



# SOLDIERING ON

**UNSUNG HEROES**

**BY EDWIN KIESTER JR.**

**W**hen the story of University of Pittsburgh medical education and research is written, two capital letters will leap off the page: VA. The U.S. Department of Veterans Affairs is a largely unsung and often unrecognized major player in Pitt physician education and research. More than half of Pitt's medical school graduates spend time during their rotations tending to patients in one of three VA Pittsburgh Healthcare System hospitals. Some \$24.5 million in Pitt research is at least partially funded by the VA, and more than 200 faculty members hold joint Pitt-VA appointments.

"Very definitely, people don't understand the importance of the VA in promoting basic scientific research," says Peter Strick, professor of neurobiology and codirector of the Center for the Neural Basis of Cognition, a partnership with Carnegie Mellon University. Strick is a VA senior career research scientist in addition to his university affiliations; up to one-third of the support for

his laboratory and its much-admired work in mapping previously unrecognized communication between brain centers is underwritten by the VA. Strick cites the little-known key contributions of VA scientists to basic research, noting in particular the 1977 Nobel Prize to Rosalyn Yalow of the Bronx VA Medical Center for developing the radioimmunoassay test.

The East Side New York girl decided early on that she wanted to be a physicist; and as a young woman, she was further inspired by Madame Curie's biography. But in 1941 it seemed unlikely that good graduate schools would accept or offer financial support to a woman. She graduated with high honors from the then all-female Hunter College, yet the only semiscientific job she could get was as a part-time secretary to a biochemistry professor—she could type and agreed to take stenography courses. She eventually filled an opening as a graduate assistant taking classes and teaching physics at the University of Illinois (where she was the only woman among 399 men and where, upon receiving three A's in her coursework and an A-minus for lab work, she was told the A-minus confirms that “women do not do well at laboratory work”).

When the war ended she returned to New York and there found that the VA was more accepting of female researchers. She stayed at the unheralded Bronx Center for 30 years, where she could pursue her fascination with radioactivity. The radioimmunoassay was developed in 1959, and since has become the key test routinely used to trace hundreds of substances circulating in the blood, from insulin to peptide hormones. Yalow's work has been a boon to diagnosticians worldwide.

Students report they find the VA welcoming as well. For one thing, VA patients seem particularly open to interacting with med students, notes Michael Jude Rest (Class of '04). Last year, Rest spent three weeks of his medical rotation at the VA center on University Drive, then returned for six weeks of surgery rotation. “I got to see all sides of patient care,” he says of his VA training. “I brought patients to x rays and scans and talked directly to the radiologist. I went to pathology labs and actually looked through the scope with the pathologist. I went to the microlab and Gram-stained cultures and studied the slides with the microbiologist. Nowhere else do these opportunities present for a junior medical student.”

Apart from the VA's impact on individual lives like Yalow's and Rest's, statistics on the

VA and health care are impressive, to say the least. The VA's 163 medical centers constitute the nation's largest network of care facilities. The congressional appropriation for VA research in 2002 amounted to \$400 million. Leveraged with National Institutes of Health (NIH) and other grants, its funding adds up to a cool \$1.4 billion, spread over 10,000 VA projects involving 3,000 investigators. In addition to Yalow's, VA researchers have won two other Nobels and six Lasker awards. Indeed, Pitt's transplant trailblazer Thomas Starzl got his start under the VA tent. Starzl's initial animal studies that led to human organ transplants were conducted at the VA medical centers in Denver and Chicago.

The VA impact on training is equally impressive, with 81,000 healthcare professionals getting their feet wet at the VA every year. Frederick DeRubertis, Pitt professor of medicine and chief of medicine for the VA, sees VA training as critically important both to future patient care and to medical research. He speaks of a growing need for physicians trained to bridge the gap between

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basic science questions and clinical medicine.

“The clinician-scientist has become an endangered species,” adds Steve Graham, the VA's associate chief of staff for research and a Pitt professor of neurology. “The VA provides an environment where the physician-scientist can prosper. VA training, with its close exposure to patients, develops a cadre of physicians who see, firsthand, patient needs and whose research interests grow out of the problems they encounter at bedside.” The VA boasts plenty of great MDs who explore underlying basic questions of physiology (like Pitt's David Roodman, profiled in this issue, and John Hibbs, MD '62, of nitric oxide fame at the University of Utah). Yet the VA also is a place where researchers are encouraged to look at immediate matters of improving patient care. Pitt's Strick notes, also, that VA-trained MDs and PhDs work closely together. Neurobiologists with an intricate knowledge of brain anatomy stand at the neurosurgeon's elbow to guide the deep-brain stimulation now used to treat Parkinson's disease and

other movement disorders; a minuscule error in placement can make the treatment futile—or worse.

The exact roots of Pitt-VA (and, indeed, of VA-auspices) research appear lost to history. During the 1920s and 1930s, doctors at VA hospitals informally, and often out of their own pockets, carried on clinical research projects on veteran-related problems that intrigued them, like the respiratory disorders produced by poison gas in World War I. Some of this informal research was conducted at the Aspinwall Hospital (now the H.J. Heinz III Progressive Care Center) by physicians affiliated with the School of Medicine. After World War II, their work and that of others led to a more successful treatment for tuberculosis, at a time when 10,000 veterans were being treated for TB in VA hospitals nationally. VA post-World War II work also revolutionized and standardized prostheses and rehabilitation methods. The VA finally received its first official congressional appropriation for research in 1958, of \$9.3 million, and Pitt was an early beneficiary. The rela-

tionship has burgeoned since. Besides the \$24.5 million in faculty research the VA sponsors with the University, it also coordinates a \$17 million, multicenter trial in the treatment of acute renal failure that is jointly funded by the VA and NIH.

Pitt has another VA distinction. It lays claim to four Centers of Excellence, one of only two institutions nationally with more than two. Centers of Excellence are collaboratives established by the VA in which specialists from several disciplines are brought together. Pitt's centers are the Geriatric Research Education and Clinical Center, Rehabilitation Research and Development Center, Mental Illness Research Education and Clinical Center, and the Center for Health Equity Research and Promotion.

“Pittsburgh is one of our premier research programs,” declares Nelda Wray, the VA's chief national officer for research. “It has a long history of achievement that continues today. We place great value on the relationship between the VA and the University.” ■