

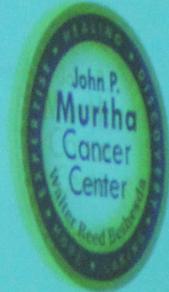
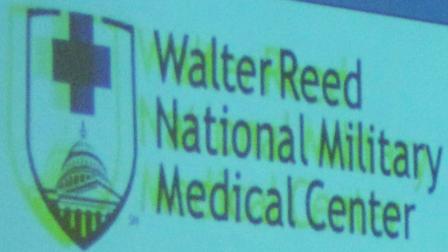
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MILITARY WOMEN'S HEALTH RESEARCH
CONFERENCE



U.S. Department
of Veterans Affairs



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ARMED SERVICES UNIVERSITY



Learning to Care for Those in Harm's Way

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USU Receives Cyber Security ATO

By Eric Ritter

The Uniformed Services University of the Health Sciences (USU) is a unique entity within the Department of Defense, and that uniqueness has carried over to the computer network it uses.

In order to perform the mission properly, USU needed to move primarily to a civilian “.edu” platform away from the regular DOD “.mil” system. In order to do that, USU needed to earn a letter from U.S. Cyber Command for the Authority to Operate (ATO) status—which meant it could operate its unique mission while still maintaining the DOD’s level of cyber security and operations.

According to USU Chief Information Officer Timothy Rapp, having the .edu system will allow the USU student and faculty operate more affectively.

“Part of USU’s unique DOD mission involved communicating with countries such as China, for example, to set up collaborative efforts for medical programs that are in the interest of academics,” he said. “We wouldn’t be able to do that under the normal .mil DOD cyber system, because Internet communication with China on that system would be blocked.”

The USU Director of Operations and Communications, Joel Robertson, said a lot of work had to go in to establishing the required criteria toward earning that ATO.

“There was an entire baseline of controls we have to adhere to that addresses the DOD security model

that talks about access controls and network architecture as well as user training and compliance,” Robertson said.

Achieving an ATO isn’t a green light for the network operators to relax their efforts either.

“Just because we got the ATO doesn’t mean we are to not keep up with our cyber security either,” Robertson explained. “It’s a continuous effort, because we always need to be proactive and patch systems, maintain the network architecture and constantly educate users on potential cyber security threats.”

Rapp explained that earning the ATO isn’t just good for USU users, but it also offers credibility toward working with other agencies.

“The ATO letter is also important, since we work with other government agencies on network projects,” Rapp said. “Before that begins, one of the first things they ask to see is an ATO. That ATO is like a passing report card. No one will want to connect with us if our report card is full of failures. It just really gives us credibility for them to want to work with us.”

Rapp said he applauds the work his IT staff accomplished in order to get this achievement through.

“Our guys put in a lot of work for this. A lot of the evaluators who came out to analyze our network said our networked more secure than some .mil sites that they visit. I think that’s an incredible compliment to the work our guys have done.”

**On the cover**

USU President Dr. Charles Rice addresses attendees at the inaugural Military Women's Health Research Conference, organized by USU, held at the Women in Military Service for America Memorial at Arlington National Cemetery, April 26. See story, page 3. (Photo by Eric Ritter)

USU Hosts Inaugural Military Women's Health Research Conference

By Eric Ritter

The Uniformed Services University of the Health Sciences (USU) hosted the inaugural Military Women's Health Research Conference at the Women in Military Service for America Memorial at Arlington National Cemetery, April 26.

The educational forum focused on many topics such as reproduction, optimal readiness and cancer to just name a few. Those are just some of the topics that are increasingly important to the military and other Department of Defense (DOD) agencies and partners as the percentage of females joining the military ranks and opportunities for females continue to increase.

Dr. Arthur Kellermann, dean of the F. Edward Hébert School of Medicine at USU, said the conference was groundbreaking in terms of addressing how the future of the new focus on women's health will benefit the DOD.

"I think this is one of the most important conferences we're holding this year on one of the most important topics facing military health today," he said. "Many of the issues brought up are more military-specific like deployments and how being away from children and dealing with relationships while in austere and sometimes hostile environments can affect women's health. This is not something you would find regularly in the civilian envi-

ronment, so there is clearly a need to focus on military women."

According to Dr. Yvonne Maddox, Vice President for Research at USU, the purpose of hosting the topic at the conference was a way to begin a dialogue with the DOD and federal health agencies like the Defense Health Agency, Department of Veterans Affairs, Public Health Service, National Institute of Health and Walter Reed Bethesda.

"We wanted to initiate dialogue to get all of the stake holders motivated around the topic," she said. "Since USU is an integral part of DOD, we wanted to establish a research agenda, and look at what we can do to galvanize attitudes around
See Conference, page 6



Dr. Yvonne Maddox, Vice President for Research at USU (standing, left) directs audience questions to the panel of experts from throughout the Federal health sector during the inaugural Military Women's Health Research Conference held at the Women in Military Service for America Memorial at the Arlington National Cemetery, April 26. (Photo by Eric Ritter)

Nobel Laureate Delivers David Packard Lecture

By MC3 Laura Bailey

A 1997 Nobel Laureate delivered the 28th annual David Packard Lecture at the Uniformed Services University of the Health Sciences (USU), April 4, 2016.

Stanley B. Prusiner, M.D., the director of the Institute for Neurodegenerative Diseases (IND) and a professor in the department of neurology at the University of California San Francisco (UCSF), delivered the 2016 lecture, sponsored by the USU Faculty Senate.

“This is the most prestigious lecture of the university. It is named in honor of the former Deputy Secretary of Defense, co-founder of the Hewlett-Packard Company, and the second president of USU” said Navy Cmdr. James Palma, M.D., MPH, the president of the USU Faculty Senate. “Doctor Prusiner’s research has many ties to USU’s ongoing exploration into traumatic brain injury (TBI) and other neurologic disorders.”

Prusiner received his B.A. in Chemistry in 1964 and his M.D. in 1968 from the University of Pennsylvania. After completing his military service as a lieutenant commander in the U.S. Public Health Service at the National Institutes of Health (NIH) and his neurology residency training at UCSF, he joined the UCSF faculty in 1974 and set up a laboratory to study brain diseases. He discovered an unprecedented class of pathogens that he named prions.

Prions are proteins that ac-

quire an alternative shape and become self-propagating. As prions accumulate, they cause neurodegenerative diseases in animals and humans. Prusiner’s discovery led him to develop a novel disease paradigm: prions cause disorders such as Creutzfeldt-Jakob disease (CJD) in humans that manifest as sporadic, inherited, and infectious illnesses.

Based on his seminal discovery that prions can assemble into amyloid fibrils, he proposed that the more common neurodegenerative diseases including Alzheimer’s and Parkinson’s diseases may be caused by prions. Remarkably, a wealth of evidence continues to accumulate arguing that prions cause not only these common degenerative diseases, but also ALS, the frontotemporal dementias (FTDs), chronic traumatic encephalopathy (CTE), and multiple system atrophy (MSA). Much of Prusiner’s current research focuses on developing therapeutics that reduce the levels of the specific prions responsible for Alzheimer’s, Parkinson’s, MSA, the FTDs, CTE and CJD.

“It’s a very special honor to give this lecture to tell you about some very exciting new results in the field of chronic traumatic encephalopathy (CTI),” said Prusiner. “The big issue: Do some types of head trauma result in the production of tau proteins that turn into prions and if that’s true, can we intervene with medicines? Can we develop prophylactic medicines? Can we develop medicines that can be used in

the later stages to stop the horrors that patients experience? Currently there is not a single drug that stops or even slows one neurodegenerative disease. There are certain drugs that treat the symptoms of the disease, but the symptoms continue to progress. Is there a spectrum that goes all the way from PTSD to TBIs and CTI? Is it a neurodegenerative process that goes on and on and on? The answer is: I don’t know. These are wonderful problems that some of you young people need to think about.”

Prusiner’s contributions to scientific research have been internationally recognized. He is a member of the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences, the American Philosophical Society, and a foreign member of the Royal Society, London. He is the recipient of numerous prizes, including the Potamkin Prize for Alzheimer’s Disease Research from the American Academy of Neurology (1991); the Richard Lounsbery Award for Extraordinary Scientific Research in Biology and Medicine from the National Academy of Sciences (1993); the Gairdner Foundation International Award (1993); the Albert Lasker Award for Basic Medical Research (1994); the Wolf Prize in Medicine from the State of Israel (1996); the Nobel Prize in Physiology or Medicine (1997); and the United States Presidential National Medal of Science (2009).

Eberly Wins National Teaching Award

By Eric Ritter

With a mix of innovation, strong subject knowledge, and an unexpected talent for video production, Air Force Lt. Col. (Dr.) Matthew Eberly, assistant professor of Pediatrics at the Uniformed Services University of the Health Sciences (USU), was recently awarded the Council of Medical Student Education in Pediatrics (COMSEP) 2016 Teaching/Education Award.

The national award is presented annually to an individual who shows positive contributions towards education and leadership in the field of pediatric medical education.

Eberly developed a high-quality online faculty development course known as the "New Preceptor Start-up Package" which included six videos: The Rhythm of RIME, Direct Observation, Teaching Tools, One-Minute Preceptor, and Giving Feedback. The pursuit of producing the videos all began because of a small student overlap between two classes.

"When we began the clerkships under the new USU curriculum in 2013, we had to open up ten additional pediatric training sites at military community hospitals around the country, because we had seven months where the Class of 2014 overlapped on their clerkships with the Class of 2015," he said. "We just didn't have enough room for all of the students at our original sites."

Eberly said he and his staff then pursued the idea of using videos to help prepare the pediatricians to teach and mentor the med students.

The video collection allowed for a convenient way to train faculty

at distant sites the essentials of precepting students, such as teaching on-the-fly, giving feedback, and performing direct observation of medical interviews.

"Most of the pediatricians at these sites had never worked with clerkship students before, so we wanted to give them an instructional video package that provided the tools they needed to be successful teachers of novice learners," he explained.

He continued saying the added benefit was that offering the package via video freed them from traveling to so many sites in the limited amount of time they had.

"It was a good way to quickly disseminate the information to the preceptors without us having to travel to these places individually. So, they are able to watch the videos on their own time, which worked out for everyone."

He said he also sought to improve the educational experience of the rotating medical students by creating several videos specifically for the students. His Oral Case Presentation Guide is a 22-minute movie with narration, animation, and skits involving over 20 student and faculty actors. It explains how to give an effective oral presentation while on Rounds or in clinic and highlights common mistakes that medical students make. Another video he developed, Pediatric Physical Exam Pearls, is presented to the students on the first day of the clerkship to help familiarize them with tips and techniques for the examination of infants and toddlers.

Eberly said the good thing that came out of this was that members of COMSEP heard about these videos and requested using the vid-

eos for their own institutions. They found it useful, because medical schools across the country are increasingly relying on community preceptors at satellite clinics to teach their medical students. Videos such as the One-Minute Preceptor are especially popular for this purpose.

"Winning an award from an organization that represents pediatric clerkship directors from around the country felt like a big honor and was certainly humbling for me," he said. "I didn't expect when we were creating these videos that they would go this far. I'm very glad, because it seems to have allowed other people to use the videos for their own training purposes."

Making the videos wasn't easy right away for him either. Eberly said he had to teach himself how to shoot and edit the videos.

He said he had some prior basic knowledge of video production using a camcorder. But after several weeks of research online, he decided he needed more items to produce the videos. He learned by watching lots of videography tutorials online and through many hours of practice.

COMSEP has even asked him to host a workshop at their annual conference on using video to enhance medical student education.

He added that it was an overall enjoyable experience putting the video package together.

"The videos required lots of actors, so it was fun getting some of the USU students involved to be actors in them. They really enjoyed seeing themselves in the videos."

Eberly said he plans on creating more videos as new topics become available.

USU Students Travel to India for First look into Country's Medical Practice

By MC3 Laura Bailey

Three fourth-year students at the F. Edward Hébert School of Medicine (SOM) at the Uniformed Services University of the Health Sciences (USU) are the first students to participate in the Armed Forces Medical College (AFMC), Pune, India, Partnership. India is a strategic partner of the U.S. in the war against terror and an emerging global economic power. As such, it provides a unique backdrop and ideal means to expose final-year medical students to India's medical practices and culture.

Army 2nd Lt. Daniel Hart, 2nd Lt. Anant Shukla and Lt. Nicholas Singh-Miller pioneered to Pune, India as the first USU student diplomats to participate in the AFMC partnership. Their selection was based on their highly competitive academic records, essays, personal interviews and the strength of their capstone projects. The collaboration between the two premier institutions was several years in the making and the direct culmination of hard work by leadership of the Indian Military Medical Services (IMMS), USU, Capstone Director, AFMC, Pacific Command (PACOM) and the U.S. Embassy in New Delhi.

"Prior to this trip from USU to AFMC, I was often reminded to keep an open mind while in India," said Hart. "From my initial ride in an auto-rickshaw in the crowded streets of New Delhi to my tour of the Indian Military Paraplegic Rehabilitation Center to assisting in the neurosurgery operating theater, I found my experience to be enriching, challenging, absorbing and mind-opening."

A high patient intake, the sheer variety of illnesses and workload proved challenging.

"Each resident sees 15 to 20

patients in four hours of clinic," said Hart. "This pace drives a very quick decision-making process which is clearly evident in the residents' efficiency. Then, being a teaching institution, the command hospital attached to AFMC opens its doors to civilian cases and thereby cares for a wide breadth and severity of cases from the states surrounding Pune."

"My education at USU has been rigorous, but I am blown away daily by residents' detailed knowledge of diseases and disease processes as well as their effective use of the physical exam," said Singh-Miller, who returned from India Jan. 29, 2016. "This, no doubt, is due to the incredible patient load and variety that they see while training here. For instance, in just one day, I saw a case of ricketts, malnutrition secondary to a VSD, pulmonary tuberculosis in a child with newly-diagnosed HIV, and a child with dengue fever, alongside many URIs, well-baby checks and other chief complaints. The day to day ebb and flow of work is very different to what I'm used to; records are kept on paper, orders are written on paper, residents set most of the IVs and do most of the blood draws. They start at 7:30 a.m., round at least twice daily, attend lectures and, except for those working the nights, end at 9 p.m.. There are no work hour restrictions and I am not sure if the first-year residents actually ever sleep. The team really only takes a half-day break on Sunday. Despite the heavy workload, the residents and staff display camaraderie."

Additionally, student diplomats had to work around the language barriers that are commonplace in a place such as India where 36 states boast more than 122 major languages and more than 1,000 mother tongues.

"Being an amalgamation of

hundreds of disparate cultures, even my Indian colleagues admitted that when they travel merely 100 miles from their hometowns, they often find themselves in areas where nobody speaks their local tongue," said Hart. "Hiring an interpreter who spoke English, Hindi and Marathi, the most prominent local language around Pune, was invaluable in allowing me to interact one on one with the civilian population in both outpatient clinics and wards."

Despite the many challenges, all of the student diplomats were successful in tackling their day to day tasks and completing their capstone projects. Hart's project focused on neuropsychiatric assessments in patients with traumatic brain injury while Singh-Miller's project aimed to understand the unique challenges faced by Indian families with autistic children. Anant conducted a unique study that enrolled patients with benign prostatic hyperplasia for comparing the international prostate symptom scores between U.S. and Indian patients – something that had not previously been measured in the military system, according to Lt. Col. Amit Agrawal, of the Command Hospital in Pune.

"We are so very grateful to the Departments of Surgery, PMB and Global Health, the capstone project director, Dr. Ottolini, the International Relations Committee led by doctors Welling, Rich, Elster and Longacre," said Rahul M. Jindal, M.D., PhD, a professor in the Department of Surgery and Division of Global Health at USU and Walter Reed National Military Medical Center. "All this would not have been possible without the extensive logistics support of AFMC, Brig. Kanitkar and LG Chopra, the US Embassy in New Delhi and PACOM."

this agenda, and specifically, once we understand what the agenda is and how it should be addressed, it's up to USU to lead and steer this agenda. This conference was a way to see how the stakeholders can contribute to this collectively."

Some of the other topics discussed were the Zika virus, sexual abuse, family violence and fertility and infertility issues.

"Another prime example of why military women-specific studies are important, is that there is a high level of premature births and post-partum depression within the military, and we don't understand that. So, that's other of the many areas discussed," Maddox said.

She also said the health of women wasn't the only topic addressed, but women taking a leadership role in health research leadership was also stressed.

"It wasn't just about health research," she said. "The panel discussed how women physicians, professors, clinicians and other health professionals could impact research because of women's unique needs along ethnic, racial and cultural differences. Those woman leaders will be a very important part of the research agenda and how it will influence the military."

Dr. Maddox noted that she was impressed and encouraged by the level of participation and support for the conference.

"The energy behind this meeting was well beyond my expectations," Maddox said. "I knew people would want to come given that it was one of the first such meetings, but I wasn't expecting such an energetic group."

Maddox continued by saying the results of the conference

were immediate following the event, as many of the DOD leadership came forward to discuss next steps.

"Our leadership at health affairs, who attended the meeting, spoke of how powerful the conference was and that we should ensure that a session on women's health is held at the Military Health System Research Conference--which is a well-attended annual national conference to highlight research for all of the DOD. The session is already being planned.

Maddox said that when the Office of Research began planning this conference, there had been no discussion around making it an annual event, but the reaction from the co-sponsors and others who attended was so positive that they are now planning regular follow-up seminars and other collaborative projects on the importance of women's health research.

"I'm hopeful that in the next few months, we will get enough support that we will get more funding opportunities to explore some more research for us to study the issues in a structured and more formalized way."

Kellermann said he was very impressed with the quality of the presentations and panels throughout the event.

"What's impressed me so far has been the caliber of the work by the military medical officers who are also women and taking a leadership role on these topics, and the expertise of the panels and how they addressed the questions that have come forth from the audience," he said. "The composition of the panels themselves was comprised of military women, and clearly they are driving this leadership role [and many of the topics of] this confer-

ence, but more importantly driving our knowledge of care for women's health issues."

Kellermann added the location of the conference was also well planned.

"To have the conference at the Women's Memorial [at the Arlington National Cemetery] was very symbolic and really added meaning to the event."

Maddox said USU taking the leadership role in this topic is also greatly symbolic for everyone involved.

"There is an enamored view of universities," she explained. "It's USU being an intellectual spark that DOD and others see. As a hub for learning and the acquiring of knowledge, we took and accepted the lead on this on behalf of the Department. What pleases me is that the other organizations allowed us to take the lead, followed and the product surely was beneficial to everyone."

Focusing on the issue of women's health in the military isn't a totally new concept. Maddox did explain that it took a new course of action when the first lady, Michelle Obama, began looking into military families and their needs.

"Over the months in planning for the conference, her office was very supportive, and this support helped drive the focus of family and its tie to women's health."

Maddox said she is extremely proud to be working on this topic and looks forward to working more closely with the other organizations and other projects.

"This has been my dream and a goal since arriving at USU," she said. "To have this kind of visibility for women's health and on such a scale as this, is an absolute dream."

Final Frame



*Senior Associate Dean, professor of Family Medicine, Dr. Brian Reamy (left) presents this year's Henry Wu award to Dr. Brian C. Schaefer, an associate professor in the Department of Microbiology and Immunology at the F. Edward Hébert School of Medicine (SOM) at USU. Schaefer won the award for his paper entitled, "Selective Autophagy of the Adaptor Protein Bcl10 Modulates T Cell Receptor Activation of NF- κ B," published in *Immunity*, June 29, 2012.*