The Pulse
The Official USU Newsletter

On the cover
Navy Capt. (Dr.) Eric Elster, chair of the Norman M. Rich Department of Surgery at the Uniformed Services University, teaches second-year medical students different surgical techniques in the Fundamental Surgical Skills Workshop, one of the many opportunities USU students have with the department. (See story, page 3.)

On the cover
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Alison O’Brien, PhD (center), chair of the Department of Microbiology and Immunology at the Uniformed Services University attended a symposium in her honor along with Samuel Formal, PhD (left), retired chief of the Department of Bacterial Diseases at the Walter Reed Army Institute of Research, and Larry Laughlin, MD, PhD (right), dean emeritus of USU’s School of Medicine. The event highlighted O’Brien’s groundbreaking Shiga toxin research over the past 30 years.

The Uniformed Services University recognized Alison O’Brien, PhD, professor and chair of the university’s Department of Microbiology and Immunology, by co-sponsoring a symposium in her honor, March 29.

The event, held in Sanford Auditorium, included plenary talks and presentations that chronicled O’Brien’s groundbreaking work over the past 30 years. Guest speakers described O’Brien’s most important scientific accomplishments and the discoveries they catalyzed.

O’Brien, who is best known for her pioneering Shiga toxin research, first made headlines in the early 1980s, when she published a landmark letter in a leading medical journal that linked the production of Shiga toxin with \textit{E. coli} strains and foodborne illness.

Since then, her lab has yielded many new discoveries, including producing the first set of monoclonal antibodies that neutralize different types of Shiga toxin. Furthermore, O’Brien collaborated with a pharmaceutical company to develop and test humanized antibodies for treatment of diseases caused by Shiga toxin-producing \textit{E. coli}.

In addition to her scientific achievements, O’Brien was also lauded for the contributions she’s made on campus. Larry Laughlin, MD, PhD, dean emeritus of USU’s School of Medicine, recounted several in his welcome address.

“Remember me being part of the faculty that interviewed Alison to be chair of her department,” he said. “I recognized immediately she was a fierce person and the right choice for the job.”

Laughlin also commended O’Brien for being a “strong leader,” “incredible scholar,” “honorable person” and for running one of USU’s most effective departments.
Dr. Jonathan Woodson, assistant secretary of defense for Health Affairs, joined scholars, physicians, residents and future military medical officers for the Uniformed Services University’s annual Surgical Associates Day, March 28.

Since 1981, USU Surgical Associates Day has brought USU students together with leaders for mentorship and exposure to best practices.

Dr. David Welling, associate professor in the Department of Surgery at the Uniformed Services University, presents the Jean Dominique Larrey Award to Navy Capt. (Dr.) Eric Elster, chair of the Department of Surgery at USU, for outstanding contributions to surgery. The award was presented during this year’s USU Surgical Associates Day.

Woodson, a vascular surgeon who has worked in the civilian, academic and military medical communities, highlighted the long and impressive partnership between civilian and military medicine. “Military medicine has much to be proud of,” Woodson said. “We have a history of making advances that have been adopted into the public sector. The Joint Trauma System [for instance] has led to the highest survival rate in recorded warfare.”

Woodson said these and other advances, which were forged in combat, will continue to transform peacetime civilian medicine.

Navy Capt. (Dr.) Eric Elster, professor and chairman of USU’s Norman M. Rich Department of Surgery, said USU Surgical Associates Day gives students and young physicians the opportunity to interact with the best in their profession. “Both the students and the residents represent the future of military medicine and academic surgery. Exposing them to leadership in medicine is a smart investment,” Elster said.

Other medical leaders at the event included Dr. Michael F. Rotondo, chair of the committee on trauma, at the American College of Surgeons and Dr. David B. Hoyt, ACS executive director.

In addition to hearing from top medical leaders, surgical residents presented their own research conducted over the course of a year.

“Each of these residents presented that body of work on areas ranging from advanced imaging of limb ischemia, development of novel strategies to improve outcome after shock, wound closure methods in casualties and treatment of pediatric tumors with non-invasive therapy,” Elster said.

He added, “Our visiting professors, doctors Hoyt and Rotondo, were extremely impressed, not only with the quality of the science involved, but also the ability of the residents to understand and articulate the scope of the work.”

Woodson said student participants are, “part of a great legacy and master of the future of the military health system.” He added, “Nothing can compare to the military health system…The future is bright and they have dynamic careers and opportunities ahead of them. For us, 2013 is a transformative year and it is very important for our leaders to make them understand that as seniors we are invested in our junior officers. We have to spend time with them…in contact. That’s how they will stay motivated.”

Dr. Charles Rice, president of the Uniformed Services University, presents the university’s Excellence in Teaching Award to Army Maj. Gen. M. Ted Wong, commanding general of the Southern Regional Medical Command, April 5. The prestigious award is accompanied by a grant from the Henry M. Jackson Foundation, and was presented to the San Antonio Military Health System (SAMHS), to benefit both San Antonio Military Medical Center and Wilford Hall Ambulatory Surgical Center. Pictured in the photo from left to right are Army Col. Kyle Campbell, commander, Brooke Army Medical Center; Wong; Rice; Air Force Col. Randall Zernzach, associate dean, San Antonio Uniformed Services Health Education Consortium (Texas); retired Maj. Gen. Patrick Sculley, senior vice president, University Programs, USU; and Air Force Col. James McClain, SAMHS.
As a young girl, Cindy Dullea, a distinguished professor in the Graduate School of Nursing at the Uniformed Services University, spent countless hours talking to nurses at Massachusetts General Hospital in Boston. For six months, they took care of her favorite grandmother, who was burned in a terrible accident.

Dullea suffered with her grandmother as she endured painful skin grafts and multiple surgeries, but the high school freshman found solace at the nurses’ station, where skill and compassion resided.

Inspired by their healing hands, Dullea decided to follow in their footsteps and pursue a career in nursing. She attended college at Salve Regina University in Newport, R.I., a city beaming with Navy pride. After earning her degree, Dullea began working as a staff nurse at The Medical University of South Carolina on the critical care ward. Even though she fulfilled one dream, Dullea was restless.

“Back then, I was a brazen 23-year old, ready for some excitement,” she said. “My boyfriend, who is now my husband, encouraged me to consider the military, so I called a Navy recruiter. The rest is history.”

Once she commissioned, Dullea left South Carolina to embark on a whirlwind military career that brought her to several major coastal cities in the United States and duty stations overseas. She spent nearly 30 years in the Navy Nurse Corps, between active-duty and reserve service.

Dullea excelled at each post and quickly rose through the ranks, commanding five different units. By the time she retired, Dullea was one of only nine medical reserve admirals, and served as both deputy commander of Navy Medicine National Capital Area and deputy director of the Navy Nurse Corps.

Throughout her impressive military career, Dullea had many opportunities to work with service members from every branch of service. They became her new inspiration.

“Since I spent a good part of my career in the reserves, I was able to experience military and civilian ways of life,” she said. “I can say with unequivocal certainty, there is nothing more rewarding than uniformed service. As a naval officer, I worked with people who had a unique moral fiber to them. They aren’t motivated by profit, just achieving the mission. They’re an incredible, selfless group, and it was a great honor to serve with them for so many years.”

At USU, Dullea’s passion continues to burn strong. She teaches two graduate-level nursing courses that cover leadership and health informatics, topics that drove both her military and civilian careers into high gear.

“Besides serving in the reserves, I also helped start a health informatics company and worked in the field for more than 20 years. My two working worlds were very different in many respects, but they also brought value to each other. Realizing this, I tried to incorporate the strong points of military medicine into my private practice and vice versa,” Dullea said. “At USU, I want my students to think outside of the box, as well. A broad, creative vision is the best impetus for progress and change.”
Army 2nd Lt. Braden Hestermann, a fourth-year medical student at the Uniformed Services University, has seen a lot in his short military career. After graduating from West Point in 2004, he spent 15 long months on Iraq’s brutal frontlines.

While there, Hestermann came face-to-face with war’s most dire consequences. In 2007, he was a medical platoon leader working in Diyala, a dangerous province controlled by Sunni insurgents. Fighting was fierce in Diyala, and many servicemembers were badly wounded or killed in battle.

Hestermann helped as much as he could by calling MEDEVACs and coordinating patient evacuations to major military hospitals, but he still felt powerless as colleagues and friends around him grappled with life-changing injuries.

“I wanted to help so badly, but all I could do was call an Evac, watch and wait,” he said. “It was a terrible feeling.”

By the end of his tour, Hestermann was ready for a new career path. He wanted to be a military doctor, so he could take care of wounded servicemembers like the ones he’d served with in Iraq.

“USU was a no-brainer for me,” Hestermann said. “I wanted to stay in the Army, and USU gives you a better exposure to military medicine than any other medical school around.”

On course to graduate in May, Hestermann will move to San Antonio by the end of the summer, where he’ll begin his residency in anesthesiology at Brooke Army Medical Center.

“Anesthesiology is a great fit for me,” he said. “It’s a hands-on discipline. Plus, I like to know that what I’m doing is helping, and in this field, you get immediate feedback.”

Hestermann’s excitement for his future is tempered only by the memories he’s created at USU. He’s president of a tight-knit class that has bonded over their tough classes, military training, field exercises and rotations.

“I’ve had such a great experience here,” Hestermann said. “The camaraderie at USU is incredible, because we are all working toward the same goal. I’ll hold onto these experiences forever.”
Spring is finally in the air, so Pulse staff members wanted to know how personnel at the Uniformed Services University plan to enjoy the warmer weather. Here are some of their answers:

“I’m potty training my son during spring break. We’ll both be home, so I’ll be able to give him a lot more one-on-one attention. I hope it sticks.”

Army 2nd Lt. Tim Hunter, 1st-year medical student

“I’m a Floridian, so we have spring and summer weather year round. I’ve missed it living here, so when it finally warms up, I plan to get out and enjoy the sites as much as possible.”

Navy Petty Officer 3rd Class Juanita Lane, information technology specialist

“I love to garden, so springtime is a great time to be outside enjoying the warmer weather.”

Denise Anderson, admissions officer

“Spring has sprung, and I’m looking forward to the extended daylight, moonlight gardening, biking, hiking, attempting to get in shape.”

Andrew Lee, contract specialist

“I’m going to fly kites with my daughter.”

Navy Lt. Brian Andrews-Shigaki, assistant professor, Department of Military and Emergency Medicine

Add some water to your workout
Swimming and other water workouts are great ways to give aching joints a break or recover from an injury and still get in a good workout. Exercising in the water provides the same aerobic fitness benefits as exercising on land. In fact, exercising in water may be less work for your heart, because it pumps out more blood per beat, and heart rates are slightly slower. What’s more, pressure from the water speeds blood flow back to your heart, where your blood gets the oxygen that your muscles need during exercise.

Aquatic exercise is great for most people, including older and younger folks.

Effective pool training sessions should vary in intensity and emphasis. To avoid shoulder joint and upper back issues, warm up by swimming for five to ten minutes at a pace slower than your usual training pace, and include kicking and pulling drills. To improve both strength and endurance in the water, try interval training. Shorter rest intervals will improve endurance, while longer ones will stress your anaerobic system and improve your strength and power. Alternating between aerobic (longer and slower) and anaerobic (shorter and more intense) workouts will optimize your overall performance for both combat swimming operations and cardiovascular fitness in general.

Information provided by HPRC.
At the Uniformed Services University, people keep their finger on the pulse by reading the Pulse. It’s filled with important university news and candid feature articles.

The Pulse hasn’t been USU’s only publication. Earlier archetypes preceded it, like the Vector, FYI and USUHS Quarterly. These products captured important aspects of USU’s history, beginning in 1978 when the Vector, the oldest campus publication, was first created by the charter class.

In an effort to preserve a unique part of USU’s history, the University Archives department has created an online repository for campus publications.

“We’ve collected publications piecemeal over the years, so we don’t have a complete run of any of them,” said Emelie Rubin, USU’s institutional archivist. “If anyone at the university would like to donate their back issues to the archives, we will gladly scan and add them to our collection.”

The repository may be a work in progress, but it already has hundreds of different artifacts to browse, which illustrate the life – and sometimes humor – behind USU.

“The Vector tended to be light in tone and usually had humorous articles and cartoons drawn by students,” said Rubin. “The Vector from April 1, 1988 is an excellent example of the tongue-in-cheek nature of the publication. For this April Fool’s Day issue, the publication was renamed The Infector and it poked fun at some of the faculty members. It showed how, even though the students were going through rigorous training, they were still able to have some fun.”

The different generations of publications also capture USU’s growth over the years. Early print publications were more basic than today’s Pulse with barebones design elements.

“It is interesting to see that as technology improves and the university becomes more mature, how our publications improve in quality. Early students published The Vector using typewriters and then early word processing software,” said Rubin. “In later publications, like the USUHS Quarterly, the university printed them in full color and included photographs. The rudimentary nature of The Vector reflects the nascent roots of the University.”

University Archives has salvaged many of them – from early, more simple publications to USU’s modern, professionally created newsletters, and they are available to view online at http://www.lrc.usuhs.edu/archives/.
The Department of Preventive Medicine invited animal handler, Bruce Shwedick, to the Uniformed Services University for the annual Snakes Alive! program, April 3. Shwedick is a snake expert, who shared information about snake wounds. This unique aspect of health care is important because USU graduates may practice medicine in desert or tropical locations where reptiles like rattlesnakes, anacondas or cobras thrive, and must be able to recognize and treat bites and other injuries suffered by military members or their families as a result of an encounter with one.