

Solving the Mysteries of ALS

Since joining Upstate in 1996, Jeremy Shefner, MD, PhD, has received more than \$1 million in funding to study possible treatments for Amyotrophic Lateral Sclerosis (ALS) or Lou Gehrig's disease. Findings from these studies may help prolong the lives of ALS patients, as well as enable scientists to gain a better understanding of the disease's progression.

"Given the knowledge we currently have, I believe that ALS will someday be considered a chronic disease that can be managed through combination drug therapy," says Dr. Shefner, professor and chair of neurology at Upstate Medical University, who is currently working on five clinical trials, three of which are funded by the National Institutes of Health.

ALS attacks motor neurons and causes degeneration throughout the brain and spinal cord, leading to paralysis and death. While its cause is not completely understood, recent discoveries in ALS have paved the way for greater funding and more focused studies into both the cause and treatment of the disease.

Those discoveries, including that of a mutation of the SOD1 gene—believed to make a defective protein that is toxic to motor nerve cells—and a few genes that appear to serve as ALS markers, have resulted in a greater number of funded ALS studies, including those involving drug compounds. "As only one drug has



Jeremy Shefner, MD, PhD, was recently named chairman of the Department of Neurology.

thus far been proven effective in managing ALS, we need to widen the search for potential therapeutic agents," Shefner says.

His current studies test the safety of drug compounds and their effectiveness in interfering with or slowing the progression of the disease in humans. He also is conducting studies on improved use of respiratory and nutritional treatments currently available but for which optimum timing and method of implementation is not yet known.

To measure outcomes for some of his studies, Shefner uses Motor Unit Number Estimation (MUNE), a technique he

helped to develop and was the first to use in a clinical trial. MUNE counts and compares the number of motor nerve cells a patient has before and after therapy by stimulating the patient's nerves, recording the response and obtaining the measurement of the response of each nerve fiber.

Shefner has been involved in the study of ALS for more than a decade. He founded and is co-chair of the Northeast ALS Clinical Trials Consortium (NEALS), with the purpose of identifying and rapidly testing promising treatments for ALS. Today the consortium includes 60 U.S. academic centers involved in ALS investigations.

"In the last four years, NEALS has developed novel trial designs, pioneered several new potentially important outcome measures that may improve the efficiency of clinical trials, and successfully performed four national, multicenter clinical trials," he says. "I believe the translation of new information about disease mechanisms and methods of altering disease pathways from the basic science laboratory through preclinical models to the clinical arena is an endeavor that should be at the core of the research mission of an academic medical center."

—Doretta Royer



David Feiglin, MD



Leslie Kohman, MD, HS '85

Anesthesiology

Interim Chair: Colleen O'Leary, MD '78

- **Carlos J. Lopez, III, MD**, associate professor, department of anesthesiology, and director of critical care anesthesia, has been named residency program director.

Medicine

Chair: David Duggan, MD '79

- **John A. Collins, MD, HS**, of Lee, MA, has been named chief medical officer of Northeast Health, a regional comprehensive not-for-profit network of healthcare, supportive housing and community services.

Ophthalmology

Chair: John Hoepner, MD

- **Barbara W. Streeten, MD**, professor of ophthalmology and pathology, received the 2005 Chancellor's Award for Excellence in Scholarship and Creative Activities.
- Research to Prevent Blindness (RPB) has granted a four-year Career Development Award (CDA) effective July 1, 2005 in the amount of \$200,000 to **Andrea S. Viczian, PhD**, research assistant professor in the Department of Ophthalmology. This is the 4th CDA to be awarded to the Department from RPB. Funding to the Department from RPB also includes a current unrestricted grant of \$110,000 per year. Past support from RPB included a departmental challenge grant as well as a Senior Scientific Investigator Award for **Robert Barlow, PhD**, research professor, Department of Ophthalmology. Headquartered in NYC, Research to Prevent Blindness is the world's leading voluntary health organization supporting eye research.
- The Ninth Annual ForeSIGHT Golf Classic to benefit the Center for Vision Research, Department of Ophthalmology will be held Sept 12, 2005. For further information, please call 315-464-5253.
- The 56th Annual Post-Graduate Review Course in Ophthalmology will be held November 18 & 19, 2005, at the Oncenter Convention Center in Syracuse, NY. For more information www.upstate.edu/eye/course/ or 315-464-5253.

Radiology

- **David Feiglin, MD**, was appointed chair of the department. Dr. Feiglin joined the SUNY Upstate faculty in 1995 and has served as interim chair of the department since January 2004.

- **Walter Huda, PhD**, received a \$75,000 grant from the Radiological Society of North America Research and Education Foundation to produce a web-based teaching tool for use by radiology residents throughout the United States.

Surgery

Chair: Paul Cunningham, MD

- **Leslie Kohman, MD, HS '85**, of Upstate has been named Distinguished Service Professor, SUNY's highest academic rank. The Distinguished Service Professorship honors SUNY faculty who demonstrate an outstanding commitment to service. Kohman is professor of surgery and chief of the section of general thoracic surgery. The SUNY faculty designation honors her for her 20 years as a faculty member and clinician at Upstate; her commitment to clinical research in thoracic oncology and lung cancer; her mentorship to women in medicine and particularly surgery; and for her volunteer service at the local and national levels.

Graduate Studies

- **Linda Costanzo, PhD**, a 1973 pharmacology graduate, has received the AAMC's Robert J. Glaser AOA Distinguished Teacher Award at the AAMC's annual meeting in Boston. Dr. Costanzo is now on the faculty of Virginia Commonwealth University in Richmond. Costanzo is one of only four medical school faculty members in the country to receive the award, given annually in recognition of significant contributions to medical education by gifted teachers.
- **Michael Miller, PhD**, professor and chair of neuroscience and physiology and the director the Upstate Developmental Exposure to Alcohol Research Center, was recently honored by his peers for his long-time research accomplishments. He was given the Henry Rosett Award by the Research Society on Alcoholism and its Fetal Alcohol Syndrome Study Group.

Balancing Act

As revolutionary changes remake the training of residents, Sara Jo Grethlein, MD, finds herself on the front lines. Dr. Grethlein, an oncologist, was appointed associate dean for medical education at Upstate Medical University in October 2004, a position with oversight of more than 400 residents training at St. Joseph's, University, and Crouse hospitals.

"The location of my office says it all: I'm on the hallway between the hospital and the medical school," notes Grethlein, who previously served as a course director for the Practice of Medicine course for first- and second-year medical students.

Upstate's 467 residents have but 80 hours a week to care for patients, study, and conduct research. Because they are students as well as employees, these physicians are

subject to enormous oversight. Grethlein makes sure residents get the most out of their residency, fulfill requirements—and follow a great many rules.

Each specialty has its own requirements for what information, experiences, and practice a resident must receive to be considered appropriately trained. The Accreditation Council for Graduate Medical Education (ACGME) determines how many hours they can work and how they must be treated.

Grethlein studies the rules that apply to Upstate's residents daily. "There may be 160 rules for a specific residency, and we have about 28 residencies. For each residency, a program director has direct responsibility for designing, implementing, evaluating, and improving the program. I am responsible for making sure that each program director is successfully meeting all the requirements."

She is also the duty-hours cop. "When I was in residency in the intensive care unit, I was on call 36 hours, off 12," she explains. "The every-other-night call. Many residents worked about 100 hours a week. Now we are required to limit work to 80 hours a week. Each physician must have 24 hours off at some point during the week, and 10 hours off between shifts. And they may not work longer than a 24-hour shift."

New York was among the first states to reduce the number of hours residents can work and study, and the rules went nationwide two years ago. It creates problems. Says Grethlein: "Simultaneously, you have the residents for less time and we check what they're being taught more closely.

We have more intricate patient care with less time when residents are available to provide service. It's especially difficult for surgical programs that have relied on residents' blood, sweat, and tears."

Grethlein devises educational experiences and assessment tools and offers these services to Upstate's training programs. She helps programs use outcomes measures—such as board exam pass rates—to identify areas for improvement. "I help troubleshoot issues that come up. If a program director has a problem, it goes through me," she says. "If a contract is not going to be renewed, I am the person who hears the resident's appeal."

And that's just 50 percent of her job. Grethlein likes the mix of administration and hands-on care. "Oncology is emotionally very intense, so I find it important to balance it," she says. "If I'm in the worst bureaucratic mess, it's still not as bad as leukemia. When I'm dealing with a patient who is terribly ill and has bad options, sometimes it's helpful if I can focus on something else for a while that's important, but not so life and death."

The new associate dean knew what she was getting into when she took the deanship. "I wouldn't have taken this job if I wasn't going to love it," Grethlein says. "This position gives me the opportunity to work with really good people who are in really challenging circumstances. The reward is coming up with good solutions and training good doctors."

—George Lowery



Sara Jo Grethlein, MD, splits her time between oncology and the oversight of Upstate's residents.