Unlocking the mysteries of hypertension. See page 3
2 UT LEADS INTERNATIONAL STENT STUDY FOR KIDNEY ARTERY BLOCKAGE

5 RENAL ARTERY STUDIES HAVE HISTORIC TIE TO UT

6 THE MOLECULAR MYSTERIES OF HEART DEVELOPMENT

9 CAMPUS CAPSULES

14 LEARNING MORE ABOUT A MARVELOUS PUMP

17 A TRANSFORMATIVE GIFT

18 UNRAVELING THE PUZZLE OF HYPERTENSION

21 SOLDIERING ON: CHAIR OF UT PSYCHIATRY EXCITED ABOUT GROUNDBREAKING PTSD STUDY IN MILITARY MEMBERS

23 COLLEGE OF MEDICINE CLASS NOTES
With this first issue of Rocket Science, the UT College of Medicine introduces a new magazine that will cover news about the college, with a special focus on the clinical and translational scientific investigations of our faculty as well as feature articles and news of interest about graduates of the former Medical College of Ohio, Medical University of Ohio and UT College of Medicine.

Since the merger in 2006 of MUO and UT, there have been many exciting developments. The college is contributing to the advancement of knowledge, addressing real-world problems and leading economic development in northwest Ohio — all with the goal of helping the University achieve its goal of becoming one the country’s outstanding metropolitan research universities.

Our faculty and students are engaged in innovative fundamental, translational and clinical research that is being conducted within and between departments, centers, and institutes and creative activities that consistently break new ground and allow people to live better lives.

A major impetus for this publication is to engage and connect MCO and MUO graduates with The University of Toledo. Many MCO and MUO graduates earned undergraduate degrees from the University, while others matriculated at other undergraduate colleges and universities and have formal ties with The University of Toledo College of Medicine.

As you will read in the Class Notes section of this publication, our medical graduates are doing wonderful things in the service of mankind across the country and around the world.

During the next few years, the magazine will cover a great diversity of topics. Our goal will be to publish twice yearly and mail the publication to our medical alumni and select members of the UT community.

This is your alumni magazine and we welcome any feedback you have on this first publication. We look forward to receiving news to share with other alumni, as well as any articles, human interest stories, and even photography that you might wish to submit. If your travels take you through Toledo, please stop by.

Sincerely,

Jeffrey P. Gold, M.D.
Health Science Campus Provost
Executive Vice President for Health Affairs
College of Medicine Dean
What is the best way to control the high blood pressure caused by a narrowed blood vessel to the kidney?

That’s the simple, yet vexing, question an international, $25 million University of Toledo-led clinical study called Cardiovascular Outcomes in Renal Atherosclerotic Lesions (CORAL) hopes to answer.

Led by Dr. Christopher J. Cooper, professor of medicine and chief of cardiovascular medicine at the UT College of Medicine and study principal investigator, the National Institutes of Health-funded study, which started in 2005, is enrolling 1,080 patients with narrowed kidney arteries at more than 100 sites in the U.S. and around the world to compare medical therapy with the use of medicines and stents. Stents are tiny metal meshes inserted in arteries after an angioplasty procedure has cleared the fatty debris that blocked the blood vessel. They act as a scaffold to help keep a cleared artery open after removal of the blockage.

As of mid-April, 718 patients at 116 clinical centers, including most of the United States’ most prestigious academic health centers and teaching hospitals and centers in Canada, Europe, Africa, Australia and South America, have enrolled in the study, which started at the former Medical College of Ohio and was the largest grant in the college’s 42-year history.

When the kidney arteries become narrow, a condition called renal artery stenosis, less blood flows to the kidneys. The kidneys mistakenly respond as if blood pressure is low and give off hormones that tell the body to retain salt and water. This causes blood pressure to rise.

The toll high blood pressure takes on the U.S. population is tremendous. An estimated 40 million to 65 million American adults — about one of every three to four adults — have the problem. About 10 percent of people with hypertension have what’s called secondary hypertension with an identifiable cause such as blocked kidney arteries.

Despite the fact that stents have been used for more than 15 years to keep blood vessels open, controversy swirls about their effectiveness to reopen kidney arteries with significant blockages to reduce high blood pressure, and scientific proof that they work better than blood pressure and cholesterol-lowering drugs alone is scant, said Cooper, an interventional cardiologist.

During a stenting procedure, physicians insert a catheter into a very small incision in the femoral artery in the leg. Then, guided by real-time x-ray imaging, the physician maneuvers the catheter into the stenotic area of the kidney artery. A balloon expands the artery, which flattens the plaque, and the stent is then inserted to hold the blood vessel open, providing unimpeded blood flow.

On the surface, it would seem that such a procedure, with the increased blood flow to the kidney, would have a positive impact on a patient’s high blood pressure. However, studies have offered little that is definitive.
“The conundrum is that it is not really understood whether the stenting strategy confers any advantages over just treating the high blood pressure with medication,” Cooper said.

To participate in the study, patients must give informed consent and undergo a baseline evaluation that includes a history and physical, quality-of-life measurements and lab work. Study patients undergo a diagnostic test — either a renal angiography, magnetic resonance angiography or renal artery duplex ultrasound — and must have a blockage of either kidney artery greater than 60 percent.

Study participants are randomized to one of two groups. One group receives medication alone to control blood pressure and other risk factors, while the second group is treated with medication and placement of a stent in the blocked kidney artery. Participants will be followed for the duration of the six-year study to determine which treatment reduces incidences of heart attack, heart failure, stroke and kidney failure. Data also will be gathered concerning cost effectiveness and quality of life.

Pfizer and AstraZeneca are providing lipid lowering and anti-hypertensive medications to all patients free and Cordis Corp. is providing stents.

“At the conclusion of the trial, not only will we be able to answer whether the stent therapy did anything to improve patients’ overall outcome, but we also will be able to answer questions about blood pressure control, prevention of kidney disease, the cost effectiveness of renal artery stenting and the quality-of-life implications,” said Cooper, a native of Springfield, Ohio.

CORAL’s genesis began in the late 1990s, when he submitted a grant to the NIH to conduct a study on treating patients with high blood pressure caused by narrowed kidney arteries with medications.

“The study section review group came back and said they wanted to see a bigger, more robust study which dealt with clinical events like heart attacks and strokes,” Cooper said. “That’s how CORAL was born, as an attempt to answer the fundamental question of whether opening the blocked kidney artery confers any advantages beyond just treating the risk factors with high blood pressure medications.”

To get the study off the ground, Cooper worked with cardiologists, radiologists and kidney specialists across the country. Today, Drs. Lance D. Dworkin, professor of medicine and director of renal diseases at Brown University in Rhode Island, and William L. Henrich, vice president for medical affairs and dean of the School of Medicine at the University of Texas at San Antonio, are study chairman and co-chairman, respectively. Henrich was professor and chairman of medicine at the former Medical College of Ohio in the mid-1990s. Dr. Timothy P. Murphy, associate professor of diagnostic imaging at Brown, is co-principal investigator.

Physicians at the University of Virginia, University of Minnesota, Harvard Medical School, Mid-America Heart Institute in Kansas City, Massachusetts General Hospital and Weill Cornell Medical College are analyzing patient lab data coming from clinical sites to confirm its integrity and accuracy.

“When we put the study group together, we tried to get the very best individuals to serve in these roles and make sure the collection and analysis of the data was consistent,” Cooper noted. “By using singular core labs, we can make sure that an apple is an apple.”

The Data Safety Monitoring Board (DSMB), an independent advisory group of experts in cardiovascular disease, epidemiology, patient care, biostatistics, medical ethics and clinical-trial design, monitors CORAL’s accumulating data every six months to detect evidence of any unanticipated benefit or harm to trial participants that may be attributable to one of the treatments under evaluation.

Participants in clinical trials such as CORAL are crucial in the research of potential new medical treatments, Cooper emphasized.

“I know that for patients, clinical trials are an enormous commitment,” he said. “First, it is a commitment to participate in the long-term follow-up. Second, it is a commitment in terms of allowing yourself to become part of an experimental design, not selecting which therapy you would rather have, but allowing the study to do that allocation. Some folks are thrilled to participate and to make a contribution, others are quite reticent and say ‘No, I don’t want to participate in that kind of research and just do X, Y, or Z.’ But I think it is important for individuals to understand that without these clinical trials, we really can’t advance medical science. There is no amount of smart thinking or computer models that can replace the collection and analysis of data in a clinical study.

“Our plan is to conclude this study in a fashion that will allow a message to go out from the National Institutes of Health that makes a firm recommendation to physicians and to patients about how patients with this condition should be treated,” he said.
RENAL ARTERY STUDIES
HAVE HISTORIC TIE TO UT

By Jim Winkler

Dr. Chris Cooper’s studies into the best way to treat narrowed kidney arteries have an historic tie to The University of Toledo.

In 1934, Dr. Harry Goldblatt, then a professor of pathology at Western Reserve University School of Medicine in Cleveland, established the first animal model of renal artery disease and renal hypertension.

Beginning in 1979, Dr. Goldblatt’s son, Dr. Peter Goldblatt, was professor and chairman of the Department of Pathology at the former Medical College of Ohio. Dr. Goldblatt stepped down as chairman in 1997, and retired in 2000. He returned to the UT Department of Pathology in 2007 as a professor emeritus, and is today involved in patient care, research and teaching.

The senior Goldblatt simulated obstructive renal vascular disease by attaching tiny clamps to the kidney arteries of dogs. The experiments showed that blood pressure becomes elevated when there is an interference with the blood flow through the kidneys.

The findings were published in an article, “The Production of Persistent Elevation of Systolic Blood Pressure by Means of Renal Ischemia,” that appeared in the Journal of Experimental Medicine.

Subsequent experiments by Goldblatt and others revealed that constriction of the renal arteries caused a series of chemical reactions involving an enzyme, later called renin, that led to high blood pressure. The studies also led to early insights into what eventually came to be known as the renin-angiotensin-aldosterone system in regulating normal blood pressure and causing fatal high blood pressure.

What does Dr. Peter Goldblatt remember about those days?

“I was born in 1933, and Dad’s first paper on production of hypertension, by means of an adjustable clamp on the main renal artery of the dog, was published in 1934,” he said. “I can recall that it received some repeated coverage in the Cleveland newspapers — both The Press and The Plain Dealer — at the time and over the next several years. When I was about six, I remember that a neighbor lady — everybody on the street knew the names of everyone who lived there — stopped me and told me how wonderful my father’s discovery was! That obviously impressed me.

“The date of the work is another significant memory because the first “great depression” was still affecting us. Case Western Reserve University — then Western Reserve University — had been significantly affected. My father’s salary had been cut by one-third in 1929, and there was no money for research. In fact, his first grant support was in the amount of $200 from the American Medical Association, which is acknowledged in that first paper. He could only afford to do a few experiments and each dog was extremely precious. He was a skillful surgeon from his experience in World War I, but to be sure that each dog would do well, he decided to clamp only one kidney at a time, so as not to lose a single animal. He fully expected to have to clamp both main renal arteries, but to his great surprise, clamping only one produced hypertension. He said later that was totally unexpected and in many ways, “the biggest payoff,” since the recognition that unilateral renal disease could lead to hypertension became “The Goldblatt Kidney.” This led to the first surgical cures of high blood pressure.”

In 1984, to commemorate the 50th anniversary of Goldblatt’s first successful experiment to induce arterial hypertension, MCO held a conference on the basic mechanisms of arterial hypertension that featured an all-star cast of nationally recognized authorities, including Dr. John Laragh, a longtime leader in high blood pressure research who was featured on a Time magazine cover in 1975.

Today, the words “Goldblatt kidney” are still commonly used.

Dr. Harry Goldblatt was honored by many groups, including the American Medical Association which gave him its scientific achievement award in 1976. The American Heart Association later established the Dr. Harry Goldblatt Fellowship. He died in 1977.
To make an organ like the heart, the body’s hardest working organ, everything needs to be timed and patterned perfectly. The development of the heart is driven by the precise expression of genes in time and space.
A few days after conception, specialized cells that form as part of the developing nervous system start to migrate through the developing embryo. Known as neural crest cells, they have the uncanny ability, given the right biochemical and genetic instructions, to multiply and differentiate into more than 20 different cell types.

Some travel to the heart, for example, where they are critically important for development of the septum that divides the right ventricle from the left ventricle, for development of the valves that regulate blood flow between the top and bottom chambers of the heart, and for the proper alignment of the great vessels that provide blood to the body and lungs. Other neural crest cells give rise to specialized neurons of the peripheral nervous system and the gastrointestinal tract, while still others differentiate as pigment cells and as bones and muscles of the face.

But sometimes the immature cells don’t get the correct instructive cues, leading to a group of developmental disorders known as neural crest-derived cristopathies. The resulting anomalies include congenital heart defects such as ventricular septal defects; neuroblastoma, a major pediatric cancer of sympathetic peripheral neurons; Hirschsprung’s disease, where part of the bowel wall lacks neurons; and anomalies of craniofacial development, including cleft palate and cleft lip.

“We have come a long way in identifying genes that cause or contribute to these common birth defects, making studies of the neural crest quite exciting,” said Dr. Marthe Howard, UT professor of neurosciences who has spent more than 20 years studying how the peripheral nervous system and other neural crest-derived structures respond to extrinsic and intrinsic cues that direct the cells’ differentiation and function. “Their diversity is very interesting because early when they are initially specified, they are pretty homogeneous. Then they give rise to all these different kinds of cells so it becomes an interesting puzzle to try to figure out how this cell-type diversity is generated. My lab is interested in the signals, mechanisms and genes involved in these early decisions.”

Today, part of her research is to identify and understand the DNA regulatory molecules, signaling pathways and cell-cell interactions that regulate development of neural crest-derived cells in the heart, including their differentiation once they reach the end of their migration.

It is work that could lead to better understanding of the molecular mechanisms in heart development that could, in turn, lead to therapeutic interventions when things go awry. Approximately 35,000 children are born in the U.S. each year with congenital heart defects. Many more die during gestation because of complications from improper heart development.
Septal defects, known as “hole in the heart” syndrome, represent one of the common cardiac defects of neural-crest origin. Another less common defect is double outlet right ventricle, a congenital heart defect in which both the pulmonary artery and the aorta arise from the right ventricle, resulting in improper blood circulation.

To make an organ like the heart, the body’s hardest working organ, everything needs to be timed and patterned perfectly. The development of the heart is driven by the precise expression of genes in time and space.

One gene that appears to be crucial for embryonic heart formation is Hand2.

“If you knock it out in those neural crest-derived precursor cells that contribute to heart development, you get cardiac phenotypes that are equivalent to septal defects and vascular problems known to be neural crest-derived birth defects,” Howard explained.

Howard has developed a strain of mice in which the function of Hand2 can be deleted in time and space in a cell-type specific way. In a conventional knockout strain of mice, the Hand2 gene is never expressed, and the embryos die too early to examine the cell types where the Hand2 gene is normally expressed.

Instead, she has genetically engineered what are called Cre-loxP conditional knockout mice. The technique involves two transgenic mouse strains. One carries Cre recombinase, an enzyme that recognizes a specialized binding site called “loxP.” The other strain is engineered so that the Hand2 gene is surrounded by these “loxP” binding sites. When mice that carry Cre in a neural crest-specific promoter are bred with mice carrying the lox-P surrounded Hand2 gene, the resulting mice lack Hand2 expression in all neural crest-derived cells. As a result, the protein product of the Hand2 gene needed for normal embryonic heart development is not expressed in the mice.

“We think we have identified the underlying cause of this defect,” said Howard, who is working on a paper for publication outlining her findings. “We have done a microchip gene assay analysis of the hearts of these mice and identified a group of genes that are controlled either directly or indirectly by Hand2. Many of these genes are required for proper formation of the septum, formation of the great vessels, the pulmonary artery and aorta, and regulation of proliferation of neural crest-derived cells.”

Howard also has learned a lot about the structure of the Hand2 gene. Five years ago, she discovered that for it to function appropriately as a DNA-binding protein it has to be bound by a phosphate group — a widespread biological phenomenon called phosphorylation.

“This phosphorylation not only regulates the ability to bind to DNA, but in the choice of dimerization partner as well; without the correct partner Hand2 can not function properly,” Howard said.

Howard, a College of Medicine faculty member for 12 years, continues to study the biochemical signals, transcriptional regulation and extrinsic soluble cues involved in development of neural crest-derived cells responsible for nervous system development.

Early in her career, she and researchers at two other institutions independently and simultaneously discovered existence of a molecule called bone morphogenetic protein (BMP) that is needed for development of noradrenergic neurons, which release the neurotransmitter noradrenaline. In the developing nervous system, Hand2 is required for differentiation of noradrenergic sympathetic ganglion neurons. Hand2 regulates cell proliferation which is important because the correct number of neural precursor cells must develop at the correct place in the correct time frame to assure that the nervous system develops appropriately.

“It is clear that Hand2 plays a central role in development of many neural crest-derived structures, including the heart, the peripheral nervous system and craniofacial bone,” Howard said. “This is a fascinating gene that has provided us the ability to unravel several very important transcriptional control mechanisms that are critical for normal development.”

“You can drive deletion in a space- and time-specific manner; this is important because knockout of Hand2 systemically is embryonic lethal,” she said. “Embryonic lethality occurs primarily because the vascular system and peripheral nervous system don’t develop properly. The main cardiac defects you get when Hand2 is absent in those neural crest-derived cells that contribute to heart development are ventricular septal defects and double outlet right ventricle, which results in improper blood circulation.”
Translational research program records successes

Three years ago, The University of Toledo College of Medicine decided it needed to play a bigger role in translational research that works to bridge the gap between basic and clinical research and established its Translational Research Stimulation Award (TRSA) Program.

Today, the pulse of translational research and collaborative science at UT has quickened, and some notable successes have been recorded.

The program, established by Dr. Jeffrey P. Gold, Health Science Campus provost, executive vice president for health affairs and College of Medicine dean, encourages faculty members to cross disciplines, departments, centers, institutes and colleges to conduct studies that emphasize translational research in which basic science discoveries are brought to the bedside to improve patient care.

Six two-year $100,000 grants were awarded in January 2007 to Drs. David Allison, professor of surgery; John Greenfield, professor of neurology and director of the MD/PhD program; Michael Rees, associate professor of urology and medical director of the Human Donation Science Program; Gretchen Tietjen, professor and chair of neurology; Randall Worth, assistant professor of medical microbiology and immunology; and Kim Yeung, assistant professor of biochemistry and cancer biology.

Their research resulted in nine grant submissions to the National Institutes of Health and other federal and private foundations, nine publications, one manuscript in review and 11 published abstracts or meeting presentations. Two investigators have brought $509,000 in investigator-initiated grant support, primarily from pharmaceutical firms.

Five awards were funded in January 2008 to Drs. Jerzy Jankun, professor of urology; David Nelson, professor of occupational therapy; Thomas Papadimos, assistant professor of anesthesiology; Debra Vestal, associate professor of biological sciences; and John Wall, professor of neurosciences. Collectively, they resulted in two grant proposal submissions, one provisional patent application, three publications and one published meeting abstract.

Dr. James P. Trempe, interim senior director of research administration, said he was pleased with the program’s progress and with the enthusiastic support of faculty across all schools and multiple disciplines in the University.

"New avenues of investigation have been opened, and intramural and extramural collaborations have been established," he said. "Although the current difficult funding climate has hindered the success of the grant submissions, I believe that some of these proposals will eventually yield significant extramural support."

Perhaps the TRSA grant that has yielded the biggest dividends is the paired donation program directed by Rees, a kidney transplant surgeon. A manuscript was published in the March 12 issue of the New England Journal of Medicine, and six abstracts have been submitted for the 2009 American Transplant Congress. In addition, he has received more than $100,000 in grants from four organizations, and the Alliance for Paired Donation headed by Rees has received coverage on CBS News, CNN, ABC News, The Wall Street Journal, USA Today, the 700 Club, BBC Radio and China Youth Daily.

The National Institutes of Health’s Roadmap for Medical Research emphasizes translational research by urging the elimination of barriers between scientists and practitioners, and fostering the education of future clinical and translational scientists.

Dr. Thomas Wakefield, professor and head of the section of vascular surgery and the Martin Lindenuer Professor of Vascular Surgery at the University of Michigan, spoke March 4 at the 2009 Alpha Omega Alpha lecture on the "Diagnosis and Treatment of Venous Thromboembolism in the Wake of the Surgeon General's Call to Action." Wakefield is an honors graduate of The University of Toledo and a 1978 graduate of the former Medical College of Ohio. Standing next to Wakefield is Tahir Jamil. Seated right to left are Asher Shafton, Kristen Kunklier, Britt Straka and Dan Straka. Photo by Jack Meade.
Two department chairs named

The College of Medicine has two new department chairs.

Dr. Bryan K. Yamamoto is the new professor and chairman of the Department of Neurosciences, and Dr. Steven H. Selman, a member of the College of Medicine faculty since 1980, has been named professor and chairman of the Department of Urology.

Yamamoto, a neuropharmacologist and expert on the neurotoxicity of amphetamines, joined UT from the Boston University School of Medicine. He earned his bachelor’s degree in 1975 from UCLA and a Ph.D. degree in 1981 from Syracuse University.

The department’s 16 faculty members teach medical and graduate students and postdoctoral fellows and conduct research. The department also coordinates the College of Medicine’s Human Body Donation Program.

In addition to his administrative and teaching responsibilities, Yamamoto, a native of Gardena, Calif., a Los Angeles suburb, is conducting research with grants from the National Institutes of Health that total more than $3.5 million on the neuropharmacology, neurodegeneration, and the neurotoxicity of amphetamines, in particular, methamphetamines and MDMA, also known as ecstasy.

His research has been continuously funded by the NIH since 1986.

Selman, a Toledo native and 1970 graduate of The University of Toledo, earned his M.D. degree in 1974 from Case Western Reserve University School of Medicine and completed general surgery and urology residency training at Case Western Reserve University Hospitals in Cleveland.

A kidney transplant surgeon, an authority on the use of lasers in surgery and in the potential uses of photodynamic therapy (PDT) to treat cancer, and a prolific scholar, he has authored more than 250 journal publications, abstracts, proceedings and book chapters and received more than $4 million in research grants and contracts from the National Institutes of Health and other scientific organizations for research studies into urologic cancers and PDT.

In 1983, he received the C.E. Alken Award for Urologic Research from the C.E. Alken Foundation in Berne, Switzerland, and seven years later received the Paul Block Jr. Research Award given by the American Chemical Society, the world’s largest scientific organization. He was recipient of the John Turin Award for Outstanding Career Accomplishments from The University of Toledo in 2002.

He currently holds the Frank D. Stranahan Chair for Oncological Research at UT and is a holder of 13 patents.

University names new director for Jacobson Center

Dr. Debra E. Gmerek, formerly vice president, site director and development site head for the Ann Arbor campus of Pfizer Global Research & Development, has been named director of the new Joan and Julius Jacobson II Center for Clinical and Translational Research at The University of Toledo.

The center, which is located on Health Science Campus, assists faculty in developing clinical research activities ranging from industry-initiated clinical trials to investigator-initiated clinical research of new drugs, medical devices and procedures, and organizes and manages clinical research trials at UT Medical Center aimed at determining the safety, efficacy and dosage of new medications and therapies.

Please see “A Transformative Gift” on page 17.
The University of Toledo College of Medicine and Case Western Reserve University School of Medicine have established an interdisciplinary center of excellence named the Ohio Center for Innovative Immunosuppressive Therapeutics to study, develop and commercialize new drugs to treat disorders of the immune system.

The universities received $3 million in capital funds from the Ohio Third Frontier Program to support the development of the new facility.

“Millions of Americans suffer health problems that are the result of disorders of the body’s immune system, diseases such as rheumatoid arthritis, asthma, lupus, psoriasis and atopic dermatitis that occur when the immune response is inappropriate in some manner,” said Dr. Akira Takashima, UT professor and chair of the Department of Medical Microbiology and Immunology, who is the principal investigator of the program and will serve as the center director.

Dr. Kevin C. Cooper, professor and chairman of the Department of Dermatology at CWRU School of Medicine, is the principal collaborator at Case and will serve as the center’s co-director.

Of the $3 million, UT will receive $2.08 million to renovate and add laboratory and office space in its Medical Microbiology and Immunology Department for two prominent research scientists who will be recruited by the University, and update its Proteomics LIMS system.
Two University of Toledo graduate students are recipients of coveted Ruth L. Kirschstein National Research Service awards for individual predoctoral research fellowship training from the National Institutes of Health.

Damien E. Earl, an MD/PhD student in the College of Medicine, received a four-year award from the National Institute on Drug Abuse (NIDA), while a two-year award to Terry D. Hinds, Jr., a PhD student in the College of Graduate Studies, is from the National Institute of Diabetes and Digestive and Kidney Diseases.

Core Laboratory with a next-generation mass spectrometer for proteomics research.

CWRU will receive approximately $920,000 to create a sophisticated, interactive videoconference facility that will house large video screens, electronic projectors, a conference table with microphones, and interactive whiteboards for collaborative discussions and conferences, as well as a multiphoton laser scanning microscope and a state-of-the-art flow cytometry system. The videoconference facility will be housed in the Case School of Medicine’s Department of Dermatology.

The state award requires the two universities to provide matching funds for the center.

“Our immediate goal is to develop the infrastructure and facilities that are absolutely required for our future recruitment of Ohio Research Scholars Program endowed scholars and for the commercialization of new immunosuppressive drugs by using the capital funds,” Cooper said.

Plans call for new drugs developed at the center to first be tested for safety and clinical efficacy in the Case School of Medicine Dermatology Translational and Clinical Trials Unit. Case’s Center for Stem Cell and Regenerative Medicine, Comprehensive Cancer Center, Skin Disease Research Center and the Center for Translational Research also will have important roles in the project. Likewise, the Center for Drug Design and Development and the Ohio Crystallography Consortium on UT’s Main Campus will facilitate the drug development efforts.

In addition, two biotechnology firms, Gene Express Inc., headquartered in Wilmington, N.C., and Cognitive Pharmaceuticals Ltd. of Toledo, and the Regional Growth Partnership will collaborate in the project.

**UT students receive prestigious NIH fellowship awards**

A Salem, Ohio, native and 2005 graduate of Kent State University, Earl is a student in the neurosciences and neurological disorders track and studies in the laboratory of Dr. Elizabeth I. Tietz, professor and vice chairman of physiology/pharmacology.

Earl’s award is for almost $161,000, which includes a stipend and monies for tuition, books, and travel to scientific meetings. It runs through May 2013.

Currently in his second year of graduate studies, Earl has completed the first two years of medical school and will resume his medical studies after he finishes the requirements for the PhD degree.

Using rats as a model, he is studying molecular changes in the brain during withdrawal from benzodiazepines, a class of drugs that most often are prescribed for anxiety and insomnia, the best known of which are Valium and Xanax. However, because it is relatively easy for people to become physically dependent, they have become drugs of abuse.

“We have found that elevated calcium levels inside certain neurons in the brain may be linked to withdrawal anxiety,” said Earl. “This may be due to aberrant regulation of a particular protein known as the voltage-gated calcium channel. My studies are focused on determining how this protein is regulated in rats chronically treated with Flurazepam. The goal is to find new therapeutic targets for treating benzodiazepine...
dependence, which will increase the clinical usefulness of this relatively safe class of drugs.”

A native of Franklin Furnace in Scioto County and a 2002 graduate of Shawnee State University, Hinds is studying in the Center for Diabetes and Endocrine Research (CeDER) under the tutelage of Dr. Edwin Sanchez, professor of physiology/pharmacology and CeDER assistant director who sponsored his application. The two-year award is for $75,000, which includes a stipend and monies for tuition, books, and travel to scientific meetings.

Hinds’ studies focus on genetic factors involved in obesity.

“Factors that control obesity via dietary intake or therapy are of much interest,” he explained. “Unsaturated fatty acids, especially polyunsaturated fatty acids, have been shown in clinical and animal studies to be useful in controlling lipid storage and regulating body weight and obesity in mammals. The molecular mechanisms behind what controls these actions are not well understood. Diseases such as Cushing’s syndrome, obesity, type 2 diabetes, and cardiovascular disease have been linked to the actions of cortisol on the body. Inside cells, cortisol binds to the glucocorticoid receptor, and this acts as a signal in regulating several different genes that regulate obesity and inflammation. Our laboratory has recently uncovered a promising approach that involves regulation of the receptor by TPR proteins, which can bind fatty acids and may regulate actions of cortisol on the body. We are investigating how different dietary fatty acids regulate obesity via TPR proteins that, in turn, regulate the glucocorticoid receptor. These studies should give insight to how our diet influences our gene expression and development of obesity.”

Hinds and Sanchez are currently submitting a provisional patent on their new discovery that will aid in understanding metabolism, obesity and diabetes.

Two MD/PhD graduates of the former Medical College of Ohio who worked in Tietz’s lab Drs. Scott M. Lilly and Bradley VanSickle also were recipients of NIDA research service awards. Lilly, a 2006 graduate, is now completing his third year of residency training in internal medicine at the University of Pennsylvania, while VanSickle, a 2004 graduate, is a fellow in pediatric endocrinology at Vanderbilt University, where he is studying the interaction between faulty glucose regulation and the progression of cystic fibrosis.

**Faculty member remembered for teaching, scholarship**

Dr. Walter B. Shelley, 91, one of the country’s foremost dermatologists and a professor emeritus at the former Medical College of Ohio, died Jan. 30 at his home in Wood County.

Shelley and his wife, Dr. Dorinda Shelley, a former chief of dermatology at MCO, joined MCO in 1983 and retired in 1997, after overseeing a busy dermatology clinic there and conducting clinical research.

He taught dermatology for almost 50 years and was a prolific writer, author, researcher and publisher. In retirement, he wrote four books, including his autobiography, and his scholarship helped MCO gain national visibility.

Professor and chairman of dermatology at the University of Pennsylvania from 1965 to 1980, Shelley was president of the American Academy of Dermatology (AAD) in 1972 and in 1992 received the Gold Medal from the AAD for his vast contributions to the field.

He was president of four other major American dermatologic organizations the Society for Investigative Dermatology, the American Dermatologic Association, the American Board of Dermatology and the Association of Professors of Dermatology.

He earned his bachelor’s, doctoral, and medical degrees from the University of Minnesota. He conducted research on how the body adjusts and sweats in hot conditions while serving in the Army during World War II.

He received honorary degrees from the Medical University of Ohio and Uppsala University in Sweden.

He was preceded in death by his first wife, Marguerite.

Surviving are his wife, E. Dorinda Shelley, sons, Peter, Thomas, and William; daughters, Anne Kiselwich and Katharine Shelley, and three granddaughters.

The family suggests tributes to the Division of Dermatology at The University of Toledo College of Medicine.
And thanks to some UT research, scientists are looking at the pump in a fundamentally different way as a new theory has emerged about its role.
LEARNING MORE ABOUT A MARVELOUS PUMP

Dr. Zi-Jian Xie has uncovered a new role for one of the hardest-working and vital machines in the human body: the sodium pump.

Each year, hundreds of thousands of Americans die from congestive heart failure and other forms of cardiovascular disease. University of Toledo College of Medicine scientists are conducting laboratory studies to put a dent in those numbers.

Their focus is an area in the human cell known as the "sodium pump," an enzyme called Na,K-ATPase which has long been known to be involved in the regulation of blood pressure and other functions. It is located on the outer membrane of every cell in the body.

And thanks to some UT research, scientists are looking at the pump in a fundamentally different way as a new theory has emerged about its role. Because of the new theory, it has become a prime target for development of new medications to treat such cardiovascular diseases as cardiac hypertrophy, hypertension and congestive heart failure.

Dr. Zi-Jian Xie, a professor of physiology/pharmacology and a molecular biologist; Dr. Amir Askari, professor of physiology/pharmacology who has spent a career studying the pump; and Dr. Joseph Shapiro, professor and chairman of the Department of Medicine who is a kidney specialist, direct the related studies that hold the potential of improving on drugs such as digitalis that have been given to heart failure patients for years. And their collaboration exemplifies the interdisciplinary nature of research in the field today.

The foundation for the studies go back some 20 years, when Dr. Askari, then professor and chairman of the Department of Pharmacology at the former Medical College of Ohio and considered a giant in the field, received a prestigious $5.4 million program project grant from the National Heart, Lung and Blood Institute in 1986 to study the pump. Such grants are large, multiple project efforts that generally include a diverse array of research activities. Subsequent program project grants have allowed the research to continue, resulting in dozens of new insights and hundreds of journal articles, manuscripts, abstracts and presentations at national and international meetings. Xie was a doctoral student in Akari’s lab in the late 1980s.

The sodium pump triggers heartbeats by moving sodium ions out of a cell while pushing potassium ions in to create an electrical charge that heart muscle cells use to contract. Patients with cardiac insufficiency often receive drugs like digitalis, which increases the activity of the sodium pump to stabilize the heartbeat.

However, in 2000, in a breakthrough discovery, Xie discovered that the sodium pump is more than a pump. It has another equally important role in the cell, acting as a receptor or switch to help cells translate signals coming from the environment and from hormones and other chemicals within the body into commands to areas inside the cell to start other kinds of activities. Although this process, called signal transduction, is integral to life, no one had a clue that the pump sent out signals before Xie’s studies.

Digitalis has been used for years to treat chronic heart failure. But Xie theorized that because of the pump’s new role that maybe the old standby drug did not work in the way people thought.

So Xie and Shapiro conducted a series of four experiments that led to the same conclusion — that the effectiveness of digitalis rested on the pump’s newly discovered command functions and that digitalis was not as effective in stimulating pumping as previously thought.
For Xie, the new view of the sodium pump is exciting. By understanding how signaling works, medications can be designed that will block harmful processes and specific molecular switches can be turned on or off to get a specific result.

He has discovered a new peptide called NaKtide, a protein fragment from Na,K-ATPase that blocks the command function of Na/K-ATPase and thus may benefit patients who develop heart failure because of stiff scar tissue caused by injured heart muscle tissue damaged by a heart attack.

“We first want to try to see if the peptide we developed can be used for renal failure-induced cardiac fibrosis,” he said. “Our goal eventually is to see whether this drug can be used as a drug to treat heart failure.”

What makes the new peptide so exciting?

“If you look at most medications we are using you are introducing a foreign thing into the body,” Xie explained. “The thing about our peptide is that it comes from the sodium pump itself. Our bodies make sodium-potassium ATPase. So this is an endogenous replacement and should be safer for our body. If our peptide is successful, now we have really opened up a new field for drug companies to look for compounds that induce the expression of the sodium pump and that compound may become an effective drug to treat patients with cardiac hypertrophy, heart failure and other cardiac diseases.”

Theoretically, drugs based on Xie’s peptide could not only influence the activity of the pump, but also influence an enzyme called “Src kinase,” that plays a key role in the signaling process.

It acts as a switch inside the cells and triggers the release of a cascade of other enzymes that transfer chemical signals that end with the cell nucleus and may contribute to heart disease.

Part of Xie’s current research involves indentifying naturally occurring substances that can mimic sodium-potassium ATPase. He has teamed with researchers at the Chinese Ministry of Science and Technology who are screening Chinese medicinal plants used to treat cardiac disease. Numerous important heart medications have been originally derived from chemicals first identified in plants.

Xie is the first to say that he cannot take all the credit and that the research collaboration with Drs. Shapiro’s and Askari’s research teams has been instrumental. By pulling together different groups with different types of expertise, they have been able to accomplish things that would be impossible for even a single lab.

“Collaboration is the key,” he said. “We have chemists in China who are isolating the compounds and characterizing their chemical structure. We have molecular biologists who can clone the pump in cell cultures so we can screen the compounds. We have cell biologists who are looking at how exactly this type of signaling process functions at the cellular level. Dr. Askari brings ideas about protein chemistry and Dr. Shapiro made the connections at the physiological and pathological levels. This is an environment where translational research is emphasized and that is why the program is so successful.”
“We are going to solve common issues like cancer and diabetes. These will no longer be a problem in the next generation.”

UT NAMES NEW TRANSLATIONAL RESEARCH CENTER AFTER ‘FATHER OF MICROSURGERY’

By Tobin Klinger

When Dr. Julius Jacobson earned his degree in biology from The University of Toledo in 1947, no one could have guessed the profound impact he would have on the field of vascular medicine.

Now the man known as “the father of microsurgery” has made a gift that could have an equally profound impact on the world. Dr. Jacobson and his wife, Joan, have made a $2 million gift to create the Joan and Julius H. Jacobson II Center for Clinical and Translational Research at The University of Toledo.

The Jacobsons’ gift will support the necessary infrastructure for the center, which is housed on the third floor of the Center for Creative Education on Health Science Campus, and will integrate UT’s basic and clinical science programs, while encouraging interdisciplinary research and maturing the clinical research enterprise.

For Dr. Jacobson, some of the greatest scientific discoveries of the future may be the result of a meeting of the minds through translational, or collaborative, research.

“Translational research brings together basic scientists and clinical scientists,” explained Dr. Jacobson, director emeritus of vascular surgery at Mt. Sinai Medical Center in New York City. “I’m a vascular surgeon: that’s what I know. But when it comes to basic biochemistry and physics, I know very little.

Through the combined skills and knowledge of basic and clinical scientists, Dr. Jacobson believes the field of medicine will see phenomenal developments. “We are going to solve common issues like cancer and diabetes. These will no longer be a problem in the next generation,” he said.

“The generosity of Dr. Jacobson will enable The University of Toledo to provide continued support for the leadership and infrastructure necessary to actively seek out and develop cross-campus and world-wide programs with potential for transforming approaches to the diagnosis, treatment and cure of complex human diseases,” said Dr. Jeffrey P. Gold, provost, executive vice president for health affairs and College of Medicine dean. “This gift will not only benefit UT, but health care around the globe. It is a wonderful gift celebrating a remarkable family and an equally remarkable concept to enhance clinical research.”

“The Joan and Julius H. Jacobson II Center for Clinical and Translational Research is a perfect embodiment of our University of Toledo mission of improving the human condition,” said UT President Lloyd Jacobs. “We speak of improving the human condition through the many great activities taking place across our institution, but the creation of this center enables us to show the impact we can have on our fellow man in the field of health care.”

“The University of Toledo was instrumental in placing me on a path that led to the man I am today,” Jacobson said. “It is our pleasure to be able to give back to the University that has given me so much in a way that will provide direct benefits to humankind. We are proud to have our name associated with this important new center.”

The gift is in gratitude for Toledo’s “wonderful people, wonderful professors and wonderful university,” Dr. Jacobson said.

“I couldn’t have gone to college if it weren’t for The University of Toledo,” he added. “I want to put Toledo on the map.”
People are estimated to have 30,000 genes responsible for inherited traits like Alzheimer’s disease, cancer and high blood pressure.

To pinpoint each of them is a daunting task.

But Dr. Bina Joe, who heads The University of Toledo’s Physiological Genomics Laboratory, and is dedicated to understanding which genes control blood pressure. She knows it’s a hunt crucial to millions of Americans with hypertension, commonly known as high blood pressure. Known as “the silent killer,” it affects one out of four adults. Uncontrolled high blood pressure leads to strokes, heart attacks, and heart or kidney failure.

The UT associate professor of physiology and pharmacology has three major grants from the National Heart, Lung and Blood Institute for her studies.

Genes tell the body how to make one or more proteins, which then perform specific activities within the body’s cells. But mutated genes produce altered proteins or no proteins at all. Sometimes this does not affect the body, but other mutations can cause disease or disrupt development.

Joe has spent the better part of a decade looking for genes that contribute to blood pressure regulation, a process likely governed by many genes, with each gene having a relatively small effect, and factors such as smoking, exercise and diet.

“We don’t know the exact number of genes involved in blood pressure regulation or the magnitude of change that each imparts,” she said. “These are very complex questions.”

Joe is carrying on the pioneering research of Dr. John Rapp, a longtime faculty member at the former Medical College of Ohio who created two pure, inbred strains of rats that today are being used as models for genetic research around the world. One strain is salt sensitive, meaning their blood pressure rises enormously when they shift to high-salt diets, while the other strain’s blood pressure is unaffected by a high-salt diet.

Dr. Lewis Dahl initiated the breeding of rats for genetic research in the 1960s and Rapp carried Dahl’s work forward when he died in 1976. Rapp’s rats, which are now available to scientists around the world, themselves are kept in several locations so that they are not all lost in a disaster, which would have a devastating consequence on research.

Rats are a valuable model for blood pressure studies because they share numerous biological and behavioral processes with humans, according to Joe. Nearly all the genes that are found that contribute to disease in humans have corresponding genes in rats, which allows scientists to generate experimental hypotheses.
Joe’s lab has identified one gene coding for 11β-hydroxylase as a candidate gene for hypertension. The 11β-hydroxylase gene produces a protein that regulates production of a steroid hormone from the adrenal gland.

“Recent studies from other laboratories corroborate the association between the gene coding for 11β-hydroxylase and human essential hypertension and this is certainly encouraging to pursue our model for advancing research on the other yet-to-be identified genes for hypertension,” she said.

Joe and her research team recently uncovered a second gene candidate and are working to determine exactly what role the gene plays in blood pressure regulation.

What makes the search for genes that control blood pressure so daunting is that people can have different variations of a candidate gene — “gene variants”— and therefore respond differently to medications or to lifestyle changes such as reducing the amount of salt in their diet. And it may turn out that a multitude of rare, hard-to-discover variants lie at the root of high blood pressure, she said.

Joe sees a three-fold benefit from identifying genes that influence people’s risk for high blood pressure.

Newly discovered genes can serve as drug targets for new therapeutic agents that will help correct the problem. It holds great potential for enhancing physicians’ ability to tailor individualized treatments — what is called personalized medicine — to more effectively manage patients with hypertension. And it can lead to advances in stem-cell research.

Joe and members of her research team, including a longtime collaborator, Dr. George Cicila, have begun pursuing the question of why one person with high blood pressure lives longer than another with the same problem and whether there are longevity genes that protect people from genes that cause high blood pressure. A paper about the findings appeared in the April issue of the journal *Hypertension*.

“The way that medicine is progressing, it is unimaginable where we will be in 10 or 20 years,” she said. “But I think it will exceed our expectations. Here’s why. The evidence that we are accumulating suggests there are not many major targets but several minor ones for the trait of high blood pressure. So what can we do? If technological development continues at the current pace, people will be able to have their genomes sequenced using microchip technology. If you want, you will have a right to look at your genome at a very low cost and determine whether you have a gene that predisposes you to develop high blood pressure eventually.

“The third avenue is stem cell research and regenerative medicine. The goal is to have, for example, cardiac cells regenerate within our body with the correct set of genes that we know will work. But how do we know which are the correct set of genes? That is what we are after. We can test these in the rat model. We know that there is a relatively ‘better’ genome in the salt resistant rats. The idea would be to take stem cells from these animals and transplant them into hypertensive rats so they could make their own good tissue and protect themselves from high blood pressure. I think you will see a surge in those kinds of models.”

Joe’s interest in the role of genetics in diseases such as arthritis, diabetes and hypertension began in the mid-1990s as a graduate student in India, where she studied the anti-inflammatory effects of oils and spices on arthritis in rats. She later learned about an NIH study involving rheumatoid arthritis that used a rat model she was familiar with and obtained a postdoctoral training position there in 1997. She joined the Medical College of Ohio faculty in 2001.
SOLDIERING ON: CHAIR OF UT PSYCHIATRY EXCITED ABOUT GROUNDBREAKING PTSD STUDY IN MILITARY MEMBERS

By Cynthia Nowak

For every sensationalized news story about a military combat veteran who returns home and murders a spouse, “there are probably hundreds of stories about veterans who return from war and adjust very well but you never see those cases publicized.”

So says Marijo Tamburrino MD (MED ’77). As chair of the UT Department of Psychiatry, she has the professional chops to know. And she’ll soon be in a position to know a great deal more on the subject of post-traumatic stress disorder (PTSD) in soldiers, thanks to a new research project being launched in collaboration with University Hospitals Case Medical Center, Case Western Reserve University.

Tamburrino identifies the ongoing study — called the Kaptur Combat Mental Health Initiative after its political champion, U.S. Rep. Marcy Kaptur of Toledo — as one of the biggest commitments on her crammed calendar.

“It’s the first project of its kind in the country,” she says of the multi-year study funded by the U.S. Department of Defense to the tune of $12 million. “The study will focus on members of the Ohio National Guard, the citizen-soldiers who fought and are still fighting in Iraq and Afghanistan.”

What researchers identify as risk factors for the development of PTSD and related mental illnesses will be examined in 3,000 members of the Guard before and after deployment. Making the study unique is its length: the servicemen and women initially receive one-hour telephone clinical interviews. Those interviews, performed by the University of Michigan and psychological survey firm SRBI, are repeated yearly until 2019.

“The clinical interviews will be done at Case Western,” explains Tamburrino, who’s co-principal investigator of the study. “Then, about 500 of the participants, randomly selected, will complete an in-person assessment that takes two or three hours. These assessments will be performed by UT and Case researchers.

“I’ll probably be doing a lot of driving around the state during that time, handling the administrative side of the project with Dr. Joseph Calabrese of Case.”

She explains studies showing that, contrary to popular belief, citizen-soldiers experience substantial trauma in combat, comparable to that of career soldiers: “One study showed about 17 percent of soldiers serving in Iraq suffering from [PTSD], which is surprisingly high. Initial results for soldiers who served in Afghanistan were lower, but the longer they served, the more the percentages went up. The way that soldiers served also seems to affect the results, as military personnel are often deployed several times over.”

The x factor remains elusive, she notes: “Each case is unique. Even though we have a good idea of the risk factors in the development of PTSD, we know less about why the majority of soldiers who experience combat stress don’t develop PTSD.”

Tamburrino, whose other research specialties include eating disorders and mood disorders, sees medical advances daily carving roads into areas of psychiatry that were uncharted territory not so long ago.

“So much progress has been made in psychiatry in the last fifteen years; it’s almost like coming out of the Dark Ages. Still, how individual patients respond to psychotherapy and pharmaceuticals remains hard to predict; each case is unique.”
The golden key unlocking such mysteries might well be genetics, she says. "And as we come to understand the human brain at the genetic level, we have so many more powerful research tools."

So are we approaching a time when mental illness can be predicted at birth? Tamburrino, although noting the criticality of early treatment, demurs: “It would be nice to have that predictive ability, but the reality is more complex, since mental illness is a multi-cause disease. It is possible to predict a vulnerability or a predisposition, but sometimes it takes a trauma to trigger it.”

The professor of psychiatry who was inspired as a child to enter medicine by encounters with the Medical Missionaries of Mary — “they were dressed in mysterious white robes and full of captivating stories about caring for people in Africa” — is understandably proud of the academic department with its two residencies in general and childhood/adolescent psychiatry.

“The residency programs are always a joy — and the residents ask such challenging questions.”

Each day’s amalgam of challenges and joys, though, inevitably centers on the patients: “It’s been such a privilege to treat and work with people, to see people recover and reclaim their lives.”

Equal progress needs to be made, she says, on widespread insensitivities regarding mental illness, displayed sometimes even by medical professionals. “I put that down to an unfortunate lack of education on the subject,” she says quietly. “For instance, it’s not well known that one in five people will experience a clinical depression during a lifetime. The good news is that mental illnesses are treatable and we now have effective treatments.

“The stigma of mental illness is being reduced, but we have much more progress to be made.”

That packed calendar beckons, but there’s time for one recollection of her long history with the institution she can remember as the Maumee Valley Hospital: “I was here when the new hospital opened and we were terribly concerned about how the patient transfer could be accomplished. As it turned out, the patients were fine with it, so perhaps there was a lesson there.”
Patrick T. Dowling MD (A/S ’71, MED ‘74) is professor and chairman of the Department of Family Medicine at the David Geffen School of Medicine at UCLA. He also is the Kaiser Permanente Endowed Professor of Community Medicine.

Alfred Connors Jr. MD (MED ‘74), Charles H. Rammelkamp Professor of Medicine at Case Western Reserve School of Medicine, Cleveland, was named chief medical officer at MetroHealth Systems, overseeing faculty and working with the school to guide the teaching and research of the MetroHealth medical staff. He was chair of the Department of Medicine at MetroHealth since 2002.

Randy L. Reese MD (MED ’77), Eugene, Ore., is practicing geriatrics and family medicine in rural Oregon after 10 years in emergency medicine. The co-author of 1993’s Growing into Wholeness reserves enough spare time to play drums in a rock ‘n’ roll band.

Janet M. Bruner MD (Pharm ’72, PharmM ’74, MED ’79, Res ’82) is chairman of the Department of Pathology at M.D. Anderson Cancer Center in Houston.

Melinda Sanders MD (MED ’79) is professor of pathology, chief of anatomic pathology and director of surgical and cytology services at the University of Connecticut Health Center in Farmington.

Mark A. Smith MD (MED ’80), is the new chief clinical officer with Mental Health Services for Clark and Madison Counties Inc. in Ohio.

Susan G. Sweda MD (MED ’80), a board-certified anesthesiologist, joined the staff of Licking Memorial Health Professionals in Newark, Ohio.

M. Lance Weaver MD (MED ’81), along with two medical colleagues, established a new practice, Northern Area Surgical Associates, University of Pittsburgh Medical Center.

Thomas L. Steinemann MD (MED ‘85), professor of ophthalmology at Case Western Reserve University, was named to the FDA’s Ophthalmic Devices Panel, which evaluates the safety and effectiveness of marketed and investigational devices for use in the eye.

George J. Weiner MD (RES ’85) is director of the Holden Comprehensive Cancer Center at the University of Iowa. He is also professor of internal medicine, a faculty member in the Interdisciplinary Graduate Program in Immunology at Iowa, and holds the C.E. Block Chair of Cancer Research. A faculty member at Iowa since 1989, Weiner led the Holden Center to recognition as a National Cancer Institute-designated Comprehensive Cancer Center in 2000, a designation renewed in 2005. He is the founding principal investigator and director of the NCI-funded University of Iowa/Mayo Clinic Specialized Program of Research Excellence (SPORE) in Lymphoma. Weiner also is chair of NCI Subcommittee A that provides peer review of the nation’s cancer centers, chair of the Governmental Affairs Committee for the American Society of Hematology and chair of the Iowa Consortium for Comprehensive Cancer Control.

Jeff A. Harwood MD (MED ’86), who practices family medicine at New London Family Practice LLC and acts as Huron County (Ohio) coroner, was installed as the 2008-09 president-elect of the Ohio Academy of Family Physicians.

Bradley P. Kropp MD (MED ’88) is professor and vice chairman of the Department of Urology at the University of Oklahoma Health Sciences Center. Last year, he received the Golden Cystoscope Award, given by the American Urological Association to urologists distinguished by outstanding contributions to the profession during the decade following their residency training. He is also chief of pediatric urology at the Children’s Hospital of Oklahoma in Oklahoma City. Kropp joined the OU faculty in 1996 as Oklahoma’s only fellowship-trained pediatric urologist. In 2005, he was awarded the OU Presidential Professorship for teaching excellence. He has held several leadership positions with national organizations, including the American Academy of Pediatrics, the Society of Fetal Urology, the Society of Pediatric Urology and the Society of University Urologists.

Elizabeth (Meyer) Read MD (MED ’88), is practicing at Premier Women’s Health in Maumee, Ohio, a new member of WellCare Physicians Group.

Ryan V. Miller MD (MED ’90) is a cardiologist with the Hickory Cardiology Associates/Western Piedmont Heart Centers. The firm has offices in Hickory, Morganton, and Lenoir, N.C.

James E. Sturmi MD (MED ’89) joined the medical staff at Genesis HealthCareSystem, Zanesville, Ohio. Board-certified in family medicine and primary care sports medicine, he has 16 years’ experience in clinical and academic medicine.

Kathryn S. Newport-Dew MD (Res ’91) is in private practice at Southwestern Medical Center in Lawton, Okla., serving as medical director of anesthesia and chair of the Medical Management Committee. She and her husband, John, have an 11-year-old daughter, Kristin. She plans to either retire or work at a local surgery center in the next three to five years.

Asra Ahmed MD (MED ’93) is an assistant professor of internal medicine at the University of Michigan. After receiving her medical degree; Ahmed completed a residency in internal medicine at Saint Joseph Mercy Hospital in Ann Arbor and fellowship training in hematology/ oncology at U-M.

Karl Klamar MD (MED ’93) is a member of the section of Physical Medicine and Rehabilitation at Nationwide Children’s Hospital and an assistant professor of clinical physical medicine and rehabilitation at The Ohio State University College of Medicine in Columbus.

Meagan Bower MD (A/S ’88, MED ’95), practicing in internal medicine, joined the staff of Defiance Clinic in the Ohio city.

Glenda M. Gensolin MD (MED ‘96) joined the medical staff of Lakeland Community Hospital in Niles, Mich.

Gary Katz MD (MED ’98), an assistant professor of emergency medicine at the Ohio State University College of Medicine, has been recognized as a “hero of emergency medicine” by the American College of Emergency Physicians. The
award recognizes emergency physicians who have made significant contributions to emergency medicine, their community and their patients.

Steven Haman MD (MED '00, Res '06) joined Paulding County (Ohio) Hospital as an orthopedic trauma surgeon available on an emergency basis, as well as conducting a weekly clinic.

Michelle Becker MD (MED '00) is a family physician with Healthpoint Medical Group in Ruskin, Fla.

Christopher Pelic MD (MED '00) became associate dean of students at the Medical University of South Carolina, Charleston, where he's also assistant professor of psychiatry and associate residency training director. His wife, Christine (MED '01) is consulting for the university's main hospital.

Dirk Thompson MD (MED '02) joined Lakewood Health System in Minnesota, working as an urgent care physician.

Yousuf Zafar MD (MED '02) is a faculty member in the Division of Medical Oncology, Department of Internal Medicine at Duke University Medical Center in Durham, N.C. He completed residency training in internal medicine at the University of Cincinnati and fellowship training in hematology/oncology at Duke University Medical Center. He also completed a fellowship in Health Services Research through which he is working towards a master of health science in clinical research.

Steven Wanek MD (MED '03) joined the staff of Summa Wadsworth-Rittman Hospital. He also has an office in Medina, Ohio.

Melissa (Stackhouse) Winterhalter MD (MED '04) joined the staff of Licking Memorial Health Professionals in Newark, Ohio, practicing as an inpatient pediatrician.

Marc Naderer MD (MED '05) joined the staffs of Great Lakes Physicians in Clyde, Ohio, and The Bellevue Hospital.

Scott M. Lilly MD, PhD (MED '06) is a third-year internal medicine resident at the University of Pennsylvania.

Nyathappa Anand MD (Res '07) joined the staff of Niagara Falls Memorial Medical Center in Niagara, N.Y., practicing in its Neurology Department.

Daobin Ding MD (Res '07), a maternal-fetal medicine fellow at the University of Chicago, received a 2008 Vision Grant from the Preeclampsia Foundation, which funds research into the disease that accounts for 15 percent of all premature births in the United States.

Venak R. Neelagiri MD (Res '08) joined the staff of Halifax Regional Hospital in Virginia.

Obituaries

Raymond L. Candage III (MED '04), North Canton, Ohio, died Dec. 21, 2008, at age 31.

George Palade MD, Del Mar, Calif., Nobel laureate honored as one of the fathers of cell biology, died Oct. 7 at age 95. In 1974, MCO bestowed on him an honorary doctor of medicine degree.

David K. Snyder MD (MED '81), Greenville, N.C., died Oct. 16, 2008, at 56.
Research and Sponsored Programs
Mail Stop 1020
3000 Arlington Avenue
Toledo, OH 43614-2595