## Kim, Watson selected 2016 ISR NCO, Soldier of the Year



Sgt. Tae Kim, left, was selected as the USAISR 2016 Noncommissioned Officer of the Year and Spc. David Watson was selected as the USAISR 2016 Soldier of the Year. Kim and Watson competed in a week-long competition March 7-10 at various location throughout Joint Base San Antonio.

Story and photos by Steven Galvan  
USAISR Public Affairs Officer

After a tough week-long competition in which seven Soldiers and noncommissioned officers competed for the title of 2016 U.S. Army Institute of Surgical Research's Soldier and Non-commissioned Officer of the Year, the victorious warriors were announced March 10. The announcement was made during an awards ceremony at the San Antonio Military Medical Center auditorium hosted by USAISR Commander, Col. (Dr.) Michael Wirt and Sgt. Maj. James Devine.

"We are very proud of all of the competitors," said Wirt addressing the competitors. "Throughout the week you faced and completed some challenging and demanding events to prove that you are the best of the best."

"We started with seven competitors and only four of you made it through the week, but every one of you is a winner," added Devine. "Unfortunately, we can only have one winner in each category."

Sgt. Tae Kim earned the title of Noncommissioned Officer of the Year.

He is a native of Seattle and is assigned to the Laboratory Support Services—Research Support Division as a medical laboratory specialist. Selected for Soldier of the Year was Spc. David Watson who hails from Fairfield, Montana, and is a histotechnician at the Anatomical Pathology Division.

"I feel extremely honored to have this title," said Kim. "I will take the opportunity to push myself further and to do my best to contribute to the ISR and the Army."

Kim enlisted in the Army in 2013 and has been assigned to the ISR for almost two years. He said he joined the Army because he wanted to serve his country and for personal and professional growth.

"I get to interact with people from different backgrounds," Kim responded when asked what he likes best about his job. "I learn about them and their perspectives and work together with them as one team."

Kim attributes teamwork to his success in the laboratory and during the competition.

"Oddly, my competitor, Staff Sgt. Vidal, helped me the most to prepare

for the competition," he said. "He helped me with the Army Warrior Tasks and the Tactical Combat Casualty Care lanes which I lacked knowledge on the most."

Being physically prepared, motivated to win and a bit of luck are the factors that Kim said got him through the competition.

"It was challenging, and I had to keep reminding myself of why I was competing," he said.

The one thing that Kim would like people to know about him is that he gets motivated by the good things that his peers do. He said that it makes him strive to be a better person and a Soldier. With that in mind, Kim said that his short-term goal is to become a certified medical technologist. In the long-term he's aiming to serve in the Veteran's Administration health system as a healthcare administrator.

For now Kim is preparing for the next competition and the challenge ahead of him and feels confident that he'll do well by summing it up with this short phrase: "I do not like losing."

Joining Kim at the competition  
***NCO/SOY continues on page 7***

**NCO/SOY continued from page 6**

at Fort Detrick, Maryland, will be Watson who joined the Institute 16 months ago and has been in the Army a little more than two-and-a-half years. He said he joined the Army for better opportunities and to be able to succeed in an organization worth being a part of—it's also a family thing.

“Out of the eight kids that my parents have, six of us have served or are serving in the military,” said Watson.

When asked why he believed he was selected as the Soldier of the Year, Watson said: “Because I have shown in the last year that failure should be

taken as an opportunity to succeed, not to give up.”

Watson said that he feels privileged to represent the ISR at the next level and looks forward to the competition.

“Being able to represent the ISR allows me to take pride in myself because it shows that a Soldier can receive recognition for doing the right things and trying harder to achieve goals,” he said.

His goal is to win the Soldier of the Year competition against other Soldiers who will be competing against him at the headquarters level, but he also has his sights set on other goals. He wants to earn the Expert Field

Medical Badge, a master's degree and ultimately get a commission as an Army officer. Until then, he's going to move forward and gives this advice to anyone who would like to earn his spot.

“There's always time to prepare for a competition: just make a list of priorities,” said Watson. “When you win it shows that age or background should not limit a person to compete.”

Kim and Watson will compete at the next level for the title of U.S. Army Medical Research and Materiel Command's Soldier and NCO of the Year which will be held at Fort Detrick, March 28 to April 1.

## Texas EMS, Trauma Organizations Adopt 'Stop the Bleed' Training

By Cynthia R. Kurkowski  
JTS Senior Technical Writer

The Texas Emergency Medical Services Trauma and Acute Care Foundation publicly announced support for the *Stop the Bleed* campaign which aims to train individuals to recognize life-threatening bleeding and administer appropriate medical treatment. During the November TETAF general meeting, the board of directors voted to support the Hartford Consensus and the national *Stop the Bleed* campaign.

Recommendations for controlling external hemorrhage from the U.S. Army Institute of Surgical Research Joint Trauma System at Fort Sam Houston, Texas, were the basis for the clinical and ideological changes to first responder trauma care curriculum.

TETAF will adopt training materials from the U.S. Military Tactical Combat Casualty Care Course, the Committee on Tactical Emergency Casualty Care Guidelines and the Prehospital Trauma Life Support Course which is cosponsored by the National Association of Emergency Medical Technicians and the American College of Surgeons Committee on Trauma. The program is part of the organizations' efforts to promulgate the Bleeding Control for the Injured Course.

“The JTS has been honored to be a participant in the American College of

Surgeons-sponsored Hartford Consensus effort and the White House-sponsored *Stop the Bleed* campaign,” said Dr. Frank Butler, chairman of the Committee on Traumatic Combat Casualty Care and JTS prehospital trauma expert.

“The U.S. military has learned a great deal about prehospital trauma care in the 14 years of war that we have just experienced. The same Tactical Combat Casualty Care pioneered external hemorrhage control innovations which have saved so many American lives in Afghanistan and Iraq are now being used to help save American lives at home.”

In addition to TETAF's endorsement, *Stop the Bleed* is being supported by numerous Regional Advisory Councils and the Texas Governor's EMS and Trauma Advisory Council.

GETAC voted to review the Hartford Consensus III Report as it relates to empowering the public to serve as first responders in intentional mass-casualty and active shooter events and *Stop the Bleed*. The Hartford Consensus III Report was presented at the White House roundtable discussion at last year's *Stop the Bleed* campaign debut.

Good Samaritan laws have been effective in empowering the public to become involved in the immediate re-

sponse to a victim of cardiac arrest or choking by the initiation of cardiopulmonary resuscitation and the Heimlich maneuver, respectively. The Hartford Consensus recommends that these legal protections be extended to include the provision of bleeding control.

The Hartford Consensus calls for a seamless, integrated response system that includes the public, law enforcement, first responders, and definitive care to employ the THREAT response in a comprehensive and expeditious manner. THREAT stands for:

- Threat suppression
- Hemorrhage control
- Rapid Extrication to safety
- Assessment by medical providers
- Transport to definitive care

Various resources are available free of charge, including a *Bleeding Control for the Injured* presentation, ACS-COT Evidence-Based Prehospital Guidelines for External Hemorrhage Control and a list of PHTLS State Coordinators. These and other resources can be accessed on the TETAF website.



# Safety Notes

By Stephanie L. Truss  
Health, Safety and Environmental Specialist



## April is National Distracted Driver Month

Thousands have died in car crashes involving cell phone use. New technology allows us to make phone calls, dictate texts or emails and update social media while driving – all actions that are proven to increase crash risk. The National Safety Council observes April as Distracted Driving Awareness Month to draw attention to this epidemic. NSC wants empower you to put safety first and Take Back Your Drive. Distracted driving is any activity that diverts a person’s attention from the primary task of driving. All forms of distracted driving endanger driver, passenger, and bystander safety.

At any given daylight moment across America, approximately 660,000 drivers are using cell phones or manipulating electronic devices while driving, a number that has held steady since 2010. Distracted driving has become a deadly epidemic on America’s roadways. A total of 3,154 people were killed in 2013 and an estimated 424,000 injured in motor vehicle crashes that involved distracted drivers. Distracted driving is a dangerous epidemic on America’s roadways. In 2014, 3,179 people were killed in distracted driving crashes Our youngest and most inexperienced drivers are most at risk, with 10% of all distracted

## In the Spotlight

Spc. Aaron Liddle

**Job title:** Bioscience Specialist

**How long have you worked at the ISR?** 15 months

**What or who has been an inspiration to you in your work?**  
That we are helping to improve the casualty care on the battlefield and the casualties at home with what we are doing.



**What is your favorite part of your work?** Knowing that what I am doing is going to help my fellow man and future generations.

**What is your proudest achievement?** Being a member of the Funeral Honors detail and honoring our fallen heroes.

**Short- and long-term goals:** To graduate college and to become a Pastor.

**Hobbies:** Playing chess and being with my family.

**Favorite book:** The Book of Proverbs from *The Bible*

**Favorite movie/TV show:** *3rd Rock from the Sun*

**Favorite quote:** : “It is better to trust in the LORD than to confidence in man” *Pslams 118:8*

driving crashes involving drivers under the age of 20. This age group has the largest proportion of drivers who were distracted

We ask that you follow installations, local and state laws in reference to distracted driving. Take it a step further by taking the pledge to be an attentive driver:

I pledge to Take Back My Drive for my own safety and for others with whom I share the roads. I choose to not drive distracted in any way – I will not:

- Have a phone conversation – handheld, hands-free, or via Bluetooth
- Text or send Snapchats
- Use voice-to-text features in my

- vehicle’s dashboard system
- Update Facebook, Twitter, Instagram, Vimeo, Vine or other social media
- Check or send emails
- Take selfies or film videos
- Input destinations into GPS (while the vehicle is in motion)
- Call or message someone else when I know they are driving

A simple pledge one that you can share with your family and friends. One simple text can wreck lives. The best way to end distracted driving is to educate about the danger it poses. Together, we can help save lives.

Simple reminder from the 2014 distracted driving awareness month.  
**U drive. U Text. U Pay.**



# Health News

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



In Texas, the Bluebonnets mark the beginning of spring! And Texans know that it gets warm in Texas. Spring average temperatures in Texas are 79 degrees. Average sunny days 25/month. Average precipitation in April is 3.3 inches up to 4.2. So outdoors here we come!

Spring activities in Texas range from rodeos to music to art shows. Crawfish Festival, Art festivals, Strawberry Fest and birding festival. There's the Scarborough Faire, the Renaissance Festival and much more.

As the temperatures rise every spring, there's a corresponding increase in fatal accidents. Army accidents rise as well. Soldiers, Army civilians and their family members are eager to get back to the fun only warm weather can bring: motorcycles, road trips, water activities and relaxation with friends that often includes alcohol. Because you are undoubtedly going to enjoy your off-duty time or time away from the office, its incumbent leaders at all levels to ensure everyone is equipped to make smart decisions. Every two years, the Army releases a new safety campaign intended to promote individual responsibility and engagement on all fronts — among Leaders, Soldiers, Civilians, Families and peers — to help prevent fatalities and injuries throughout the year. The current safety campaign is entitled "Ready...or Not?" Remaining in line with Army "The Ready and Resilient Campaign" it is designed to heighten awareness of risk factors .

So let's start by looking at Texas. According to State of Texas Vital Statistic report in 2014 Texas had 3,534 deaths related to motor vehicles. Breakdown listed as: pedestrian accidents 37; passengers 163. DUI drivers 677. Other 1. Persons in car not DUI related 163. Crashes, injuries and fatalities caused by drunk drivers continue to be the major traffic safety problem in Texas. According to data, Texas' alcohol-impaired driving fatality rate was greater than the National average rate each year. During Spring Break 2015, there were 459 crashes in Texas involving young drivers (17-34 years of age) under the influence of alcohol. Those crashes led to 43 serious injuries and 16 fatalities. Compared to hunting accidents: 1 fatality, 24 non-fatal total 25 accidents.

According to US Department of Transportation, 80.1 percent of Texas residents drive alone to work, higher than the national average. Texas ranks second in vehicle miles traveled and first in public road miles. Texas ranks second in the nation in freight shipments. Texas ranks #6 overall in value of agricultural exports leading the nation in cattle, cotton, hay, sheep, goats and mohair production.

Texas is also the best state for business in 2015, according to a survey by Chief Executive Magazine of the U.S.'s top CEOs. Texas has taken the top spot every year since the beginning of the

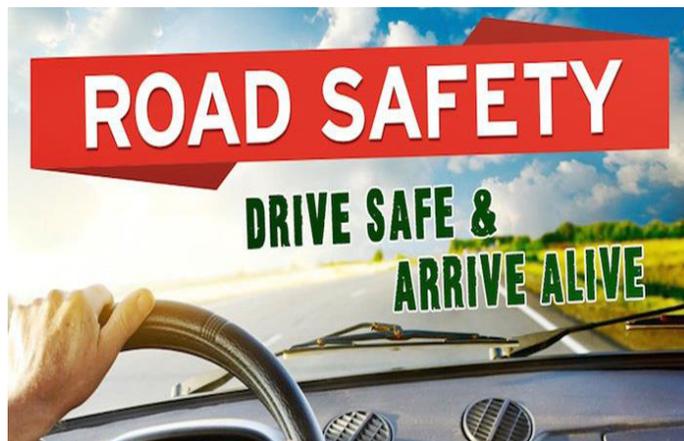
survey in 2005, thus the vehicle miles traveled and first in public road miles. Let's celebrate spring by increasing April's Alcohol Awareness Month, and highlight National Public Health Week (April 4) which champions the health of all people and communities for key public health issues.

And do you know the name, "Texas," comes from a Caddoan Indian word meaning "friendly" or "friend." And according to the Texas Governor's office report the Friendliest City (U.S.), San Antonio was #3 in 2014. Have a safe and healthy spring ! Let's keep everything bigger and better in Texas !

**CDR continued from page 2**

the Battle of Lexington and Concord as well as the midnight ride of Paul Revere. Earth Day will be celebrated on the 22nd as usual and on the last Friday in April we will celebrate National Arbor Day. There are numerous monthly observances and holidays in April so I'll only name a few such as National Sexual Assault Awareness and Prevention Month, National Child Abuse Prevention Month, National Distracted Driving Awareness Month, and Stress Awareness Month please come out and support the awareness activities.

Once again, thank you for all that you do every day at the ISR—you efforts do not go unnoticed. Hooah! Army Strong!



# Around the ISR

Top right: Phyllis Turner cuts her birthday cake March 11.  
Bottom right: Andrew Wallace describes the capabilities of the Burn Flight Team to medical officers from the United Arab Emirates during a tour of the Burn Center March 30.  
Bottom left: Col. (Dr.) Jeffery Cleland, right, describes the function of the shock tube March 10 to Col. (Dr.) Iain Gibb, UK's Defense Consultant Advisor in Radiology.  
Top left: Sgt. 1st Class George Wallace explains how rehab is part of burn patient's healing process March 8 to Scott Hughes, Military Legislative Assistant and Legislative Director for Representative (Dr.) Joe Heck Chairman, House Armed Service Committee, Subcommittee: Military Personnel, and Jami Burgess, Military Legislative Assistant for Representative Denny Heck, Legislative Responsibility: Armed Services, Budget and Defense.



## Around the ISR cont.



Top right: Staff Sgt. Maria Thomas presents DC Peterson with a certificate from the office of the mayor of San Antonio during his retirement ceremony March 31.

Bottom right: Jimmy Rodriguez, center, gives a tour of the Burn Intensive Care Unit March 31 to educators attending the U.S. Army Recruiting Battalion--Los Angeles Center of Influence Educator Tour.

Left bottom: Staff Sgt. Wendy Abel, left, gives a tour of the Burn Rebab Unit March 31 to educators attending the U.S. Army Recruiting Battalion--Oklahoma City Center of Influence Educator Tour.

Left center: Col. (Dr.) Booker King, right, gives a tour of the Burn Center March 30 to incoming Brooke Army Medical Center commander Col.(P) Jeffrey Johnson and his family.

Top left: Sgt. Maj. James Devine, left, pins on Sgt. Tae Kim's new rank during Company Formation March 4.



# Sierra First USAISR Soldier Selected for SAMA

By Steven Galvan  
USAISR Public Affairs Officer

Earning the Sergeant Audie Murphy Award—Goal accomplished.

That was a goal set last year by Staff Sgt. Pablo R. Sierra, III, from the U.S. Army Institute of Surgical Research at Fort Sam Houston, Texas, when he was named the USAISR 2015 Non-commissioned Officer of the Year. Just a few days after he relinquished his title to the 2016 NCO of the Year, the San Antonio native learned that he was the only candidate within the U.S. Army Medical Research and Materiel Command this quarter to be selected to earn the prestigious award—the first NCO ever to earn it from the USAISR.

“Joining the Sgt. Audie Murphy Club is a huge honor itself, but it is definitely not the end—it’s actually the beginning,” said Sierra, the non-commissioned officer in charge of the Dental and Craniofacial Research Directorate. “It means that it is my turn to do my part in carrying the torch forward and helping others to realize their potential as well.”

Sierra joins an elite club of NCO’s who represent the characteristics of Sgt. Audie Murphy’s leadership and caring for Soldiers.

According to the Sgt. Audie Murphy Club website, induction into the club is for noncommissioned officers who exemplify leadership characterized by personal concern for the needs, training, development and welfare of Soldiers and concern for families of Soldiers.

The club was started in 1986 at Fort Hood, Texas to honor Sgt. Audie Murphy who was the most decorated U.S. combat Soldier (including the Medal of Honor) during World War II. Murphy was wounded three times and served in nine major campaigns throughout Europe and is credited for wounding, capturing or killing 240 enemy soldiers.

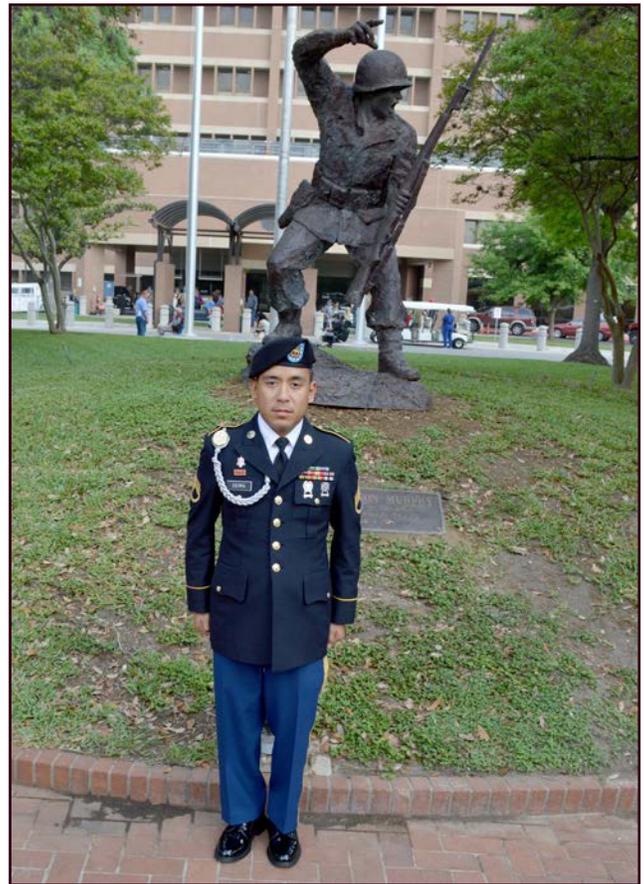
During his three years of active ser-

vice (1942-1945), Murphy rose from the rank of private to earning a battlefield commission as a second lieutenant. In 1945, after being released from active duty, Murphy moved to Hollywood where he acted in 44 films to include *To Hell and Back* which was based on a book he wrote about his experience during WWII. Murphy died in a plane crash at the age of 46, but his legacy continues to inspire Soldiers today.

Sierra enlisted in the Army eight-and-a-half years ago and said that he wanted to earn this honor to pay homage to the NCOs who paved the way for him and to prove to Soldiers that he is willing to “lead from the front” (a term coined by Murphy) and pave the way for them.

“I realized a long time ago that life is short,” he said. “I’ve learned that I have to seize any positive opportunity that presents itself and that I need to appreciate those who serve to my left and right. I am a product of outstanding NCO leadership and would not be here without them.”

Sierra also attributes his success to the support of his wife who is also a



Staff Sgt. Pablo Sierra III poses in front of the Sgt. Audie Murphy Veteran’s Administration Hospital in San Antonio, Texas.

sergeant in the Army and their three children.

“They are my motivation for everything that I do,” he said.

To prepare for the rigorous board, Sierra said that he studied Army publications for many hours while also gaining knowledge from other experienced leaders around him. The advice that he gives NCOs who want to earn this honor is simple.

“Study straight from the source and be bold enough to ask questions from those who are subject matter experts and those with more experience,” Sierra said. “I would like to thank my family, unit leadership, and the USAISR NCOs who always push me to do better and have provided me the support that I needed to get me through.”

“Joining the Sgt. Audie Murphy Club is a huge honor itself, but it is definitely not the end—it’s actually the beginning. It means that it is my turn to do my part in carrying the torch forward and helping others to realize their potential as well.”

**Staff Sgt. Pablo R. Sierra III**

# CELEBRATING SCIENCE



In this 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.

## TOP THREE PAPERS OF THE MONTH

### The Compensatory Reserve

Variability in integration of mechanisms associated with high tolerance to progressive reductions in central blood volume: the compensatory reserve.

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

High tolerance to progressive reductions in central blood volume has been associated with higher heart rate (HR), peripheral vascular resistance (PVR), sympathetic nerve activity (SNA), and vagally mediated cardiac baroreflex sensitivity (BRS). Using a database of 116 subjects classified as high tolerance to presyncopal-limited lower body negative pressure (LBNP), the authors tested the hypothesis that subjects with greater cardiac baroreflex withdrawal (i.e., BRS > 1.0) would demonstrate greater LBNP tolerance associated with higher HR, PVR, and SNA. Subjects underwent LBNP to presyncope.

Contrary to the hypothesis, higher HR, PVR, SNA, and BRS were not associated with greater tolerance to reduced central blood volume. These data are the first to demonstrate the variability and uniqueness of individual human physiological strategies designed to compensate for progressive reductions in central blood volume. The sum total of these integrated strategies is accurately reflected by the measurement of the compensatory reserve

### Storage of Platelets

Storage of platelets at 4°C in platelet additive solutions prevents aggregate formation and preserves platelet functional responses.

Getz TM, Montgomery RK, Bynum JA, Aden JK, Pidcoke HF, Cap AP  
*Transfusion*

BACKGROUND: Platelet (PLT) storage has been limited to 5 days at room temperature due to metabolic decline and risk for bacterial contamination. Refrigeration preserves

PLT metabolism and function as well as limits bacterial growth; however, cold storage of PLTs also leads to aggregate formation. The authors hypothesized that storage of PLT concentrates at 4°C leads to glycoprotein (GP)IIb-IIIa activation and thus aggregate formation through fibrinogen binding and that this could be prevented by storing PLTs in PLT additive solution (PAS) without compromising PLT function. STUDY DESIGN AND METHODS: Apheresis PLTs in plasma (AP) or apheresis PLTs in PAS were stored at 22 or 4°C for up to 15 days. Measurements include PLT counts, blood gases, aggregation response, flow cytometry analysis of integrin levels, activation markers, and micro-particle formation. RESULTS: Storage of AP 4°C led to a gradual decline in PLT count and an increase in aggregate formation that was mediated by intracellular calcium leak and fibrinogen receptor activation. Storage of PAS at 4°C prevented aggregate formation due to dilution of plasma fibrinogen. PAS stored at 4°C maintained aggregation responses to multiple agonists better than 22°C controls. CONCLUSION: Storage of AP at 4°C leads to low level GPIIb-IIIa activation and results in aggregate formation over time. Separating the PLTs from the plasma component and storing them in PAS at 4°C resolves aggregate formation and preserves the metabolic and functional responses of these stored PLTs.

### Polytrauma

Procoagulant and fibrinolytic activity after polytrauma in rat

Wu X, Darlington DN, Cap AP.  
*Am J Physiol Regul Integr Comp Physiol*

The purpose of this study was to determine whether trauma-induced coagulopathy is due to changes in 1) thrombin activity, 2) plasmin activity, and/or 3) factors that stimulate or inhibit thrombin or plasmin. Sprague-Dawley rats were anesthetized with 1-2% isoflurane/100% oxygen, and their left femoral artery and vein were cannulated. Polytrauma included right femur fracture, and damage to the small intestines, the left and medial liver lobes, and right leg skeletal

muscle. Rats were then bled 40% of blood volume. Plasma samples were taken before trauma, and at 30, 60, 120, and 240 min. Polytrauma and hemorrhage led to a significant fall in prothrombin levels. However, circulating thrombin activity did not change significantly over time. Antithrombin III and  $\alpha 2$  macroglobulin fell significantly by 2 h, then rose by 4 h. Soluble thrombomodulin was significantly elevated over the 4 h. Circulating plasmin activity, plasminogen, and D-dimers were elevated for the entire 4 h. Tissue plasminogen activator (tPA) was elevated at 30 min, then

decreased below baseline levels after 1 h. Plasminogen activator inhibitor-1 was significantly elevated at 2-4 h. Neither tissue factor pathway inhibitor nor thrombin activatable fibrinolysis inhibitor changed significantly over time. The levels of prothrombin and plasminogen were 30-100 times higher than their respective active enzymes. Polytrauma and hemorrhage in rats lead to a fibrinolytic coagulopathy, as demonstrated by an elevation in plasmin activity, D-dimers, and tPA. These results were consistent with the observed clinical benefit of tranexamic acid in trauma patients.

## TRANSLATIONAL RESEARCH

### Burn Associated Pain: Animal Models

Progress of clinical practice on the management of burn-associated pain: Lessons from animal models.

McIntyre MK, Clifford JL, Maani CV, Burmeister DM.

*Burns*

## CLINICAL RESEARCH

### Allostatic Load

Does allostatic load calculation method matter? Evaluation of different methods and individual biomarkers functioning by race/ethnicity and educational level.

Howard JT, Sparks PJ.

*Am J Hum Biol*

## EXTRAMURAL COLLABORATION

### Hemodynamic Instability

A Signal Processing Approach for Detection of Hemodynamic Instability before Decompensation.

Belle A, Ansari S, Spadafore M, Convertino VA, Ward KR, Derksen H, Najarian K.

*PLoS One*

### Breast Milk

Breast Milk Protects Against Gastrointestinal Symptoms in Infants at High Risk for Autism During Early Development.

Penn AH, Carver LJ, Herbert CA, Lai TS, McIntire MJ, Howard JT, Taylor SF, Schmid-Schönbein GW, Dobkins KR.

*J Pediatr Gastroenterol Nutr*

### Effect of Age and Military Service

Effects of Age and Military Service on Strength and Physiological Characteristics of U.S. Army Soldiers.

Abt JP, Perlsweig K, Nagai T, Sell TC, Wirt MD, Lephart SM.

*Mil Med.*

### Ophthalmic Disease

Acute and Chronic Ophthalmic Involvement in Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis - A Comprehensive Review and Guide to Therapy. II. Ophthalmic Disease.

Kohanim S, Palioura S, Saeed HN, Akpek EK, Amescua G, Basu S, Blomquist PH, Bouchard CS, Dart JK, Gai X, Gomes JA, Gregory DG, Iyer G, Jacobs DS, Johnson AJ, Kinoshita S, Mantagos IS, Mehta JS, Perez VL, Pflugfelder SC, Sangwan VS, Sippel KC, Sotozono C, Srinivasan B, Tan DT, Tandon R, Tseng SC, Ueta M, Chodosh J

*Ocul Surf.*

### Effect of Age and Military Service

Management of Postoperative Pain: A Clinical Practice Guideline From the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council.

Chou R, Gordon DB, de Leon-Casasola OA, Rosenberg JM, Bickler S, Brennan T, Carter T, Cassidy CL, Chittenden EH, Degenhardt E, Griffith S, Manworren R, McCarberg B, Montgomery R, Murphy J, Perkal MF, Suresh S, Sluka K, Strassels S, Thirlby R, Viscusi E, Walco GA, Warner L, Weisman SJ, Wu CL.

*J Pain*



## TOP PAPER OF THE MONTH

James Bynum, Ph.D., left, is presented with a Combat Casualty Care Research Program coin March 30 by Lt. Col. (Dr.) Kevin Chung, Research Director for earning the Top Paper of the Month.

Photo by Staff Sgt. Olarewaju Magreola

## USAISR Staff Participate in Science Fiesta

By Kathy Ryan, Ph.D.  
Chief, Research Regulatory Compliance

U.S. Army Institute of Surgical Research staff participated in the First Science Fiesta March 4 at La Villita in downtown San Antonio. This family-friendly event was organized by the University of Texas Health Science Center at San Antonio. There were approximately 30 booths from organizations performing research in the San Antonio area, in addition to science poster presentations and talks. The USAISR hosted a booth at which we passed out information about the combat casualty care mission of USAISR, recruited for our summer GEMS program and spoke to interested individuals about our mission and research. Importantly, the booth was supported by both military and civilian scientists. Capt. Elaine Por and Capt. Gina Griffith and Drs. Alicia Schiller, Jaideep Banerjee and Josh Avila. Avila and Banerjee are postdoctoral research fellows.



# USAISR Organization Day

The USAISR Special Events Committee coordinated an Institute Organization Day March 24 with various activities for staff and family members to include games, food, facepainting and competitive events.

Competitive events winners:

**Tug of War:** 1st: Spc. Raymond Calzada, Spc. David Watson, Sgt. Benjamin Joiner, and Sgt. Tae Kim.

**Relay Race:** 1st: Staff Sgt. William Vidal and Spc. Raymond Calzada. 2nd: Spc. Matthew Durant and Spc. Fabian Quattlebaum. 3rd: Staff Sgt. Jamar Daniels and Staff Sgt. Tiffany Baldwin.

**Trivia:** 1st: Staff Sgt. Joel McVay. 2nd: Sgt. 1st Class Ansel Arizmendi. 3rd: Bridgette Adams.

**Volleyball:** 1st: Bonnieface Premdas, Staff Sgt. Timothy Hair and Staff Sgt. Gina Chang. 2nd: Sgt. Jamar Daniels, Sgt. Nguvan Uhaa, Spc. Matthew Durant and Staff Sgt. Jamar Williams. 3rd: Lt. Col. John Decker, Spc. Tyler Everett and Staff Sgt. David Shelley.

**Golf Scramble:** 1st: Col. Michael Wirt, Sgt. Maj. James Devine, 1st Sgt. Kenny Rogers and Sgt. 1st Class D. Keith Lowe. 2nd: Sgt. 1st Class Burt Hensley, Jaime Cavazos and Col. Michael Davis. 3rd: Staff Sgt. William Vidal, Sgt. Daniel Wendorff, Chris Bell and Gary Muniz.



**O-Day cont.**



Back When...



Can you guess who this ISR staff member is? This photo was taken in 1990 in Korea where her dad was stationed when she was 8 years old.

Last Month's Answer:



Wanda Segroves  
Head Nurse Burn Clinic

Submit your photo for publication in upcoming issues.

Wilkins.

You can search EBMR (Evidence-Based Medicine Reviews), Cochrane Database of Systematic Reviews, and ACP Journal Club through OvidMD. Full text journals available include such top ranked titles as Circulation, Circulation Research, Critical Care Medicine, Journal of Burn Care & Research, Journal of Orthopaedic Trauma, Transplantation, and many more.

Books@Ovid holdings can also be searched on OvidMD. Samples available are: Hospital Epidemiology and Infection Control, 3rd ed., A to Z Drug Facts, (updated in April 2016), Trauma Manual: Acute Care Surgery, 4th ed., Lippincott's Manual of Nursing Practice, 10th ed. and many others.

We have a number of access points to OvidSP. The link is shown on our library intranet home page. It is on the left side of the AMEDD Virtual Library Homepage, and can be found in LEAP under Databases. Finally, if you hold an Athens credential, it is listed there also.

I recommend you look over this platform and its many valuable resources. Any questions, I will be happy to assist. Thank you for using the ISR Library.

Library News



By Gerri Trumbo  
Library Manager

I recently attended a Train the Trainer workshop on the new features added to our OvidSP platform. I am hoping that at some later date I can put together a short presentation on the new databases we have available to us. Meanwhile, this will be a column devoted to some of the highlights of OvidSP that you might not be aware we had.

OvidMD offers a core package and

allows physicians to earn CME in the process. Full-text journal articles give you a 2 year rolling archive of 11 of the most popular Current Opinion journals from Lippincott Williams &

**The Research Regulatory Compliance Division will be conducting a Good Clinical Practice Training Course on May 9 (0800-1600 new to GCP) and May 10 (0800-1200 half day refresher) in the BHT1 2nd floor conference room.**

**Required every 3 years if you are involved with FDA-regulated IND/IDE research studies.**

