News about UB's School of Medicine and Biomedical Sciences and its Alumni, Faculty, Students and Staff

WINTER 2008

Pathways

Hopkins Honored for Neurosurgery Advances, Teaching

These techniques have resulted in greatly improved patient survival and in decreased surgical complications and recovery time.

L. Nelson Hopkins, MD, chair of the Department of Neurosurgery in the School of Medicine and Biomedical Sciences and director of UB's Toshiba Stroke Research Center, has received the third annual Leaders in Endovascular Education (LIVE) award from Cordis Endovascular and Cordis Neurovascular Inc.

The award, honoring the contributions Hopkins has made to advancing endovascular and neurovascular education, was presented at the 2007 National Vascular Interventional Advances (VIVA) seminar held in Las Vegas in September 2007.

Hopkins is known internationally as an innovator in the development, use and teaching of minimally invasive surgical techniques that treat brain aneurysms and stroke blockages by threading specially designed instruments through blood vessels to the site of the injury, rather than opening the skull.

These techniques have resulted in greatly improved patient survival and in decreased surgical complications and recovery time.

"The educational contributions you have made to this field are numerous, consistently innovative and effective, and always centered around advancing patient care," the award states. "The Global Endovascular Complications seminar you created established a standard in education from which all other peer review meetings are measured."

The award goes on to note that the numerous fellows and residents Hopkins has taught and mentored as professor and chair of neurosurgery at UB will serve as a continuing legacy of his life's work.

"The significance of the educational impact you have had on hundreds of health-care professionals, students and ultimately patients is extraordinary," the award states in conclusion.

VIVA presents professional education seminars in vascular medicine and intervention.

—Lois Baker

Hopkins

Griswold Receives International Institute Award

Kim Griswold, MD '94, MPH, associate professor of family medicine and psychiatry in the School of Medicine and Biomedical Sciences, was presented with the Global Citizen Award by the International Institute of Buffalo on November 14, 2007. The award recognizes individuals in Western New York for their exceptional service to refugees and immigrants and for building bridges across cultures locally and internationally. Griswold was honored as founder of the Refugee Cultural Competency Training Program at Niagara Family Health Center.

Griswold

The program is supported by a five-year, $604,000 federal grant she received in fall 2006 from the National Heart Lung and Blood Institute. With this support, Griswold and her colleagues in the School of Medicine and Biomedical Sciences are working to develop and test patient-centered videos, called "patient voices," for use in teaching; consolidate existing cultural-competency projects into a cohesive educational program for medical students, residents and practicing physicians; and produce handbooks on cultural competency.

Buffalo is a major refugee resettlement center, currently receiving refugees from Somalia, Iraq, Cuba, Burma, Sudan and Vietnam. In the past, the area's four resettlement agencies also served an influx of persons from Rwanda, Ethiopia, Congo, Kosovo and Bosnia.

—S. A. Unger

Faculty Appointed to NIH Study Sections

The National Institutes of Health Center for Scientific Review has appointed three UB health sciences faculty to serve as members of study sections.

Members of NIH study sections are selected on the basis of their demonstrated competence and achievement in their scientific discipline as evidenced by the quality of research accomplishments, publications in scientific journals and other significant scientific activities, achievements and honors.

LAURIE K. READ, PHD, professor of microbiology and immunology in the School of Medicine and Biomedical Sciences, has been invited to serve as a member of the Pathogenic Eukaryotes Study Section.

Read's research focuses on molecular mechanisms of posttranscriptional gene regulation, especially RNA editing and RNA turnover, in the protozoan parasite, *Trypanosoma brucei*.

T. brucei is the causative agent of African sleeping sickness, which afflicts an estimated 500,000 people annually and is invariably fatal if not treated. Her work was recently featured in *Buffalo Physician* in an article titled "Ancient Organisms, Modern Scourges."

To view the article, visit www.smbs.buffalo.edu/bp, click on "Past Issues" and go to the spring 2006 issue.

As a member of the Pathogenic Eukaryotes Study Section, Read will review applications involving protozoal, helminthic and fungal pathogens in humans and animal models.

TIMOTHY MURPHY, MD, UB Distinguished Professor of medicine, and microbiology and immunology in the School of Medicine and Biomedical Sciences, has been invited to serve as a member of the Clinical Research and Field Studies of Infectious Diseases Study Section. Murphy is also founding director of the Buffalo VA COPD Clinic. His research focuses on nontypeable *Haemophilus influenzae* and *Moraxella catarrhalis*, important pathogens in otitis media and lower respiratory tract infections in adults with chronic obstructive pulmonary disease. The goal of his research is to develop vaccines to prevent these infections.

The Clinical Research and Field Studies of Infectious Diseases Study Section reviews applications that address population-based studies on the emergence, spread, control and prevention of infectious diseases (including potential agents of bioterrorism) that affect humans.

ROBERT M. STRAUBINGER, PHD, professor in the School of Pharmacy and Pharmaceutical Sciences, has been invited to serve as a member of the Drug Discovery and Molecular Pharmacology (DMP) Study Section.

Straubinger's research focuses on the broad area of drug carriers and targeted drug delivery, with an emphasis on the mechanisms by which drug carriers alter the pharmacology of carrier-associated drugs. Currently he is at work on an NIH-funded research project that involves strategies to attack tumor blood vessels by targeting lipid nanoparticles to them.

The DMP Study Section encompasses discovery, design, identification, isolation, development and synthesis of novel agents that are potentially useful in cancer therapy; identification of molecular targets of antineoplastic agents; and design, development and validation of novel preclinical models for anticancer drug evaluation.

—S. A. Unger

Lema a Distinguished Speaker at Canisius

Mark J. Lema, MD, PhD '78, chair of the Department of Anesthesiology in the School of Medicine and Biomedical Sciences and current president of the American Society of Anesthesiologists (ASA), spoke at Canisius College on November 6, 2007, as part of the Dr. George E. Schreiner '43 Pre-Medical Center Distinguished Speakers Series. Lema, who also serves as chair of anesthesiology, pain medicine and critical care, and medical director of surgical services at Roswell Park Cancer Institute, spoke on "2007 and Beyond—Preparing for the Future Health Care Paradigm."

In his role as president of ASA, Lema has lectured all over the country about the future of health care in America. Most recently, he appeared on CNN's "Anderson Cooper 360°."

"Radical changes in the practice of medicine and surgery over the next decade are inevitable and imminent," he said. "Practice arrangements and payments for these new therapies will radically change how care is delivered and who delivers it. American physicians, indeed all Americans, must anticipate and plan for future change."


Lema

Recognized in 1998 with the Canisius College Distinguished Alumni Award, Lema earned his undergraduate degree in political science from Canisius. He received his medical training at the State University of New York, Downstate Medical Center, followed by an internship at Staten Island Hospital, and residency at Brigham and Women's Hospital/Harvard Medical School in Boston. Lema also holds a PhD in physiology from UB.

—S. A. Unger

Shepard Goldberg Elected ASPPB Fellow

Shepard Goldberg, PhD, clinical assistant professor of psychiatry, was elected a Fellow of the Association of State and Provincial Psychology Baords (ASPPB) at the 47th Annual Meeting of Delegates at Colorado Springs in October 2007. An ASPPB Fellow is an honorific category that "recognizes outstanding service to ASPPB and to the field of professional psychology regulation and licensing/recertification.


Goldberg

Goldberg, who also is clinical associate professor in the Department of Psychology in the UB College of Arts and Sciences, is presently the director of psychological and clinical services at BryLin Hospitals in Buffalo.

His citation states that "he has played a major role in the history of ASPPB."

—S. A. Unger

Mindfulness and Alcohol Treatment

Gerard J. Connors, PhD, director of the UB Research Institute on Addictions, has received a four-year, $1.9 million grant from the National Institute on Alcohol Abuse and Alcoholism to conduct a study of mindfulness-based stress reduction as an adjunct in the treatment of alcohol-use disorders.

"By adapting and applying mindfulness-based stress reduction in alcoholism treatment, we hope to develop an increased ability to cope with stress and enhanced psychological well-being among alcohol-dependent individuals," says Connors. "For people who often deal with stress in their lives by turning to alcohol, this could be a very positive alternative."

Connors is a clinical psychologist who also serves as professor in the Department of Psychology in the UB College of Arts and Sciences and as research professor in the Department of Psychiatry in the UB School of Medicine and Biomedical Sciences.

—Kathleen Weaver

Less TV, More Play?

If young teenagers can't watch TV or play computer games, will they fill that time with physical activity?

And will living close to a park play a role in how active they are during their video downtime?

These are questions researchers at UB hope to answer via a three-year, $1.4 million grant from the National Institute of Child Health and Human Development.

"A lot of our research has shown that for children, living in a neighborhood with high park access is associated with being more physically active," says James N. Roemmich, PhD, associate professor of pediatrics in the UB School of Medicine and Biomedical Sciences, and lead researcher on the study.

"This is the first effort to test these findings in a randomized controlled experiment. We want to know if the built environment a child lives in affects physical activity, and if access to parks stimulates an increase in physical activity when access to television and computer is reduced by one-half.

"In addition to providing some interesting data on the influence of the built environment on youth physical activity, these data can be used to guide the design of new neighborhoods or the redesign of existing neighborhoods to best promote spontaneous physical activity of teens," says Roemmich.

Experimental sessions will take place during the school year, with the first cohort expected to begin in early spring 2008. The interdisciplinary study involves specialists in geographic information systems, urban planning and health behavior, as well as pediatrics and exercise science.

To learn more about this study, its methodology and the researchers collaborating on it, visit the UB NewsCenter website at www.buffalo.edu/news and search "video time."

—Lois Baker

Neurodegenerative Disease Study

Abnormal iron metabolism is linked to many neurodegenerative disorders, spurring scientists to search for ways to keep iron levels in balance and to develop drugs to correct an imbalance.

Daniel Kosman, PhD, professor of biochemistry in the School of Medicine and Biomedical Sciences, has received a two-year, $418,363 grant from the National Institutes of Health to develop a drug aimed at an iron-based neurodegenerative disease called aceruloplasminemia.

This research complements the $1.16 million four-year NIH grant Kosman received in June to study how iron is metabolized in cells.

Aceruloplasminemia occurs when the balance between the compartmentalization and storage of iron and the mobilization and transport of iron is disrupted. The condition is caused by a deficiency in the activity of the enzyme ceruloplasmin, which is essential for normal iron metabolism.

Kosman will be searching for a drug that can supplement the ceruloplasmin activity these patients lack.

"Ceruloplasmin is required for the efficient trafficking of iron from the intestine to other organs in the body, such as the liver and pancreas," Kosman says. "Ceruloplasmin activity in the brain is even more important because a deficiency of this enzyme leads to neurodegeneration. It is likely that the failure to adequately manage the toxicity of iron in the brain is a component of all neurodegenerative disorders."

Kosman's research group has developed a method to produce human ceruloplasmin and to modify this protein and its yeast counterpart, Fet3p, into a form that will be stable in the bloodstream, a first requirement for any pharmacologic agent. These proteins will be furthered modified to target them to the brain.

Lynn Zeigler, senior research technician, and doctoral students Satadipta Chakraborty and Julie Spix collaborated on developing a method to produce human ceruloplasmin for these studies.


From left: **Kosman with doctoral candidate Julie Spix and Lynn Ziegler, senior research technician.**

Kosman's group will test the therapeutic protein in a mouse strain genetically altered to exhibit the problems in iron metabolism observed clinically in humans. This work will be carried out in collaboration with Zena Leah Harris, MD, at Johns Hopkins University School of Medicine, and Jonathan D. Gitlin, MD, professor of pediatrics and genetics at the Washington University School of Medicine.

—Lois Baker

Field of Dreams

By Kevin Fryling

Dalian Ding survived exile to become a world-renowned anatomist

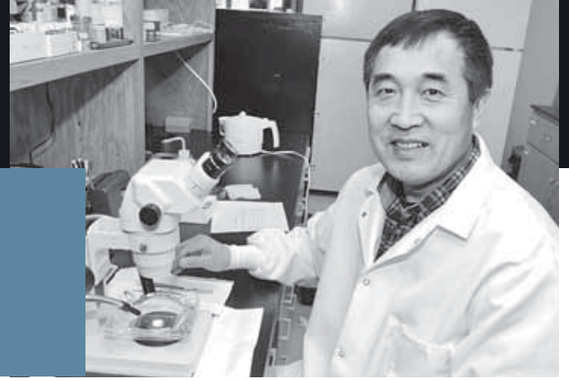

PHOTO BY NANCY PARISI

Sent from school to labor as a peasant farmer in Southeast China, Dalian Ding has overcome tremendous obstacles to earn a reputation as one the most prolific research scholars at UB—not to mention one of the greatest inner-ear anatomists in the country.

At age 16, Ding, whose father was a military official, fell victim to the unrest and anticapitalist sentiment that ran rampant during China's Cultural Revolution and became one of millions of college-bound men and women exiled to rural farms in China in 1968.

"Everyday I worked over 12 hours," recalls Ding, associate research professor in the Center for Hearing and Deafness, Department of Communicative Disorders and Sciences. "You had to get to work very early and work until very late at night. For a whole year I didn't wear shoes; even in the wintertime I had to work in the swampland or the field."

The payment for such labor? Less than 23 Chinese coins daily, which is roughly equivalent to three U.S. cents. Worse yet, he says the farmers soon started to claim "you ate more than you earned" and demanded he return what scant cash he had received. Ding, still only a young boy, was forced to pay the farmers for food he ate, despite his diligent work.

The chance to escape these conditions took about two years, says Ding, explaining that he was hired for a job in Union Hospital, affiliated with Wuhan Medical University, which was searching the countryside for "fresh blood."

"I went to the hospital to clean and mop floors, to wash spittoons, to take care of patients, to distribute lunch and dinner," says Ding. "I knew nothing about medicine, but I worked at a hospital. In the evening, I went to night school because the hospital didn't really need workers; they wanted medical assistants and nurses." The shortage of professionals was a great concern at the time because all the universities had closed during the Cultural Revolution, he says.

"I think we got some very good training in that very difficult period of time," says Ding, who trained as a nurse and then was chosen to serve as a technician in the otolaryngology department and the otology laboratory.

In 1978, Ding moved to Shanghai and sought to reclaim his education. He worked full time as a technician in the otology laboratory in the otolaryngology department in Renji Hospital, which was affiliated with Shanghai Second Medical University, and spent nights and weekends going to school. "I had to restart middle school," he says, "then go to high school in the evening, then college." He published his first research paper in 1981, graduated from the Bioengineering Department of Fudan University in 1989, and in 1998 earned the equivalent of a master's degree in neuroscience from the J. R. Ringer Credential Evaluation Inc. "That was really difficult, but I didn't give up," he says. "I wanted to learn to make up for missed lessons." The hardest part was not the study or work, he says, but the time not spent with his young son, Feng.

Over the next 15 years, Ding worked his way up from technician to assistant research fellow to associate research professor—a rare promotion—at Shanghai Second Medical University, and played an important role in the development of the otology laboratory at Renji Hospital. Ding also established a well-known series of national education and training courses on inner-ear physiology and pathology.

In 1995, Ding joined the research faculty at UB after being offered a position based on reputation alone. A Chinese graduate student at the university brought him to the attention of Richard Salvi, PhD, professor of communicative disorders and sciences, otolaryngology and neurology, and director of the Center for Hearing and Deafness.

Since moving to the U.S., Ding has continued to travel to China to hold workshops and has trained nearly all of the researchers and technicians working in the fields of otology and otolaryngology in that country.

"I feel like he's one of our secret weapons," Salvi says. "Ding has an outstanding research record and is probably one of the best inner-ear anatomists in the country—maybe the world."

Salvi and Ding currently are co-investigators on a $227,000 grant from the National Institute on Deafness and Other Communication Disorders to investigate the protective effect of chemical compounds, such as the calpain inhibitor leupeptin and the P53 inhibitor pifithrin, on microscopic "hair cells"—the auditory sensory cells that transduce mechanical sound waves into neural activity in the brain. The subject has become a "hot topic" in hearing research, explains Salvi, noting that concerns about drug-induced hearing loss are on the rise in developing nations due to the use of cheap antibiotics and anticancer drugs that damage the inner ear.

Research on the project is carried out on cells culled from test subjects and cultivated under artificial conditions in the lab—a practice that enables more precise experimentation, as well as reduces the need for animal testing. But because microscopic inner-ear cells from small-animal models require a gifted anatomist to dissect, laboratories from Boston to South Florida have started to contract out the process to UB.

"You have to have really good hands," says Salvi, estimating that less than 5 percent of anatomists master the procedure routinely performed by Ding.

In addition to his anatomical skills, Ding has authored more than 200 papers and close to 20 book chapters. Twenty years ago, he never imagined that such a prolific career lay ahead of him.

"I dreamed that in my life I could maybe publish 10 papers," says Ding, "but now, in fact, I've written about 220. I can't stop myself," he laughs.

Ding resides in Amherst with his wife, Haiyan Jiang, a research technician in the Center for Hearing and Deafness. A former technician at the Shanghai Physiology Institute, Haiyan helped Ding so much with his work when he first came to UB that she, too, was hired by the university, Ding says. Their son, Feng, 26, who received a master's degree in computer engineering from UB, was hired recently by IBM.

"The people from Ding's generation in China who have survived and done well are remarkable people," Salvi adds, noting that Ding "started out with nothing and through sheer willpower made things happen."

> "I feel like [Ding's] one of our secret weapons. "[He] has an outstanding research record and is probably one of the best inner-ear anatomists in the country—maybe the world. —Richard Salvi, PhD"

In Memoriam

John B. Sheffer, MD '47

Clinical emeritus professor of pathology

John B. Sheffer, MD, clinical emeritus professor of pathology in the School of Medicine and Biomedical Sciences, died on October 17, 2007, after a lengthy illness. He was 85.

Sheffer taught pathology for 47 years and was a favorite among students, who honored him on several occasions with yearbook dedications. One such dedication reads: ". . . for all he has taught us, to dedicate ourselves to reach for those human ideals to which he constantly aspires and so often magically attains. He has exemplified the spirit of selfless giving."

Faculty colleagues described him as an indefatigable, gentle man.

Sheffer had a particular interest in the second-year laboratory module and was responsible for collecting and upgrading much of the slide material used in today's curriculum. Each year at the medical school's Honors Convocation, an award in his name is given to the student "who has achieved academically and demonstrated particular aptitude in the pathology laboratory setting during pre-clinical years" (see Honors Convocation, page 28).

Born in Youngsville, Pennsylvania, Sheffer moved to Amherst, New York, in 1943 after graduating from Houghton College. In 1947, he graduated from UB medical school.

Following graduation, he served as a physician and officer in the army and was stationed at Landstuhl Medical Center in Germany in the mid-1950s.

After returning to Buffalo, in addition to teaching at UB, he served as chief of laboratory services at Veterans Affairs Medical Center and then as chief of pathology at Deaconess Hospital, a position he held for almost 20 years. From 1972 to 1974, he served as acting chair of the Department of Pathology at the medical school. In 1978, he joined the staff at Sisters Hospital, where he worked until illness forced him to curtail his activities in 2001.

Survivors include his wife of 64 years, the former Shirley Fidinger; two sons, Samuel A. and John B. II; a daughter, Deborah S. Alcott; and three sisters, Lovedy McCleery, Prudence West and Oneita DeVore.

—S. A. Unger

Harry W. Hale Jr., MD

Medical educator and surgeon

Harry W. Hale Jr., MD, a faculty member in the School of Medicine and Biomedical Sciences in the '50s and '60s, died August 16, 2007, in Scottsdale, Arizona, after a long illness. He was 90.

A native of New York City, Hale received his medical degree from the University of Rochester School of Medicine. After serving in the U.S. Navy from 1944 to 1946, he resumed his medical training with a surgical residency at Edward J. Meyer Memorial Hospital (now Erie County Medical Center), where he served as associate director of surgery from 1952 to 1969.

In 1969 Hale was appointed chair of the Department of Surgery at Maricopa Medical Center in Phoenix, Arizona, a position he held until 1988. While there he supervised a surgical residency program that trained hundreds of surgical residents who went on to practice in the Phoenix area and throughout the United States.

Hale is survived by his children, Nancy Priest, Harry W. Hale III, Daniel L. Hale and Robert Hale, all of Phoenix; and Alice Hale of Oakland, California.

—S. A. Unger