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the pulse

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USU's first Surgeons General



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Photo Credit: CTSU/OJ Photo Services

On the cover

Lt.Gen. (Dr.) Thomas W. Travis (left) and Brig.Gen. (Dr.) Jean-Robert Bernier became USU's first Surgeons General in separate ceremonies held July 20 and July 10, respectively. (See stories, pp. 4-5.)



Medical Students Express Gratitude, Respect for Body Donors

By Helen Hocknell, NSAB Public Affairs staff writer



Photo credit: Helen Hocknell, NSAB Public Affairs

Members of the Maryland National Honor Guard fold the national ensign during the memorial ceremony held annually to honor the bodies used in medical education and research in Maryland. Students and staff from the Uniformed Services University of Health Sciences attended the ceremony to pay their respects and express gratitude to the families of donors for the "invaluable gift" they provide.

Uniformed Services University of the Health Sciences (USU) students and staff came to pay their respects at a ceremony recently to honor the donated and unclaimed bodies used for medical education and research in Maryland.

Hosted each year at Springfield Hospital Center in Sykesville, Md., the ceremony presents an opportunity for medical students and educators to join with friends and family to honor those whose cremated remains are interred there.

"The students come here because they want to show gratitude for the gifts they are given," said Ronn Wade, director of the Maryland State Anatomy Board, which organizes the ceremony. Wade oversees the distribution of cadavers for anatomical dissection at the University of Maryland, Johns Hopkins University and USU.

Approximately 200 bodies are used in the USU anatomy lab each year, roughly half of which are provided by the state. The rest come from USU's Anatomical Gift Program. Some are used in specialty courses or to practice procedures by doctors and nurses, but the majority of the cadavers are dissected by groups of first-year

medical students in the standard 12-week gross anatomy course.

"The ceremony is a great way for us to demonstrate our respect for the donors," said Army 2nd Lt. Cassandra Kahn, a first-year medical student at USU. Kahn explained the students develop a deep personal connection to their cadavers.

Many medical students refer to the cadavers as their "first patients," said Kahn.

"They're an invaluable teaching tool, but this was also a person," said Air Force 2nd Lt. Amy Reed, another first-year medical student at USU. "The youngest we worked on was 25 years old. He could have been our peer."

According to Dr. David Welling, associate professor of surgery at USU, many medical schools have begun scaling back the hands-on laboratory aspect of gross anatomy courses in favor of computer programs and plastic models.

Welling said that while technological advances in medical education can be useful, he feels working on a human body is still a crucial part of coursework for future doctors and other medical professionals.

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Key Senate Staffer joins USU Faculty

By Tech. Sgt. Oshawn Jefferson



Photo by Thomas C. Balfour

Dr. Patrick H. DeLeon, former chief of staff to U.S. Senator Daniel K. Inouye talks to Graduate School of Nursing and Clinical Psychology students as he settles into his role of USU faculty member.

The words leadership, mentor and innovator are understatement, when it comes Patrick H. DeLeon, Ph.D., J.D., M.P.H.

He spent 38 years in public service helping others “learn the ropes” on the Hill, as the long-time chief of staff to U.S. Sen. Daniel K. Inouye, D-Hawaii, through both formal mechanisms, such as the APA Congressional Fellowships, and through more informal advising and guidance.

Retiring from his job as chief of staff in October of 2011 was not the end of his public service but, rather, a new beginning, bringing his broad knowledge and expertise to the Uniformed Services University of the Health Sciences as a faculty member in the Graduate School of Nursing and the F. Edward Hébert School of Medicine’s Department of Medical and Clinical Psychology.

“While I was still performing my chief of staff duties, I asked my wife if my granddaughter, who was a one-year-old at the time, was walking yet, and she said she started two weeks before,” said DeLeon, who graduated with his Ph.D.

in Clinical Psychology from Purdue University in 1969.

“I knew it was time to step down from my position. I didn’t want to miss any more moments like that,” added DeLeon, who now has another grandchild on the way.

While DeLeon’s workload has eased a bit, his passion for helping others hasn’t. In his new role as a Distinguished Professor at USU, DeLeon is getting a chance to influence the next generation by teaching Health Policy and by mentoring faculty members and students.

“It’s great. I get to walk to work most days, see my grandkids and work at this outstanding university,” said DeLeon, who was the former editor of *Professional Psychology: Research and Practice* from 1995-2000. “I get to interact with people, and help influence people who will directly impact military service members and their families. I get to learn from them as well, listen and be inspired by wonderful men and women, who will carry our health system into the future.”

In psychological circles, DeLeon is known as “the father of RxP” for his

efforts to expand prescription authority for properly trained psychologists. He was at the forefront of the design, approval, and implementation of the Department of Defense’s psychopharmacology training program for psychologists. Those graduates now working within military facilities are able to augment their psychological treatments of patients with pharmacological treatment when it is needed.

“When we started that program we were trying to do what was best for the patient and best for the military family,” said DeLeon. “I am proud to see what those students have been able to do with that program. It was fun and continues to have a positive influence on families.”

In addition to his contributions to the DoD psychology community, DeLeon also played a major role in the establishment of the School of Pharmacy and the School of Nursing at the University of Hawaii’s Hilo campus.

“Dr. DeLeon is a passionate and relentless advocate for psychology’s responsibilities and recognition in bettering society,” said Dr. Charles L. Rice, USU president. “Under his service, the importance of nurses, psychologists and other health professionals was properly recognized. He was at the forefront of shepherding legislation related to native Hawaiians, immigrant children, the people of the Pacific and higher education and we are honored to add him to the USU faculty.”

As DeLeon begins the next chapter of his life, he expects his time at USU to be rewarding and fulfilling.

“You know, life is a journey,” said DeLeon. “And this chapter of my journey finds my days at a great university like USU and my evenings watching my grandkids grow. What could be better?”

USU Alumnus Appointed Surgeon General of Canadian Forces

A National Defence and the Canadian Forces News Release



Photo credit: Cpl Heather MacRae, CRSJ(U) photo unit

Incoming Surgeon General, Brigadier General Jean-Robert Bernier is congratulated by the outgoing Surgeon General, Commodore Hans Jung.

Brigadier-General Jean-Robert Bernier, a 1997 graduate of USU's Master of Public Health degree program, assumed the duties of Surgeon General for the Canadian Forces (CF) from Commodore Hans Jung in a ceremony held July 10 at the CF Health Services Group Headquarters in Ottawa." The change of command ceremony was presided over by Rear-Admiral Andrew Smith, Chief of Military Personnel, in the presence of senior CF leaders and notable national health officials.

"Through his commitment to the ill and injured, the implementation of the Computer Assisted Rehabilitation Environment (CAREN) system, as well as the recent Accreditation of the CF Health Services, Commodore Hans Jung has continually demonstrated his dedication to ensuring a healthy and formidable fighting force," said Rear-Admiral Smith. "I have full confidence in the leadership and expertise of Brigadier-General Bernier, who will ensure continued professionalism and dedication to the health of our men and women in uniform."

"In assuming command of such a competent, disciplined, and internationally renowned formation of health and scientific professionals, I must express my profound appreciation for the outstanding leadership of Commodore Jung and the impressive skill of our personnel, both civilian and military" said Brigadier-General Bernier. "Through their incredible dedication to the welfare of our comrades-in-arms, no one better represents the honour, self-sacrifice, and nobility of the Canadian Forces. My role will be to build on this solid foundation in serving Canada and in promoting, protecting, and restoring the health of military personnel."

"From my days as a medical officer on board HMCS Provider, to the great task of leading the CF Health Services Group, I always knew that my job was a rewarding one," said Commodore Jung. "I am extremely proud of the dedication and effort displayed by our people as we met the many challenges of supporting CF operations and providing excellent healthcare both at home and abroad. Their numerous accomplishments are truly remarkable and reflect their ongoing commitment to quality."

An infantry officer before studying medicine, Brigadier-General Bernier, has now become Canada's 38th Surgeon General. Added to this important responsibility, Brigadier-General Bernier also assumes the roles of Commander of CF Health Services Group, Honorary Physician to the Queen, and Director General Health Services. He previously held the appointment of Deputy Surgeon General and was promoted to his current rank on June 26, 2012.

For Commodore Jung, the ceremony marks the end of a 31-year career as a CF Medical Officer. Having assumed the appointments of Surgeon General, Commander of CF Health Services Group, Honorary Physician to the Queen, and Director General Health Services in 2009, he leaves with a feeling of great satisfaction that he has had the opportunity to lead a formation of highly-trained health professionals, recognized both nationally and internationally for their excellence.

The Surgeon General is the senior departmental advisor on all matters related to health. The mission of the CF Health Services Group is to provide full-spectrum, quality health services to Canada's fighting forces wherever they serve. CF Health Services Group has over 6,400 Regular Force, Reserve, and civilian personnel in more than 40 health professions serving in over 120 units and detachments across Canada and overseas.



Photo credit: Cpl Heather MacRae, CRSJ(U) photo unit

Left to Right: Commodore Hans Jung, outgoing Surgeon General, Rear Admiral Andrew Smith, Chief of Military Personnel and Brigadier General Jean-Robert Bernier, incoming Surgeon General.

Travis sworn in as 21st Air Force surgeon general

By Sharon Willis

Surrounded by family, friends, colleagues and the top U.S. Air Force leadership, USU graduate Thomas W. Travis, M.D., M.P.H., was promoted to lieutenant general and the 21st surgeon general of the Air Force on July 20, 2012 -- the first USU alumnus to become surgeon general of a U.S. uniformed service.

Air Force Chief of Staff Gen. Norton A. Schwartz presided over the ceremony, which was held at Joint Base Anacostia-Bolling in Washington, D.C. Vice Chief of Staff Gen. Philip Breedlove was also present at the event, which drew more than 200 attendees, including USU President Charles L. Rice, Army Surgeon General Lt. Gen. Patricia Horoho, Army Deputy Surgeon General Maj. Gen. Richard Stone, Navy Deputy Surgeon General Rear Adm. Michael Mittelman, retired Air Force Surgeons General Lt. Gen. (Dr.) James Roudebush and Lt. Gen. (Dr.) Charles B. Green, and much of the Air Force Medical Service (AF) leadership.

Travis's first words upon being sworn in were "Wow! This is an emotional moment for me. I am so proud to be part of this Air Force, now and for the past 36 years."

He thanked his family for their support and Gen. Schwartz for giving him the opportunity to lead the AFMS and said, "I promise to all of you in the Air Force Medical Service I will do my very best. We will lead the AFMS into the future and take on the challenges that we may face in these tough times."

Travis also acknowledged the USU presence at his ceremony, asking the many USU alumni in the room to raise their hands. "USU is the enduring presence of medical leadership and we're proving it," he said. "I couldn't be more proud of that university." USU alumni currently account for five of the nine medical corps general officers in the AFMS, and half of the Air Force Major Command surgeons.

Travis entered the Air Force in 1976 as a distinguished graduate of the ROTC program at Virginia Polytechnic Institute and State University. He was awarded his pilot wings in 1978 and served as an F-4 Phantom II pilot and aircraft commander. The general completed his medical degree from the Uniformed Services University of the Health Sciences School of Medicine in 1986, where he was the top Air Force graduate and class president, and in 1987 he became a flight surgeon.



Lt. Gen. (Dr.) Tom Travis is sworn in by Air Force Chief of Staff Gen. Norton A. Schwartz during a ceremony on July 20, 2012. Travis is the first USU alumnus to become surgeon general of a U.S. uniformed service.

Photo by Thomas C. Balfour

For more than three years, Travis was chief of medical operations for the Human Systems Program Office at Brooks Air Force Base, Texas. He later served as the director of operational health support and chief of aerospace medicine division for the Air Force Medical Operations Agency in Washington, D.C.

The general has commanded the U.S. Air Force School of Aerospace Medicine; the 311th Human Systems Wing at Brooks AFB; Malcolm Grow Medical Center and 79th Medical Wing, Andrews AFB, Md.; and the 59th Medical Wing, Wilford Hall Medical Center, Lackland AFB, Texas. He also served as the Command Surgeon, Headquarters, Air Force District of Washington, and Command Surgeon, Headquarters, Air Combat Command, Langley AFB, Va.

He is board certified in aerospace medicine. A command pilot and chief flight surgeon, he has more than 1,800 flying hours and is one of the Air Force's few pilot-physicians. He has flown the F-4 Phantom II, F-15 Eagle and F-16 Fighting Falcon as mission pilot and the Royal Air Force Hawk as the senior medical officer and pilot.

"USU is enormously proud of General Travis' becoming the first alumnus to serve as Air Force surgeon general," said President Rice. "He exemplifies the skill, dedication and leadership that we believe all of our graduates embody and that makes us take such pride in their accomplishments."

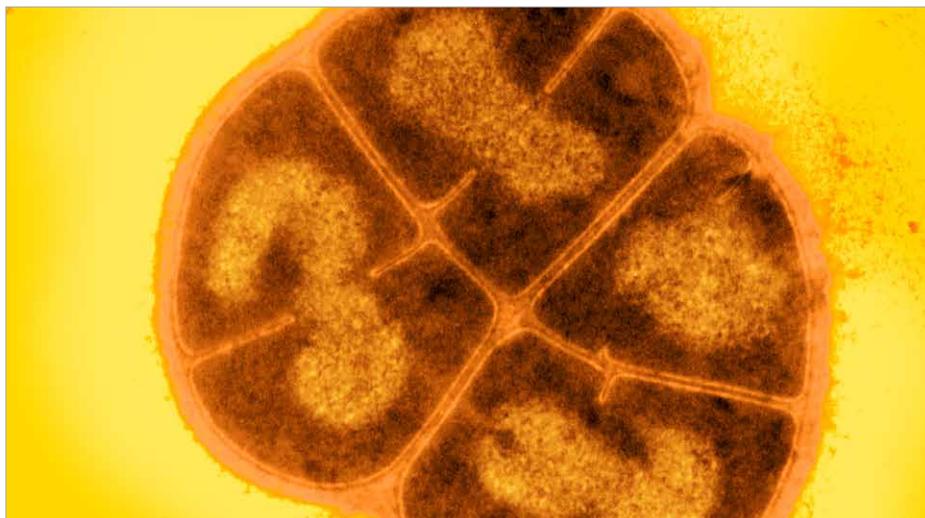


Lt. Gen. (Dr.) Thomas W. Travis has his children pin the 3rd star on during his promotion and Air Force Surgeon General ceremony at Joint Base Anacostia-Bolling, Washington, D.C., July 20, 2012.

Photo by U.S. Air Force photo/Jon Stock

World's toughest microbe helps USU scientists

By Helen Hocknell, NSAB Public Affairs staff writer



Scientists at the Uniformed Services University of the Health Sciences (USU) have discovered a new way to render a microbe non-infectious while preserving its immune system-boosting properties after exposure to gamma radiation.

The discovery could have profound implications for the development of vaccines for deadly diseases like human immunodeficiency virus (HIV), explained USU Pathology Professor Dr. Michael Daly, whose research team led the study.

Daly has devoted more than 20 years to studying *Deinococcus radiodurans*, a microorganism the Guinness Book of World Records dubbed “the world’s toughest bacterium.” Nicknamed “Conan the Bacterium,” it is known for its ability to withstand several thousand times the radiation levels that would kill a human being, and can be found nearly anywhere from your kitchen counter to the middle of a desert.

Deinococcus survives these extreme environments by accumulating high concentrations of manganese a metal element similar to iron and peptides, which protect its proteins from destruction when exposed to high levels of radiation or extremely dry conditions.

“I had been thinking there must be something very, very important we can do with this, and it just came to me, suddenly as a flash: vaccine development might be the way to go,” said Daly.

Vaccines are usually made up of ‘bits and pieces’ (epitopes) of disease-causing viruses or bacteria, he explained. When injected into a human or animal, these provoke an immune response that includes the production of antibodies, which can defend against future infection.

“However,” Daly explained, “the ‘bits and pieces’ sometimes aren’t enough, and vaccines against many deadly diseases haven’t worked.” He added that live vaccines using a weakened version of an intact virus or bacterium are most effective, but not an option when it comes to an otherwise untreatable disease like HIV because they carry an unacceptable risk of infection.

Radiation renders a virus or bacterium non-infectious by destroying the organism’s genetic material, but can also damage its protein structures, which the immune system needs to recognize for a vaccine to be effective. Daly’s team was able to get around this problem by isolating the manganese complex from *Deinococcus* and using it to protect a different bacterium’s proteins from destruction by radiation.

“The simplicity of it is what’s so amazing,” said Daly. “With radiation, their genomes are destroyed, sterilized. But all the proteins and all the structures on their surfaces remain, so you then can take these lethally-radiated pathogens and use them in making vaccines. The immune system then

thinks it’s encountering the real bugs, which are now just lifeless shells, and mounts a full protective response.”

USU researchers, led by Daly, teamed up with scientists from the National Institutes of Health to test a vaccine for drug-resistant *Staphylococcus aureus* bacteria in mice. It worked. The breakthrough study was published in the July edition of the scientific journal, “Cell Host and Microbe.” Daly said it could take years to get approval for human trials, but he’s optimistic this discovery will be a big help in fighting deadly diseases like HIV and influenza.

“This could speed up the whole process of producing vaccines instead of biochemists spending years trying to clone one aspect of a microbe’s protein structure, it could take only a matter of weeks to radiate all the different strains of a disease and create one vaccine to protect against all of them.”

“We’ve shown this approach can work on *Staphylococcus*, which kills about 18,000 people per year,” said Daly. “Now it’s only a matter of time before we can apply it to other bugs.”

40th
Anniversary Celebration

★★★★

Uniformed Services University of the Health Sciences
40th
ANNIVERSARY
1972 – 2012

Save the Date
Sept. 20–22

HPRC Health Tips

The Human Performance Resource Center Health Tips is intended to provide the USU community with information to help develop and maintain a healthy lifestyle. Check out the HPRC website at: <http://humanperformanceresourcecenter.org>.

Eat protein-rich foods to save money

Did you know that protein sources such as chicken breast, tuna, and chocolate milk—even at the highest quality and price—cost less than \$6 per pound? In contrast, protein supplements (whey, soy or casein protein powders, etc.) are usually over \$10 a pound.

The smart choice seems obvious.

Operation Supplement Safety (OPSS) is about to launch this summer and will answer many of your questions about Dietary Supplements. Watch for HPRC's announcement coming soon.

Respect for Body Donors..

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“The old-fashioned, traditional method is an important opportunity for students to gain experience working with real doctors performing real surgery on real patients, and get them thinking about clinical medicine early on,” said Welling. He explained the ability to explore anatomical structures in a cadaver by feel rather than viewing them in a textbook helps students remember them better.

“Everybody is different, and you can learn a lot more about anomalies by seeing these structures in person rather than reading about them in a book,” said Welling.

USU Anatomical Curator Ronald Rivenburgh said although many medical schools now test students using photos and computer graphics, students at USU are still tested on cadavers for the practical portion of the anatomy lab.

“At USU, we believe the human body can teach you everything you need to know,” said Rivenburgh. “Sometimes, in the lab, students discover something unusual in a cadaver, like a pacemaker or artificial hips.”

Anna J. Karsner of Baltimore, Md., who came to the ceremony in Sykesville, said her late husband, Joseph, made

up his mind 40 years ago to give his body to the Maryland Anatomy Board's donation program. She said he wanted to give back to the medical community due to his numerous health problems, but worried toward the end of his life that they wouldn't want his body.

When her husband died of congestive heart failure at age 77 in February, his body had undergone open heart surgery, a hip replacement, and a myriad of other procedures over the years. However, Welling said bodies like Joseph's are especially useful in showing students evidence of long-term illnesses and the results of past medical treatments.

“It's something you can't duplicate very well with a plastic mannequin or computer program,” said Welling.

Karsner said the service helped give her closure, and it was heartening to see the number of medical students and professors in attendance. “It's nice to see they want to remember him, too,” said Karsner.

The feeling of appreciation is mutual.

“This is a person I'm going to remember forever,” said Reed of her cadaver. “He taught me anatomy.”

USU 40th Anniversary Trivia #3 Winner

Congratulations to Erica Jones, a procurement technician in the Contracting office at USU, for being the first person to correctly answer last issue's trivia question:

Name a USU alum currently teaching in the School of Medicine, Graduate School of Nursing and Graduate Education Programs.

Jones answered, Army Lt. Col. Justin Woodson, assistant professor in the School of Medicine; Army Maj. Thomas Rawlings, assistant professor in the Graduate School of Nursing; and Air Force Col. Joseph Anderson, assistant professor for Graduate Education Programs.

Photo by MCI Chad Hallford, U.S. Navy



Retired Force Master Chief Robert Elliott (pictured second from left) was the featured guest speaker at the 114th Hospital Corps Birthday celebration, June 15. After the ceremony he was joined on the amphitheater steps by Brigade Senior Enlisted Leader Master Chief Hospital Corpsman Patrick Hyde, Brigade Commander Navy Capt. (Dr.) Tanis Batsel Stewart, USU President Charles L. Rice and Brigade Executive Officer Marine Capt. Matthew Anderson.



UNIFORMED SERVICES UNIVERSITY *of the Health Sciences*

