January is Cervical Health Awareness Month

By Christine Creenan-Jones, editor

Want to prevent cervical cancer? Get screened and vaccinated.

Regular Pap tests and immunization against human papillomavirus – the leading cause of cervical cancer – are the best ways to safeguard women, said Navy Capt. (Dr.) Jeffrey Quinlan, vice chair of Family Medicine at the Uniformed Services University, and Air Force Maj. (Dr.) Christopher Bunt, the clinic chief at USU’s Family Health Center.

Both physicians recommend scheduling a Pap test every three to five years for most women 21 and over and beginning the HPV vaccination between 12 and 13 for boys and girls. Although it’s important to note, the approved age range for the HPV vaccination is nine through 26.

Although it’s always relevant, Quinlan and Bunt’s message is especially prudent now, because January is Cervical Health Awareness Month.

“My biggest goal as a physician is to help people make informed decisions,” said Bunt. “The latest scientific evidence shows that regular screenings and the HPV vaccination is the best way for women to protect themselves from cervical cancer.”

These measures could significantly reduce fatality rates for cervical cancer, which claims the lives of more than 3,000 women each year. They also reduce the possibility of having to endure painful, emotionally taxing medical procedures in the fight against cervical cancer.

“The treatment of cervical cancer depends on the stage of cancer and may include surgery, chemotherapy, or radiation therapy. In advanced cases, a hysterectomy may be performed,” said Quinlan. “So for obvious reasons, early detection is the key to successfully treating cervical cancer in the least invasive way possible.”

For more information about cervical health, speak with your physician or stop by USU’s Family Health Center.

The Combined Federal Campaign at the Uniformed Services University exceeded its $105,000 goal by raising more than $154,000. These contributions will be used to support several CFC-sponsored charities.

Getting screened and vaccinated against human papillomavirus are the best ways for women to protect themselves from cervical cancer.
Brain bank to revolutionize study of traumatic brain injury in servicemembers

By Karen Carstens, writer at health.mil

The Defense Department advanced the study and treatment of traumatic brain injury in servicemembers by creating the world’s first human brain tissue repository for military personnel throughout 2013 at the Uniformed Services University.

The Center for Neuroscience and Regenerative Medicine Brain Tissue Repository was established with a grant from the Army Medical Research and Material Command.

“We have been at war for more than a decade, and our men and women have sacrificed,” Dr. Jonathan Woodson, Assistant Secretary of Defense for Health Affairs, said as he announced the repository’s creation last June. “The military health care system is bringing all the resources it can to better understand how to prevent, diagnose and treat traumatic brain injuries and to ensure that servicemembers have productive and long, quality lives.”

Dr. Daniel Perl, a neuropathologist and director of the brain tissue repository, recently told Health.mil that advancing research and care in this field requires extensive studies of human brain tissue samples, which will be archived at the USU-based research facility.

A key question in the diagnosis and treatment of traumatic brain injury in servicemembers is determining what exposure to bomb blasts does to the brain.

“It hasn’t really been studied in any detail, particularly any long-term effects,” said Perl. “That’s where I come in. I was recruited to essentially set up a state-of-the-art lab to study long-term effects of exposure to high [impact] explosives.”

Funds have been allocated by the Defense Department and others in the past to study animal models, yet this is not the most effective way of studying traumatic brain injury in humans, Perl underscored.

“It’s only a good model if it mimics what happens in man,” he said. “So if you don’t know what happens in a man, then it’s hard to say which animal model is correct.”

“We really have to go back to square one to see what’s happening in the human and study it.”

That, however, is the tricky part. In order to conduct long-term studies, human brains must be donated to further this kind of research. Usually there is just a small window of opportunity after a potential donor dies to transport and preserve human tissue for scientific purposes, not to mention the issue of getting the cooperation of the family.

Perl, who is also a professor of pathology at USU, said that family members can contribute to the tissue bank by donating the brains of deceased servicemembers, either active duty or retired, who have experienced traumatic brain injury.

In addition, family members can donate the brains of servicemembers who did not experience traumatic brain injury to the repository. This allows researchers to conduct comparative studies using unaffected brains and brains that were adversely affected by traumatic brain injury.

“There are a number of models of how this works,” Perl explained. “Virtually everything we know about diseases like Alzheimer’s, Parkinson’s, or Lou Gehrig’s disease has been based on the study and collection of brain specimens donated to research. That’s how this science happens.”

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Dr. Michael Roy, a professor of Medicine and director of the Division of Internal Medicine at the Uniformed Services University, is helping to bring post-traumatic stress therapy into the 21st century with Virtual Iraq/Afghanistan. The advanced simulation technology created by faculty at the University of Southern California’s Institute for Creative Technologies in 2004, and used by Roy since 2007, is an interactive method of therapy that takes patients back to Middle Eastern war zones.

With virtual reality goggles and a controller in hand, veterans with post traumatic stress find that the virtual environment can help them cope with anxiety, depression and other persistent symptoms that can sometimes follow combat deployments.

“For these patients who suffer from PTS, that feeling of hyper-vigilance they had while deployed doesn’t go away, they’re not sleeping. As a result, that fatigue eventually takes a toll on the body,” said Roy, who is also the director of Recruitment for USU’s Center for Neuroscience and Regenerative Medicine.

For some veterans, the events that brought on their PTS symptoms remain as fresh as the day they occurred and can trigger high levels of anxiety. Virtual Iraq, a form of exposure therapy, is a way to confront these traumatic memories through realistic simulations that replicate the look, sound and even smells of war, including gunfire, explosions, burning trash, helicopters and other battle stimuli.

Although this cutting-edge therapy may not work for everyone, Roy believes younger troops, especially the “video-game generation” could benefit from Virtual Iraq by getting them to use a familiar medium as a platform for meaningful communication.

“The idea is to conduct therapy while in the stressful, traumatic environment,” he said. “You want enough cues from their individual memories to get them talking. Once patients begin to talk, we can start to help.”

In addition to virtual reality, Roy is also using other technologies, such as Skype, FaceTime and smartphone-based apps to help servicemembers with post-traumatic stress symptoms. Roy hopes these approaches will be more appealing than traditional therapies, and will also help medical professionals reach out to servicemembers stationed at distant military bases.
Most human brains received by research facilities must be “fixed” in a preservative solution.

“We can make arrangements to have somebody extract the brain sample and arrange for it to reach us so that it doesn’t get damaged in transit,” said Perl.

Head trauma can lead to chronic traumatic encephalopathy, a neurodegenerative disorder that involves the progressive accumulation of the protein tau in nerve cells within certain regions of the brain. As the tau protein accumulates, it disturbs function and appears to lead to symptoms seen in those affected like boxers or professional football players with such trauma.

Perl was recently involved in investigations on the long-term effects of repeated head trauma in former NFL football players and other athletes in collaboration with the Boston University Center for the Study of Traumatic Encephalopathy.

“All the discussion and concern about multiple concussions in football and hockey players is based on looking at human brains that have been donated after death for this kind of study,” he said. “In the last five years there has really been a whole revolution in terms of how we think about participating in these sports – all based on this kind of approach.”

The Boston research on NFL players, he added, was based on less than 100 donated brain specimens.

A similar approach could now also be applied to servicemembers, who are at risk of brain injuries from bomb blasts. Among the questions to be answered, is whether this kind of exposure leads to chronic traumatic encephalopathy.

“We need to start to look at the military experience in terms of the kinds of traumatic brain injury [that] our service members suffer,” said Perl. “Their traumatic brain injuries are rather unique in that they frequently involve exposure to these powerful explosives.”

Finding out more about the long-term effects of this exposure will help to better diagnose, prevent and treat traumatic brain injury among our troops. “We know folks come back from the battlefield, and they have long-term problems. They have sleep disorders, difficulty concentrating, memory problems,” said Perl.

“And we don’t understand the nature of those. Some of this has been called PTSD [post-traumatic stress disorder], which is really a psychiatric disease, but some of it is probably actual damage to the brain... and we have to sort this out and try to understand it better. And this is the way you do it,” he added. “We think this is very important work.”

Perl also pointed out that this research will not occur in a vacuum, but involve collaborative efforts with other research facilities.

“It’s not just us doing the research. We collect the brains and store them, but we also make them available to researchers wherever they are,” he said. “We don’t have all the ideas here or all the capabilities, so we want to expand that to whoever is out there who might have a particular technique or something unique that might shed light on this problem.”

Perl said requests for tissues come from a “who’s who” of prominent scientists at top research facilities, including Harvard University, Columbia University, Johns Hopkins University, the University of California at San Francisco, Northwestern University and the National Institutes of Health.

This research can, however, only progress further if more brain tissue is made available. Hence the brain tissue repository established last year could help all researchers working in this area across the United States make major strides in the diagnosis and treatment of traumatic brain injury.

“We will foster more research,” Perl said in summing up the role of the repository.

For further information on donation to the brain tissue repository for traumatic brain injury, email the repository team at CNRM-TBI@usuhs.edu or call 855-DON-8TBI (855-366-8824).
Surgery chair inducted into nationally-recognized surgical association

By Christine Creenan-Jones, editor

Navy Capt. (Dr.) Eric Elster, chair of the Department of Surgery at the Uniformed Services University, recently became an elected member of the Southern Surgical Association – a prestigious, invitation-only organization that is comprised of top American surgeons.

Dr. Rich Norman, chair emeritus of the Department of Surgery at USU, and Dr. Julie Ann Freischlag, chair of the Department of Surgery at Johns Hopkins University, nominated Elster for SSA membership because of his landmark surgical career.

After completing a residency in general surgery at the National Naval Medical Center and a transplant fellowship at the National Institutes of Health, Elster became chief of the Transplant Division at the NNMC and later served as deputy head of Regenerative Medicine at the Naval Medical Research Center.

Furthermore, before joining USU’s faculty, Elster deployed to Kandahar, Afghanistan for a six-month tour as chief of surgery and director of surgical services at the NATO Role 3 Multinational Medical Unit, where he oversaw an interdisciplinary, multinational medical team. Elster is also an accomplished researcher, who has received millions of dollars in grant money to study combat casualty care and wound failure.

These impressive accomplishments and many others were the basis for Elster’s SSA membership.

“It is an honor and a privilege to be accepted for membership into one of the premier surgical organizations. Such peer recognition is humbling,” Elster said.

Adjunct faculty to lead American Medical Association

By Christine Creenan-Jones, editor

Dr. Robert Wah, an adjunct assistant professor in the Department of Obstetrics and Gynecology at the Uniformed Services University, was elected president-elect of the American Medical Association, the nation’s largest physician organization.

As president-elect, Wah will continue shaping AMA’s mission to promote the art and science of medicine and the betterment of public health.

Wah’s June 2013 nomination for one of AMA’s senior-most positions came on the heels of a highly successful career as a reproductive endocrinologist and ob-gyn. He currently practices and teaches USU students at Walter Reed National Military Medical Center, where he also serves as the division head and vice chairman of the Navy’s largest ob-gyn training program.

“Dr. Robert Wah is an incredible physician, teacher and mentor. We are proud to have him on our faculty,” said Dr. Arthur Kellermann, dean of the School of Medicine at USU. “His selection as president-elect of the American Medical Association not only demonstrates USU’s value as the leadership academy for military healthcare, it reflects the high caliber of our faculty at Walter Reed Bethesda and other military hospitals around the world and our commitment to improve the health of all Americans – servicemembers and civilians alike.”

After serving as president-elect for one year, Wah will be sworn in as AMA president in June 2014.

Attention all USU faculty

The Faculty Senate is currently seeking nominations for the 2014 Faculty Senate president-elect, secretary/treasurer, and senators.

Interested faculty are encouraged to contact Dr. Susanne Gibbons, chair of the Faculty Senate’s Nominations and Elections Committee, via e-mail at susanne.gibbons@usuhs.edu for a candidate form.
Associate dean bids farewell to USU, leaves behind impressive legacy

By Christine Creenan-Jones, editor

The research portfolio at the Uniformed Services University is impressive with new scientific headway being made daily across diverse biomedical disciplines. Although this progress represents much collaboration, Army Col. (Dr.) Kent Kester, associate dean for Clinical Research in the USU School of Medicine, is at the helm of many of these gains. His behind-the-scenes work to catalyze new research opportunities has greatly expanded USU’s investigative reach.

Unfortunately, Kester’s work at the university will come to an end when he retires next spring, having served more than 24 years on active duty.

“My feelings are mixed because my sadness at losing him is tempered by my admiration and respect for all he has accomplished over the course of his distinguished military career,” said Dr. Arthur Kellerman, dean of USU’s School of Medicine.

Like his time at USU, Kester’s military career has been defined by many large-scale successes. Before arriving in Bethesda, Kester spent 16 years at the Walter Reed Army Institute of Research in Silver Spring, where, among other duties, he led a successful vaccine development team for malaria, which has led to large-scale field trials underway in Africa involving more than 16,000 infants and small children.

“I like being involved in research because I’ve always enjoyed finding solutions to problems and not just accepting the status quo,” Kester said.

“Tremendous good can also come from research, and I enjoy being a part of these outcomes.” Kester may be a pioneer in the lab, but his leadership abilities rival his scientific acumen. While serving at WRAIR, Kester’s duty assignment culminated with his selection as commander. In this position leading the DoD’s largest biomedical research laboratory, he oversaw wide-ranging clinical research, from malaria, dengue, and HIV to post traumatic stress and traumatic brain injury. He was also a special consultant to the US Army Surgeon General before deploying to Afghanistan to lead a mission to evaluate infection control and infectious disease issues among deployed military troops.

These experiences have been invaluable at USU. Not only has Kester expanded research opportunities for billeted and non-billeted faculty, but he also worked hard to simplify the regulatory processes for research, making it easier for USU scientists to push new boundaries.

“My experience at USU has been great. We’re a community here. That doesn’t happen everywhere,” he said. “When I leave, my positive feelings about this place won’t go away. I always want to be viewed as somebody who supports USU and understands the value of this incredible university.”

Holiday spirit abounds at USU

The Admissions Office collaborated with the Office of General Counsel and the brigade leadership at the Uniformed Services University to organize a present drive in Dec. They collected enough gifts to fill 20 stockings that were given to enlisted members with young children.

Photo by Christine Creenan-Jones
The Uniformed Services University hosted a university-wide holiday party, Dec. 13, which included lunch, music and dancing, games and prizes and a visit from Santa Claus.