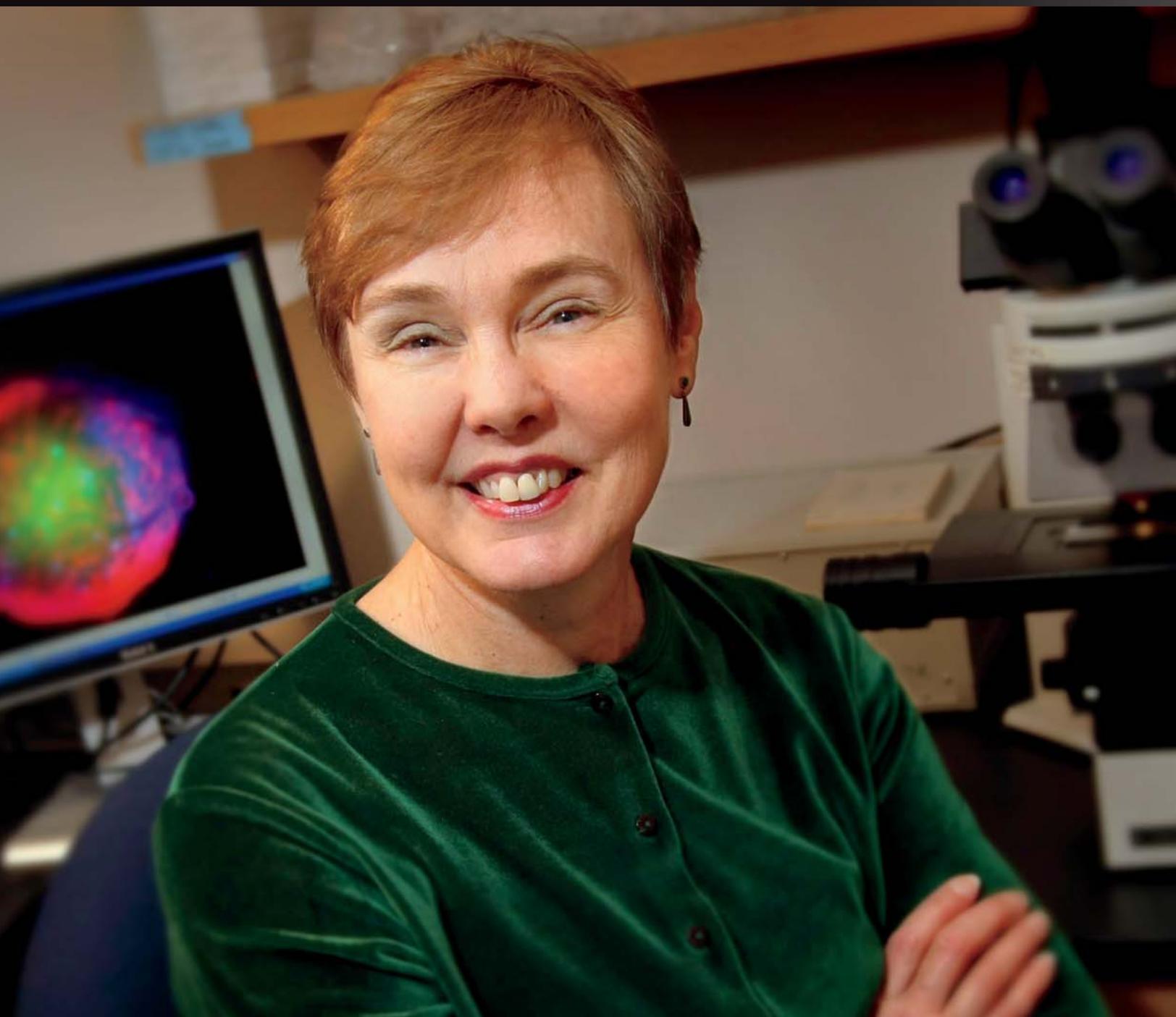


FALL/WINTER 2008 • UNIVERSITY OF ROCHESTER MEDICAL CENTER • SCHOOL OF MEDICINE AND DENTISTRY

ROCHESTER MEDICINE



New Graduate Dean

Edith Lord aims for stronger programs, better scientists, better lives

The Ph.D. Experience

Students find different paths to Rochester and their future in science



ON THE COVER

Edith Lord, Ph.D.,
Senior Associate Dean
for Graduate Education

W

e certainly will remember 2008 for the financial challenges that erupted during the year. But here at the University of Rochester Medical Center, we also should remember 2008 as a time of exciting and promising discovery.

In the journal *Nature*, Hartmut “Hucky” Land, Ph.D., chair of the Department of Biomedical Genetics, and his team reported they had found a promising way to pinpoint the genes essential in turning normal cells to cancerous cells. The *Nature* article described the discovery of approximately 100 genes that work downstream of known cancer-causing mutations, providing new targets for intervention.

The National Cancer Institute believes in the potential of this discovery, awarding a \$2.7 million grant to Land to map the network of genes that can cause colon cancer. The money will support work for the next five years in the laboratory of Land, who is scientific director of our James P. Wilmot Cancer Center.

Many athletes — professionals and gym rats — have had damaged cartilage or a torn meniscus. There is no known medical treatment for their protection or repair. Randy Rosier, M.D., Ph.D. (M’78, PhD’79), professor of orthopaedics, has discovered a cellular pathway that provides a target for a drug that can repair and regenerate articular cartilage and fibrocartilaginous tissues.

Sepsis remains a deadly condition with a mortality rate greater than 30 percent. Recently, a recombinant form of Activated Protein C has been approved by the U.S. Food and Drug Administration as a treatment for severe sepsis. While this protein “drug” shows benefit, the increase in survival rates is not large. Minsoo Kim, an assistant professor of microbiology and immunology, however, has identified variants of Activated Protein C that are more

effective at reducing the inflammatory reactions that can lead to organ failure and death. Although these variants are a long way from being approved, Kim’s versions of the protein may show enhanced efficacy.

Harold C. Smith, professor of biochemistry and biophysics, aims to develop drugs for HIV and AIDS that would not lose their effectiveness because of drug resistance. He has a new way of screening compounds that utilize a completely different pathway to attack HIV. If successful, this method significantly reduces the chances of drug resistance. In 2008, Smith received a Grand Challenges Explorations grant from the Bill & Melinda Gates Foundation for this work. The grant is designed to help scientists “explore bold, new solutions for health challenges in developing countries.”

Charles A. Thornton, M.D., professor of neurology, and his team are attacking muscular dystrophy. They have developed a method to screen compounds for RNA that can stop the progression of the disease and reverse some of the damage. Thornton already has found several compounds that appear effective in treating Type 1 myotonic dystrophy.

For many years, Chawnshang Chang, Ph.D., director of the George Whipple Laboratory for Cancer Research, has studied the role of the androgen receptor in prostate cancer. Chang says it’s likely that the androgen receptor works differently in different cells. He is developing a new therapeutic approach to target the androgen receptor differently in different cells, turning off the receptor in some cells while keeping it on in others, to fight prostate cancer.

In 2008, we also saw a different kind of step forward for science. Dina Markowitz, Ph.D., associate professor of environmental medicine, launched



Science Take Out, a Medical Center start-up company that provides science kits for high school students. Some students have difficulty meeting the state minimum requirement of 20 hours of laboratory activity to qualify to take a science exam need to get a diploma. The company already has developed nine individual science lab kits that can be used either at home, in schools with limited lab facilities, or by teachers who do not have the time for lab preparation.

We will face many serious economic hurdles in 2009. But we also know that we can count on the Medical Center faculty and scientists for the discoveries, inventions and ideas that will give us confidence in the future and enable us to leap those hurdles.

A handwritten signature in black ink that reads "Bradford C. Berk".

Bradford C. Berk, M.D., Ph.D.
(M’81, PhD’81)
CEO, University of Rochester
Medical Center;
Senior Vice President for Health Sciences

Most people think of a medical school as a place where medical students learn how to become physicians. At the University of Rochester School of Medicine and Dentistry, we have about 400 such medical students. But our School is also a place where graduate students learn how to become scientists. Did you know that we train more graduate students than medical students? Currently, we have more than 440 Ph.D. students and 135 master's degree candidates in a wide variety of fields.

Graduate school teaches a number of lessons that often aren't learned in medical school: the importance of gaining first-principles knowledge as a means of thinking creatively about the production of new knowledge; the importance of writing clearly; an understanding of how raw data translate into results, leading to an analytic (and sometimes skeptical) perspective on published data; the importance of time and of multiple failed research directions as critical ingredients in the germination of a truly novel finding; and, more important, the joy of figuring something out that was not previously known.

This issue of *Rochester Medicine* focuses on graduate education at the School of Medicine and Dentistry. In these pages, you will meet Edith Lord, Ph.D., professor of microbiology and immunology and of oncology, who is our new senior associate dean for graduate education. You can read about her ideas for improving an already excellent program. In spite of constrained support

for biomedical research, we both remain very optimistic for the future, primarily because of the high caliber and enthusiasm of our graduate students.

In this issue, you also can meet six graduate students who expect to receive their Ph.D. this year. Several already have landed postdoctoral appointments. And they each feel very positively about the education and training they received at our school. Ann Rossi, who will do her postdoctoral studies at the University of Chicago Medical Center, describes well what we try to do: "The greater value in getting my Ph.D. from the School of Medicine and Dentistry is in my training to be a scientist. Rochester, I would say, is very 'student-centric.' There is a real focus on the student — teaching how to ask and answer the right questions, how to present your work, how to collaborate with others in your field and outside of your field."

The School of Medicine and Dentistry has awarded many students a Ph.D. or a master's degree — more than 1,500 in the last decade alone. An album in this issue also includes brief portraits of six alumni whose careers began with a Ph.D. from our school.

I also want to cite articles in this issue about two remarkable gifts to the School of Medicine and Dentistry. Robert Brent, M.D., Ph.D. (M '53, PhD '55), and his wife, Lillian, have made an inspiring pledge for a scholarship fund they hope someday will make the school tuition free. And Thomas R. Noonan, M.D., a former faculty member who



taught and trained Ph.D. students four decades ago, clearly maintained his affection for the School of Medicine and Dentistry over the years and demonstrated it with an unexpected gift. This should inspire us in 2009.

A handwritten signature in cursive script that reads "David S. Guzick".

David S. Guzick, M.D., Ph.D.
Dean of the School of Medicine
and Dentistry



ROCHESTER MEDICINE

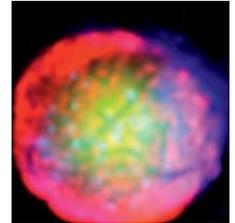
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NEW GRADUATE DEAN SEES
BETTER SCIENTISTS AND BETTER
LIVES FOR STUDENTS *By Michael Wentzel*

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Edith Lord, Ph.D., professor of microbiology and immunology and of oncology at the University of Rochester School of Medicine and Dentistry, does not hesitate when asked about the students who earn a Ph.D. working in her laboratory.

“I could put my students in any of the top laboratories in the country and they would succeed,” Lord said. “I think many people around this school would say the same thing about their students.”



Lord, a faculty member for 30 years and the School of Medicine and Dentistry's new senior associate dean for graduate education, sees the dean's job as making sure the School's graduate programs of the future are better than today's.

"We have a very strong graduate program that is in good shape. But some programs are stronger than others, and things can always be improved," Lord said.

As senior associate dean, Lord directs the School of Medicine and Dentistry's Ph.D., postdoctoral and master's degree programs, which have about 800 students enrolled. In July, she succeeded Paul L. LaCelle, M.D. (M '59), who returned to full-time research in the Department of Biomedical Engineering.

Lord has launched an assessment of all graduate programs and a review of the "clusters," the interdisciplinary interest areas that allow students to explore a variety of scientific fields and laboratory experiences before choosing a specific Ph.D. degree. A task force also is evaluating the major courses, such as biochemistry, cell biology and ethics that are taken during the first 18 months of graduate school.

"Some students have never had biochemistry and others have majored in it," Lord said. "Should they all take the same course? Or should there be shorter courses more specific for the audience? Ethics, for example, is very important. I tend to think everyone should take the same course whether you will be working with animals in a lab or might never use animals — or if you don't plan to work with industry in drug research. People should know the rules."

Lord plans to have revisions of at least two major courses in place by fall of 2009. Another top goal is increasing the quality of the school's graduate students. "That is not to say we have bad students now. But we would like to increase the overall quality. How do you do that? How do you measure it? Those are interesting questions," Lord said.

The formation of an office that would provide services to the more than 200 postdoctoral students at the School of Medicine and Dentistry is a major goal. "Postdoctoral fellows often fall through the cracks," Lord said. "They are not viewed as students, though they often get treated as students. They are not treated as faculty. They do a lot of the research here, but they don't seem to belong anywhere. They need someone to look after their needs. Many are international students so they have problems with visas and other issues. They need help getting jobs. They have families and need assistance at several different levels. We need to do that."

As part of the new graduate dean's goal to increase services for all graduate students, Lord plans to create a series of workshops.

"We should do things for students that they need. We should make life easier for students when they are here," Lord said. "There should be a writing workshop. Everyone needs to write and everybody could learn to write better than they do. Science is all about writing these days."

The topics of the workshops also could include teaching skills, career options, grant writing and ways to apply for postdoctoral positions.

"These would not be onerous for faculty or students," Lord said. "They can pick and choose what they want. They could include life skills, such as investing or purchasing a home. We will start out small, then let the students vote with their feet and see what works."

The number of applicants to the school's graduate programs has remained steady for several years. If the school is to improve student recruitment, an overhaul of the graduate program Web sites is required, Lord said.

"The Web is the way most of our students find us and make decisions. We must update the Web pages of all our programs and make them look that they are all of one program," she said. "They don't have to be the same but they should look linked and make it easier to compare programs and apply."

Lord also plans improvements in assessing graduate programs, including tracking Graduate Record Examination scores, number of student publications, length of time to earn a degree and

postdoctoral placements.

"The school has many members of the faculty who are very interested in graduate education. I want to get them more involved," Lord said. "I want to do things to make the lives of our graduate students better and make them better scientists. A good graduate student is worth a lot in the lab. The better our graduate students are and the better we treat them, the better our school will be." Lord, a Phi Beta Kappa graduate of the University of Kansas, received a Ph.D. in biology from the University of California at San Diego. She was a postdoctoral fellow at the University of California at San Francisco. She joined the School of Medicine and Dentistry faculty as a senior instructor in 1976. She was named assistant professor in 1978, associate professor in 1984 and professor in 1994.

In her research, Lord focuses on the immune responses that can control tumor development and also studies the unique microenvironment present within growing tumors. She has published, as author or co-author, more than 100 scientific articles. She plans to continue her research.

Since 2006, Lord has led graduate studies programs in the Department of Microbiology and Immunology. She also directed the school's Post-baccalaureate Research Education Program (PREP), which encourages underrepresented minorities to pursue a research doctorate and prepares them for careers as scientists and leaders in the biomedical community.

Thirteen students have received a Ph.D. while in the Lord laboratory, and two more are in training. Her Ph.D. graduates now hold positions, among other places, at Yale University, Children's Hospital Boston, University of Nebraska, University of Utah and Chang Gung University College of Medicine, Taiwan.

David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry, said he is enthusiastic about the potential of the school's graduate program under Lord.

"During a tenure at the medical school that has extended more than 30 years, she has demonstrated, time and time again, her excellence as a scientist and her passion for graduate education," Guzick said. "At a time when graduate education in biomedical science is becoming increasingly important and challenging, Dr. Lord has developed a thoughtful and creative set of short- and long-term goals that will greatly enhance Rochester's contribution to training the next generation of biomedical scientists."

Edith Lord, Ph.D., discusses research projects with Elizabeth Sorensen, a Ph.D. candidate in Lord's lab.



"Postdoctoral fellows often fall through the cracks.... They need someone to look after their needs. Many are international students so they have problems with visas and other issues.... They have families and need assistance at several different levels. We need to do that." EDITH LORD



THE PH.D. EXPERIENCE



IN THE SPRING OF 2002, WHEN SHE WAS A STUDENT AT FLORIDA INTERNATIONAL UNIVERSITY IN MIAMI, ANA S. GOYOS ATTENDED A SERIES OF LECTURES GIVEN THERE BY NICHOLAS COHEN, PH.D., THEN A PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY AT THE UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY.

Cohen, who received his doctorate in 1966 from Rochester and is now professor emeritus, focused his research and his talks on evolutionary and developmental immunology.

“I was on the edge of my seat



Students find different paths to Rochester and to a future in science

By Michael Wentzel

through his whole seminar,” Goyos said. “At the time, I was working in a lab that asked questions of immune defenses of marine coral. But when I heard Dr. Cohen speak, I immediately knew that I wanted to be involved in that kind of research.”

After the lectures, Cohen joined Goyos and another student at a South Beach bar, where they talked science until morning.

The encounter with Cohen started Goyos, the daughter of political refugees who emigrated from Cuba, on the road to Rochester and a Ph.D. in immunology she expects to receive this summer from the School of Medicine and Dentistry.

Goyos is among the almost 580 students enrolled in School of Medicine and Dentistry graduate programs this year, performing vital work in dozens of labs as they learn. In the last decade, more than 1,500 people have received a Ph.D. or a master's degree from the School.

Goyos came to Rochester because she was impressed by the School's collaborative atmosphere and the different venues for students, postdoctoral fellows and faculty to get together and critically discuss their research and get suggestions from their colleagues.

“Besides the academic research itself, I feel this is our strength,” she said

Cohen, whose lectures had inspired Goyos, initially recruited her to Rochester where he suggested she take part in a summer research program. In the program, she developed a project under the supervision of Jacques Robert, Ph.D., associate professor of microbiology and immunology. Goyos found the experience and Robert inspiring and enrolled in the School's graduate program. She describes Robert as “the reason why our lab is so dynamic and productive.”

Goyos investigates “recognition events or how a body can or can't recognize potential cancer cells and what cells and molecules mediate the recognition.” This interest goes back to the death of her mother in 1996 from non-Hodgkin's lymphoma.

“It was very tough and difficult to deal with and, as a result, my grades suffered significantly. But ultimately it shaped the kind of research that I want to end up doing,” she said.

Goyos, who is now 31, has been first author on three published articles. She has presented her work at an international conference and other meetings. She and her husband, Joe Goyos, had their

Research subjects
in the Jumping Frog
Lab of Jacques
Robert, Ph.D.



first child, a daughter, in November.

Goyos has accepted a postdoctoral position in the lab of Peter Parham, Ph.D., at Stanford University, where she will investigate the biology, genetics and evolution of Major Histocompatibility Complex (MHC) class I molecules, Natural Killer cell receptors and other immune system molecules.

“Ultimately, I want to run my own research program in an academic institution,” Goyos said.

Graduate students make their way to Rochester by many different paths.



WHILE GOYOS FOLLOWED AN INSPIRING LECTURER, IBRO AMBESKOVIC, WHO EMIGRATED FROM BOSNIA AND HERZEGOVINA IN 1995 WHEN HE WAS 17, “STUMBLED” ACROSS THE SCHOOL OF MEDICINE AND DENTISTRY PROGRAM IN BIOCHEMISTRY AS HE WAS BROWSING THROUGH PERSONAL REVIEWS OF UNIVERSITIES.

“At the time I was searching for programs in tissue engineering, and though the School’s graduate program did not offer a degree in this field, the emphasis on a cluster system got me interested enough to do more research,” Ambeskovic said. “The more information I uncovered, the more I got interested, which led me to eventually apply. My assessment of the program was confirmed when I came to interview, and I left with such a good impression that on the flight back I decided that this was the school I wanted to attend.”

Regardless of the chosen Ph.D. field, the School’s cluster program exposes a student to a range of experiences and scientific skills, but it does not lock a student into a specific discipline.

“The open exposure to many areas of work was instrumental in shaping my education here,” said Ambeskovic.

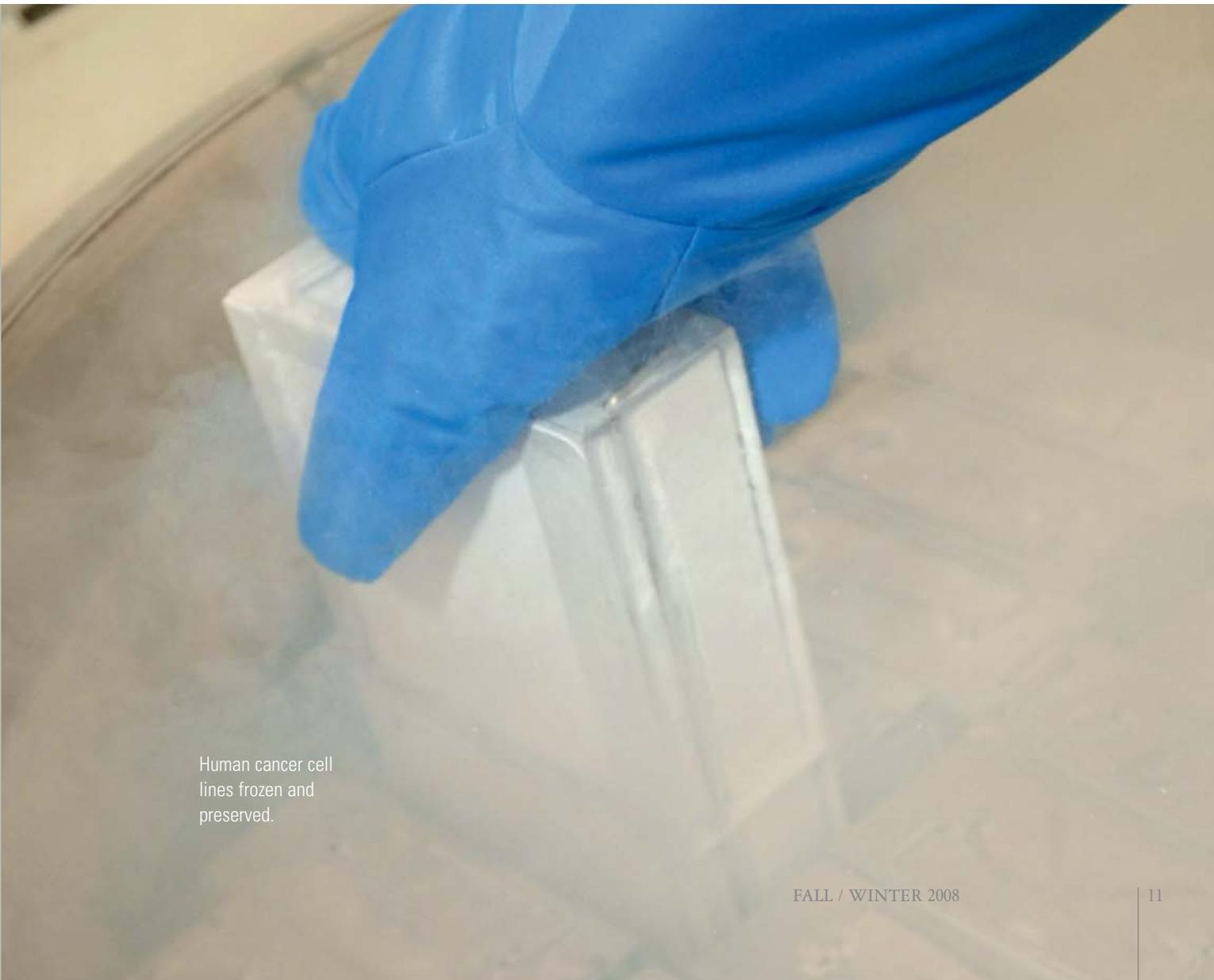
“Though I started in the biochemistry program, where I worked with and met some amazing people, I ended up switching programs and departments and instead will be getting a Ph.D. in genetics. It is my firm belief that the number of universities where this kind of a transition would be so easily accessible and supported is very small, which further supports the forward-looking approach toward graduate education at the School of Medicine and Dentistry.”

With Mark Noble, Ph.D., professor of genetics, as his advisor, Ambeskovic investigates the normal development and pathology of oligodendrocytes, using a rodent model. Thyroid hormone induces oligodendrocyte progenitor cell (OPC) differentiation, both in vitro and in vivo, Ambeskovic said. While the effects of thyroid hormone treatment on OPC gene expression are known, the early steps in the differentiation initiation are not well understood.

“My work aims at elucidating the mechanism by which the OPC oxidation seen with hormone treatment is translated into and understood by the precursor as a signal to stop dividing, exit cell cycle and initiate the oligodendrocyte differentiation program,” he said.



“My assessment of the program was confirmed when I came to interview, and I left with such a good impression that on the flight back I decided that this was the school I wanted to attend.” IBRO AMBESKOVIC



Human cancer cell
lines frozen and
preserved.



“We hope that the results of this work will lead to a better understanding of normal development and, perhaps even more important, shed new light on the pathology of a range of nutritional and hormonal disorders.”

For two years as he worked on his genetics research, Ambeskovic, a graduate of Franklin & Marshall College, also attended the University’s Simon Graduate School of Business, receiving his M.B.A. in June 2008. His new research projects “hold great promise for increasing our understanding of normal central nervous system develop-

ment and disease,” he said.

“As for my long-term goals, I intend to keep an open mind to whatever opportunities may arise, as I have intentions to start my own laboratory and also take advantage of my business training to get involved in the biotech and pharmaceutical industries,” Ambeskovic said.

IN 2004, GRACE VANGEISON — NOW A MARRIED GRACE JOHNSTON — SIMPLY CROSSED ELMWOOD AVENUE FROM THE UNIVERSITY’S RIVER CAMPUS, WHERE SHE EARNED HER BACHELOR’S DEGREE, TO BEGIN WORK ON HER PH.D. AT THE SCHOOL OF MEDICINE AND DENTISTRY.

“I thoroughly enjoyed my undergraduate life at Rochester,” Johnston, a native of Cape Elizabeth, Me., said. “I learned so much and was immediately exposed to high-level scientific concepts taught not only through rote memorization but also through labs, complex problem-solving and questions that forced you to understand the science rather than just memorize it. I wanted the same thing in graduate school. I started doing research in the med center as a junior and knew the environment was a place where I could spend the next several years at

getting my Ph.D. I love to learn.”

Johnston chose neuroscience as her field because of a class she took with Carol Kellogg, Ph.D. (PhD ’70), professor of brain and cognitive sciences, who exposed her to the scientific literature, she said, in a challenging and exciting way. As a graduate student, her advisor was David Rempe, M.D., Ph.D. (R ’01, FLW ’03), assistant professor of neurology. The goal of Johnston’s research was minimizing tissue damage after a stroke. She identified a novel cell-death pathway where astrocytes were toxic to neurons in hypoxia. By blocking this pathway, neurons can be saved from hypoxia-induced damage.

“Rochester shaped me as a person,” she said. “The School taught me how to think, how to work, and how to solve a problem. Daily interactions taught me about myself and grew me into a person who values the organization she represents, wants to work hard and wants to make an impact on society.”

As a graduate student, Johnston experimented with a variety of jobs. She worked as a teaching assistant, taught a course for the Johns Hopkins University Center for Talented Youth and interned in the University’s tech-



nology transfer office. Now, Johnston, who is 26, works at Cornell University in Ithaca as a licensing assistant in technology transfer.

“I have found that I really enjoy being a liaison between the academic world and other areas,” Johnston said. “In technology transfer, I am exposed to cutting-edge science daily and bring that to the business world. I chose my current career because now I can actively bring academic science to light.”

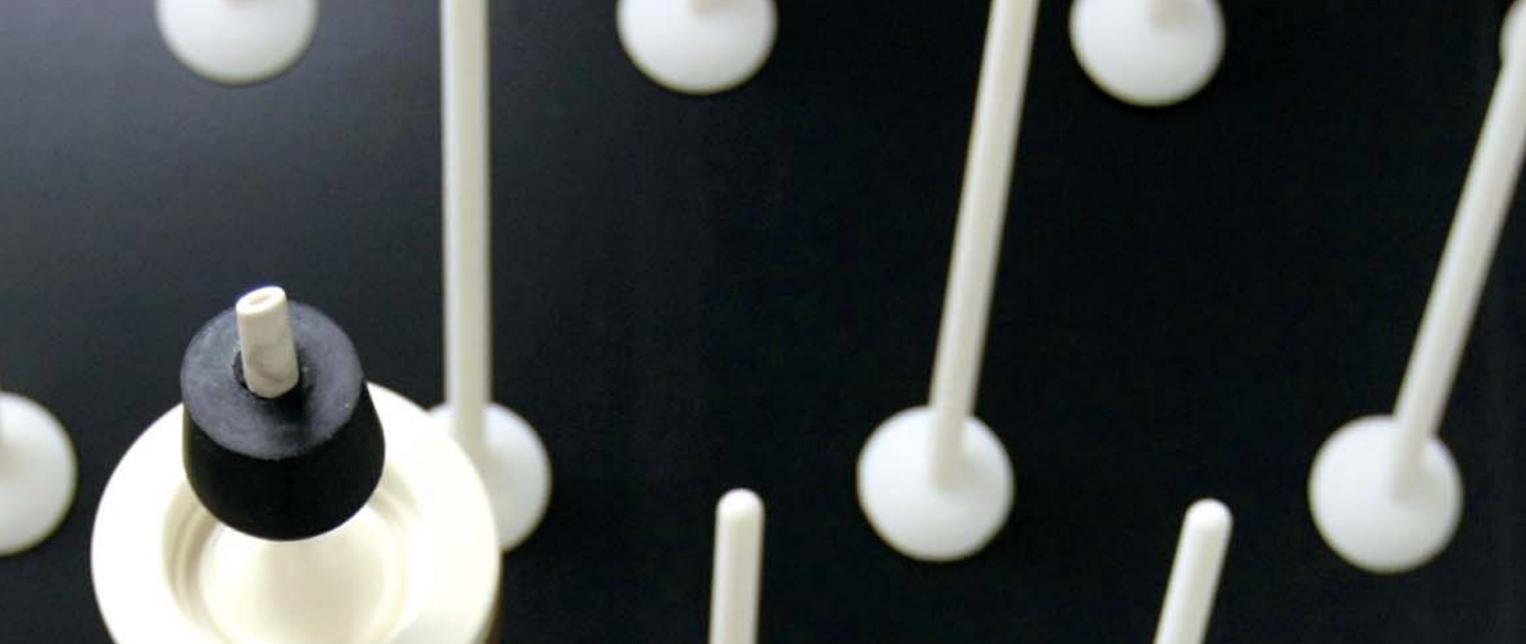
WHEN BRENT KOBIELUSH GRADUATED FROM BETHEL UNIVERSITY IN ST. PAUL, MINN., WITH A BACHELOR’S DEGREE IN CHEMISTRY, HE LOOKED TO TOXICOLOGY AS A FIELD THAT WOULD GIVE HIM A WELL-ROUNDED BACKGROUND IN SCIENCE. After studying schools across the country, Kobielush, a native of Monument, Colo., chose the School of Medicine and Dentistry because of the School’s well-respected toxicology program.

“There is great diversity in the program, which allows study of many facets of toxicology,” he said. “The program is full of great scientists who are extremely personable. The alumni, who have had success not just in academia but in industry and government as well, give great support. Funding is among the best in the nation. The Department of Environmental Medicine and the toxicology training program have years of achievement and an outstanding overall legacy.”

Kobielush studied the phosphorylation of the aryl hydrocarbon receptor (AhR) and its role in regulating AhR cell signaling. The AhR is important because it has been shown to mediate the toxic effects of environmental contaminants, such as dioxins, which are produced from the combustion of fossil fuels and metal smelting, and can be found in the food we eat, he said. Although humans have background levels of dioxin, it is not well characterized whether these levels elicit a toxic response later in life. Studies have shown, however, that mice treated with dioxin exhibit developmental and reproductive abnormalities as well as the development of cancer.

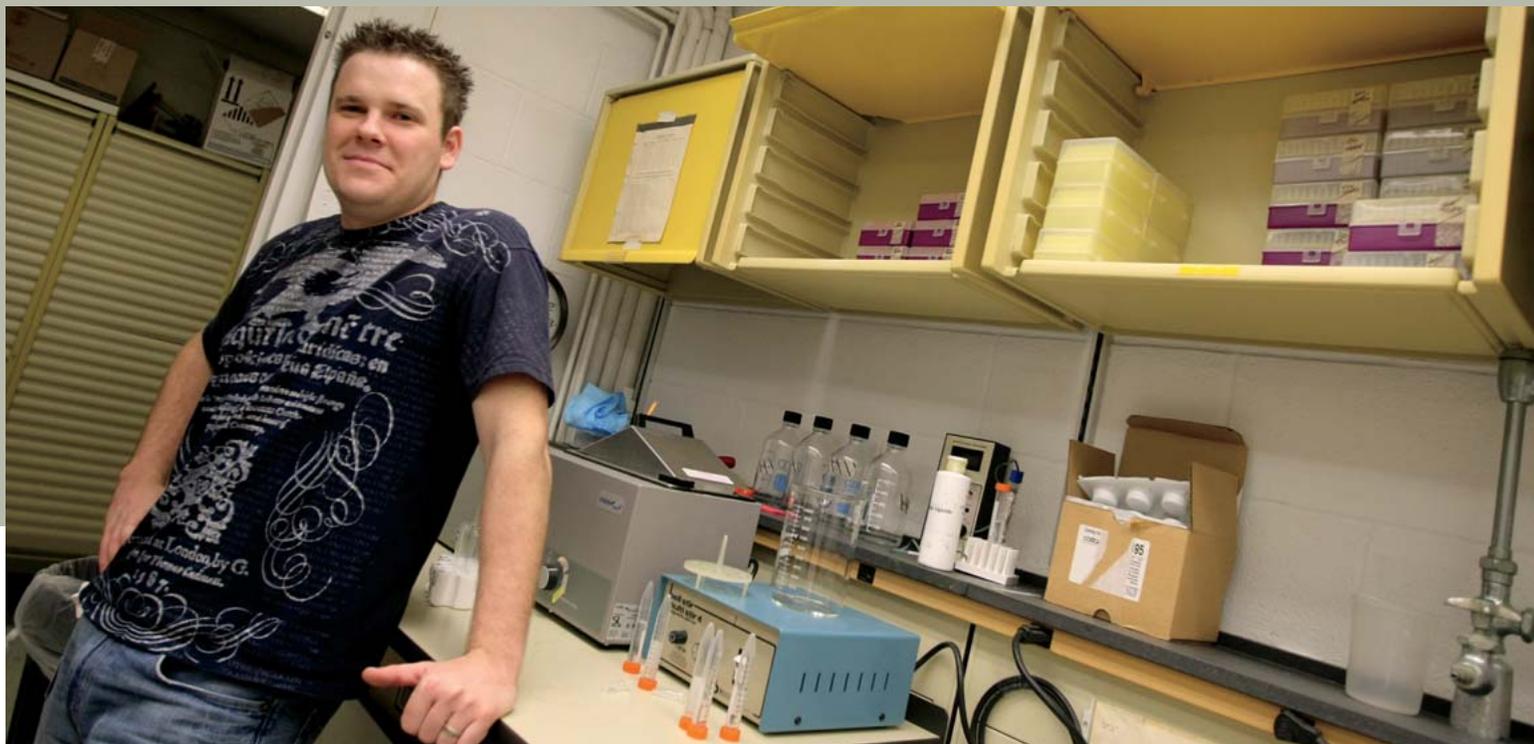
Because the AhR regulates the toxicity of contaminants and phosphory-





“They not only encouraged me to learn more and find answers on my own, but also allowed me to mature as a scientist as well as a person. The confidence I have built because of his direction will help me in my future career as a scientist.” BRENT KOBIELUSH





lation regulates the AhR, Kobielush hypothesized that phosphorylation is a mechanism by which the AhR is controlled and mediated within the cell. He identified a site of phosphorylation that plays a role in mediating the transcriptional activity of the AhR.

Kobielush's advisor is Thomas Gasiewicz, Ph.D. (PhD '77), chair of the Department of Environmental Medicine. "Every time I meet with Tom concerning my project, he asks me questions, even though he might know the answers, to get me to think more

and more like a scientist," Kobielush said. "From day one, when I asked him if I could join his lab, each meeting with him has been a growing experience. I remember sometimes leaving his office wondering whether I was cut out to be a scientist. Looking back on those times, I know they were the best learning experiences I have had as a student. They not only encouraged me to learn more and find answers on my own, but also allowed me to mature as a scientist as well as a person. The confidence I have built because of his direction will help me in my future career as a scientist."

Kobielush, who is 26, has accepted a job as the toxicology manager of quality and regulatory operations at General Mills, Inc. in Minneapolis.

"For the long term, I plan to stay and establish a career at General Mills and maybe, if the opportunity presents itself, be a guest speaker or lecturer at Bethel University for the biology or chemistry departments, so the students there might have a little taste of what toxicology is all about," he said.

ANN E. ROSSI FOLLOWED FAMILY TIES TO THE SCHOOL OF MEDICINE AND DENTISTRY. HER MOTHER GRADUATED WITH A MASTER'S DEGREE FROM THE UNIVERSITY'S SCHOOL OF NURSING AND HER OLDER BROTHER EARNED AN M.B.A. AT THE SIMON GRADUATE SCHOOL OF BUSINESS.

"I was familiar with the quality of the education," said Rossi, a native of Painted Post, N.Y., and a graduate of Nazareth College of Rochester.

For her graduate studies, she wanted a program geared more toward medicine than basic science, Rossi said. Because she had not narrowed her interests to a single field of study, she was attracted to the School of Medicine and Dentistry's umbrella-type program of clusters that enabled her to browse and experience various research opportunities. Rossi eventually chose pharmacology, with Robert T. Dirksen, Ph.D. (PhD '91), associate professor of pharmacology and physiology, as her advisor.

The primary goal of Rossi's current research is to understand sarcoplasmic reticulum (SR)-mitochondrial calcium signaling throughout skeletal muscle development.

"Others have shown that in adult





skeletal muscle, mitochondria are primarily located next to calcium release units [CRU], the structures formed by the close apposition of SR terminal cisternae and T-tubules,” she explained. “Close SR-mitochondria colocalization and the formation of functional calcium microdomains permit rapid mitochondrial calcium uptake during physiological elevations in myoplasmic calcium. However, limited information is available with regard to mitochondrial disposition during skeletal muscle development. I have characterized mitochondrial localization in flexor digitorum brevis fibers from young and adult mice using confocal microscopy and have found that there are obvious differences in mitochondrial targeting throughout muscle development.

“In addition, collaborators in Italy have revealed with electron microscopy analysis that mitochondrial localization drastically changes during postnatal development in parallel with CRU maturation. Collectively, the data indicate that mitochondrial triad targeting is a highly coordinated and developmentally regulated process and suggests that mitochondrial calcium uptake and function are altered during muscle development.”



Flexor digitorum brevis fiber stained for mitochondria.

As her research summary shows, Rossi does not exaggerate when she says: “Obviously, the breadth and depth of my knowledge have grown since I have been here.

“However, the greater value in getting my Ph.D. from the School of Medicine and Dentistry is in my training to be a scientist,” she said. “Rochester, I would say, is very ‘student-centric.’ There is a real focus on the student- teaching how to ask and answer the right questions, how to present your work, how to collaborate with others in your field and outside of your field. Preparing my yearly student research

seminar, as required by the department, has been a valuable learning experience. Through practicing the talk with my lab and my advisor before the department seminar, I became more confident in my presentations. Subjecting your research to the scrutiny of others is one of the fundamental aspects of being a scientist.”

Rossi, who is 28, has accepted a post-doctoral position at the University of Chicago Medical Center in the laboratory of Elizabeth McNally, M.D., Ph.D., professor of medicine and human genetics and director of the Institute for Cardiovascular Research at Chicago.

“I haven’t zeroed in on a particular career path, though I am leaning towards research in industry,” she said. “For now, I am just taking it one step at a time.”

RAHUL TYAGI, A NATIVE OF DELHI, INDIA, AND A 2001 GRADUATE IN CHEMICAL ENGINEERING FROM THE INDIAN INSTITUTE OF TECHNOLOGY IN BOMBAY, GOT INTERESTED IN THE SCHOOL OF MEDICINE AND DENTISTRY WHEN INVESTIGATING UNIVERSITY RANKINGS ONLINE.

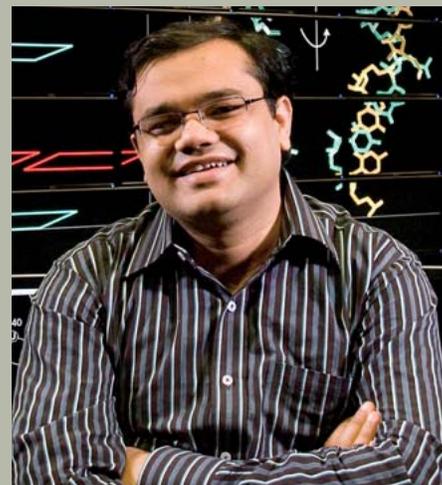
“I didn’t have a lot of knowledge about biology and medicine, but, I was quite interested in learning about these subjects, especially those at the intersection

of biology and physics,” Tyagi said. “The biophysics program at Rochester seemed a good place because the medical school here provides amazing opportunities to do rotations in different departments and clusters and even to change programs later on if the student finds something very interesting. Starting from the position where I did not know enough to be able to judge my own interest in different bio-related fields, it seemed the ideal place to be.”

Tyagi found a home in the Department of Biochemistry and Biophysics, with David H. Mathews, M.D., Ph.D.

need to change my own cluster at any point,” Tyagi said. “The very fact that you are taking some core courses with students from various clusters leads to improved insight into other fields of research—and, through comparison, one’s own field of research too.”

In 2004, Tyagi launched a blog he called “How I Stopped Worrying and Learned to Love the Blog.” He planned to write about cricket, movies and science, but his interest in movies took over the blog — until his work on his Ph.D. gave him no time to blog. Tyagi focused his research primarily on RNA.



“Student seminars, and the emphasis on student questions, go a long way in imparting critical-thinking skills in students at Rochester.” RAHUL TYAGI

(M '03, PhD '02), assistant professor of biochemistry and biophysics, as his advisor.

“While the opportunity to be able to change your cluster was clearly one of the great things about doing a Ph.D. at the School of Medicine, I didn’t feel the

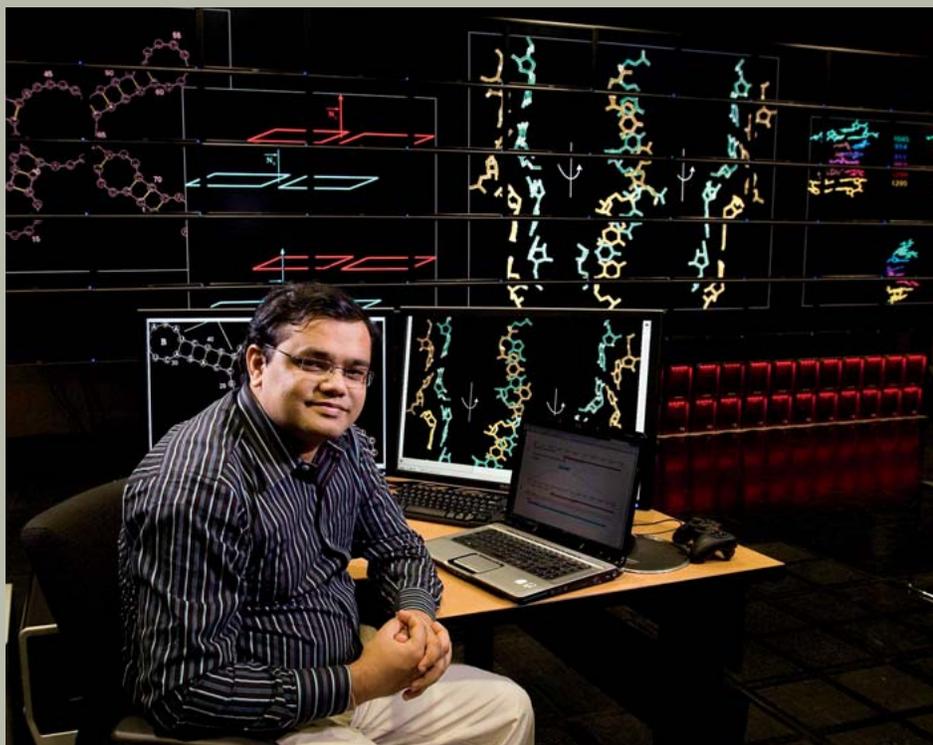
“It has been realized only relatively recently that RNA plays many important roles in biology in addition to its well-known role as an information carrier between DNA and the protein-making machinery of the cell,” he said. “My thesis

work was concerned with studying RNA’s molecular structure and using structural information for finding RNA sequences with previously unknown functions.”

A major objective of almost every graduate-level course has been the development of critical thinking, Tyagi said.

“A lot of courses involved critical reviews of relevant research articles and discussions about these things. Student seminars, and the emphasis on student questions, go a long way in imparting critical-thinking skills in students at Rochester,” he said. “I didn’t even know about the expectations that one should have from one’s graduate career. But now I don’t just know what those expectations are — developing independent critical-thinking and other skills needed for having a career in science—but I am quite confident that I have attained most of those things.”

Tyagi, 27, has begun postdoctoral research, working with William H. Press, Ph.D., the Warren J. and Viola M. Raymer Chair in Computer Sciences and Integrative Biology at the University of Texas at Austin. There, Tyagi is affiliated with the Institute of Computational Engineering and Sciences and the Institute of Cellular and Molecular Biology.



PhD Alumni

Six careers started in Rochester



SHEKEMA HODGE – PH.D. 1999

As a senior at the University of the Virgin Islands, Shekema Hodge visited many graduate schools, but she missed the recruitment weekend in Rochester. Hodge, who was born and grew up on the island of St. Thomas, finally came to the School of Medicine and Dentistry on a very cold day and found piles of snow on the streets. Missing the recruitment weekend proved to be a bonus. Instead of spending time with other potential graduate students, she talked with a professor and active graduate students who gave her an overview of the research programs at the school. “I was able to ‘see’ the various programs for what they were, outside of all the fun and activities,” Hodge recalled. “What was an added attraction was the Program in Biology and Medicine that allowed students to rotate and explore between departmental lines. Rochester had exciting research and talented professors, and the graduate students spoke highly of the University and were happy there. I asked.”

Under Steve Dewhurst, Ph.D., professor of microbiology and immunology and now the senior associate dean for research, Hodge investigated the immunopathogenesis of acute Simian Immunodeficiency Virus infection and characterized the effect of this infection on immune activation and cellular apoptosis using both in vivo and in vitro systems. Today, she is a manager in the Global Clinical Immunology Department at Sanofi Pasteur in Swiftwater, Pa., overseeing the Immunochemistry Development Lab. Her department’s key responsibility is to generate immunological data in support of vaccine clinical trials. Primarily, she is responsible for the technical development, optimization and validation of the immunological assays in support of various stages of vaccine development and the evaluation of new technologies that will provide her department with a competitive advantage. “At that time, the transition directly from graduate school to an industrial setting was quite uncommon but having the technical knowledge and skill sets I acquired at Rochester made that a reality for me,” Hodge said. “The values of integrity, creativity and teamwork that were present in the daily activities of the Dewhurst lab have proven to be invaluable assets throughout the development of my career. These values have had the biggest impact on my career and have been at the core of my daily activities.”



KENNETH I. KAITIN – PH.D. 1982

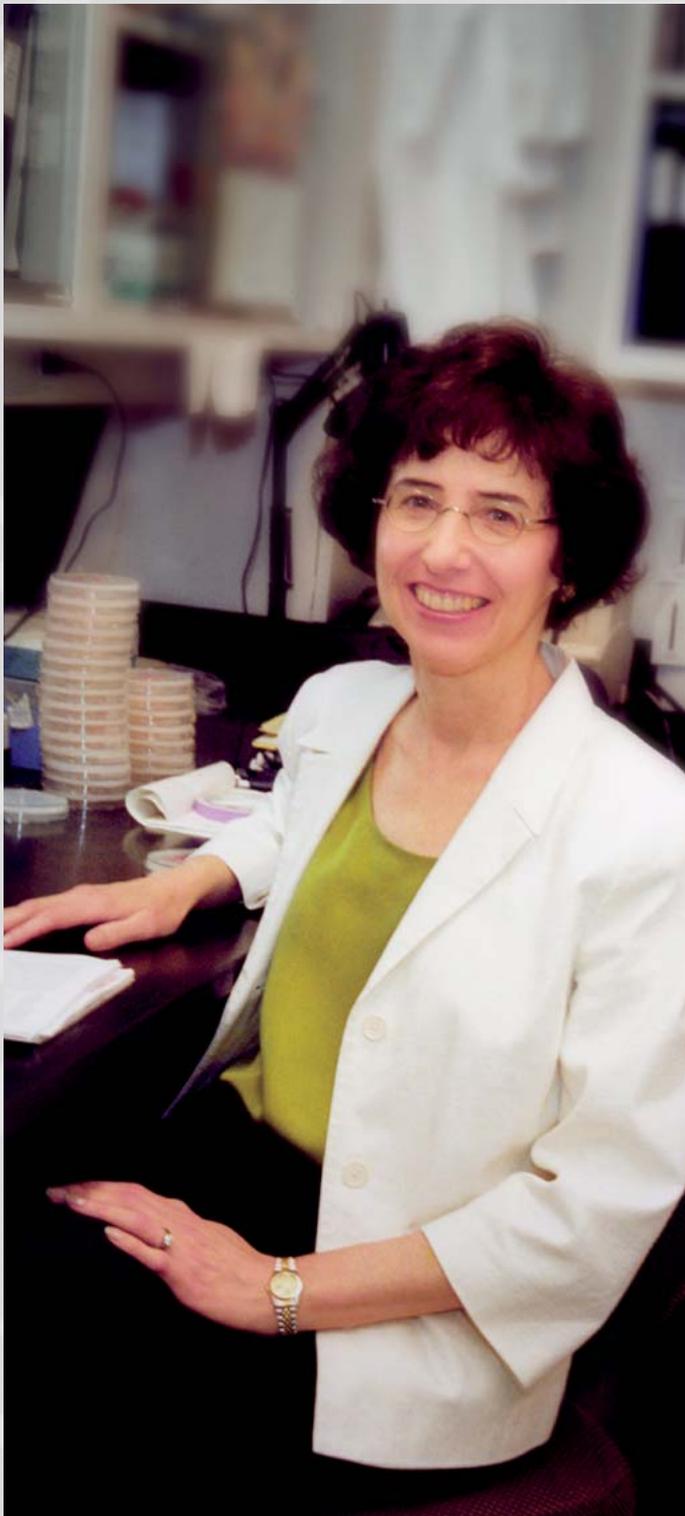
Kenneth I. Kaitin, Ph.D., who received his doctoral degree in pharmacology and experimental toxicology in 1982, now directs the Tufts Center for the Study of Drug Development, an academic drug policy research group providing strategic information to help drug developers, regulators and policy makers improve the quality and efficiency of the drug development process. Kaitin also is professor of medicine at Tufts University School of Medicine, and he serves on the faculty of the European College of Pharmaceutical Medicine at the University of Basel in Switzerland. He has written extensively on factors that contribute to the slow pace and high cost of pharmaceutical research and development and the impact of regulatory and legislative initiatives to speed new drug development and review. A former president of the Drug Information Association, he currently serves on the editorial boards of *the American Journal of Therapeutics*, *Clinical Research and Regulatory Affairs*, *Drug Information Journal*, *Drug Discovery and Development*, and *Food and Drug Letter*. Kaitin also serves on the board of directors of two publicly held companies, Curis Inc. and Phase Forward, Inc., and the privately held company Bio-Tree Systems, Inc.

The subject of Kaitin's Ph.D. was the neurophysiological mechanisms of sleep and the effect of thalidomide and pentobarbital on neuronal activity in the preoptic nucleus in the sleeping cat. His graduate advisor was Eugene S. Boyd, Ph.D., professor of pharmacology, who died in 2003.

"I was very fortunate, while at the School of Medicine and Dentistry, to meet and work with Dr. Louis Lasagna, pioneering clinical pharmacologist and chairman of the pharmacology department. Dr. Lasagna founded the Center for the Study of Drug Development in 1976, the year I began graduate studies in his department. Dr. Lasagna eventually was to become my mentor and an inspirational figure in my life. After leaving Rochester to pursue postdoctoral studies at Stanford University, I maintained my relationship with him and eventually, in 1986, came to Tufts to work at the Tufts Center for the Study of Drug Development. Dr. Lasagna had moved the group from Rochester to Tufts in 1984. I succeeded Dr. Lasagna as director of the Tufts Center in 1998. Through the years, I maintained a close personal and working relationship with Dr. Lasagna until his passing in 2003."

KENNETH I. KAITIN, PH.D.:

"I was very fortunate, while at the School of Medicine and Dentistry, to meet and work with Dr. Louis Lasagna, pioneering clinical pharmacologist and chairman of the pharmacology department. Dr. Lasagna founded the Center for the Study of Drug Development in 1976, the year I began graduate studies in his department."



SUSAN W. LIEBMAN – PH.D. 1974

Susan Liebman, Ph.D., who has been in the Department of Biological Sciences at Illinois for more than 30 years, studies yeast prions and uses yeast as a model to study protein misfolding diseases, which include Alzheimer's disease and the so-called "mad cow" disease. She has been an author or co-author of dozens of scientific articles, reviews and books. Liebman and her lab colleagues reported the first successful propagation of a prion from one organism in another where the protein is not normally found. She also developed a yeast model system and genetic assay that can detect the formation of beta amyloid protein oligomerization, which appears to play a major role in Alzheimer's. In 2002, the University of Illinois at Chicago awarded Liebman a Distinguished Professorship, a position created to recognize persons who have made a significant impact upon their field through scholarship, creativity and leadership. She earned her bachelor's degree at Massachusetts Institute of Technology and a master's at Harvard University, but Liebman points to Rochester and Fred Sherman, Ph.D., as the origin of her research endeavors.

"My career is built entirely on the graduate and postgraduate work I did in Fred Sherman's lab at Rochester," she said. "During that time, Dr. Sherman was extremely important in firmly establishing yeast as a model organism. The excitement of being in his lab and the collegiality he fostered made working on yeast genetics seem like a privilege and a joy, not a job. This spark has been sufficient to carry me through the ups and downs of my own career. I have always tried to emulate Dr. Sherman's ability to encourage and excite students."

Sherman, now professor emeritus of biochemistry and biophysics and considered one of the fathers of modern yeast genetics, calls his former student a leader in the study of prions in yeast and says her work could lead to the development of therapeutic agents.

"Sue began her studies at Rochester on suppressors in yeast. One strange mutant, PSI, eventually turned out to be a prion state of protein that was involved in translation. She not only recognized the importance of PSI, but also demonstrated unusually good judgment on how to proceed," Sherman said. "While at Rochester, she produced work that was published in 10 papers, which is unusual for someone who is just at the beginning of a career. Furthermore, she has remained highly productive her whole life."

“...I had the opportunity to serve as a teaching assistant on two occasions. These two experiences helped to shape my decision to take a position in a research institution and in a college of arts and sciences where I could do cutting-edge research and teach.” STEVEN W. MATSON, PH.D.

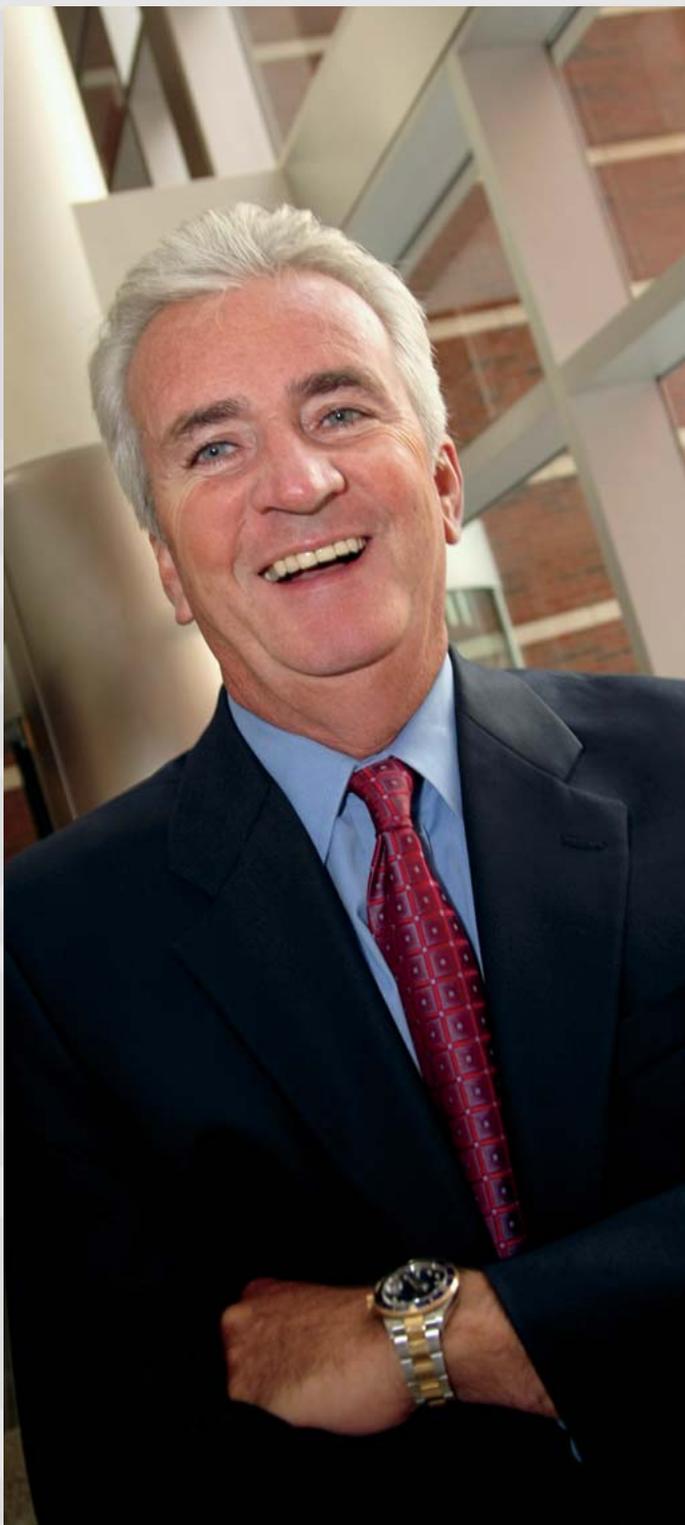


STEVEN W. MATSON – PH.D. 1980

Steven W. Matson thinks a lot these days about graduate programs. In July 2008, he became dean of the graduate school at the University of North Carolina at Chapel Hill, where he oversees approximately 8,000 graduate students in the university's 66 doctoral and 100 master's programs. Matson began his career at North Carolina in 1983 after three years as a postdoctoral fellow at Harvard Medical School. As dean, he still teaches and does research, which focuses on DNA repair, conjugative DNA transfer and the enzymatic mechanisms and biological roles of DNA helicases. Matson received his Ph.D. in biochemistry from the University of Rochester School of Medicine and Dentistry in 1980 and won the Wallace O. Fenn Award for the best doctoral thesis. His research at Rochester, he said, focused on the processivity of DNA polymerases using a mutant form of *E. coli* DNA polymerase I and the avian myeloblastosis virus polymerase as models. His thesis advisor was Robert A. Bambara, Ph.D., now chair of the Department of Biochemistry and Biophysics.

“Robert Bambara has been a constant friend, colleague and mentor. I could not have chosen a better Ph.D. advisor. During my years at Rochester I learned what it meant to be a

research scientist,” Matson said. “At the same time, I had the opportunity to serve as a teaching assistant on two occasions. These two experiences helped to shape my decision to take a position in a research institution and in a college of arts and sciences where I could do cutting-edge research and teach. I have never looked back. I often have told students and parents that I came to the university when I was 18 and I liked it so much that I never left. I have had an opportunity to work in medical schools—Rochester for my graduate work and Harvard Medical School for my postdoctoral work—and a college of arts and sciences in my career at North Carolina. This has certainly shaped my thinking as dean of the graduate school.”



MICHAEL J. MCKENNA – PH.D. 1975

By the time Michael J. McKenna received his Ph.D. in toxicology from the School of Medicine and Dentistry in 1975, he already was at work as a fellow in the toxicology research laboratory at Dow Chemical USA—and that was only the beginning. By 1982, McKenna was research manager of that lab where he began at Dow. In 1984, he moved to Parke-Davis Research of the Warner Lambert Company as associate director of pathology and experimental toxicology and from 1989 to 1995, as vice president for drug development. He then owned and operated Pharmaceutical Consulting Services. From 1999 to 2004, he served as vice president of science and technology at A.M. Pappas & Associates, a life sciences venture development company. In 2004, McKenna launched Merrion Pharmaceuticals, an international company focused on oral drug delivery with operations in Ireland and North Carolina. He served as chief executive officer of Merrion until January 2008, when he became chairman. He also owns Navigator Life Science Advisor, a consulting firm that works with start-ups and early-stage companies in the life sciences. He has published more than 30 articles in peer-reviewed scientific journals.

At the School of Medicine and Dentistry, McKenna's mentor for his doctorate was Victor DiStefano, a longtime member of the faculty who received his Ph.D. from the School in 1953 and who died in 1993. The subject of McKenna's research for his doctorate was "Alterations in Catecholamine Biosynthesis Induced by Carbon Disulfide."

"My education at Rochester developed my skills as a scientist and particularly my ability to read, write and think analytically," said McKenna, who is a member of the School's Alumni Council. "Later, it was the friends and colleagues I met at Rochester and the expansion of those relationships through the 'Rochester connection' that have been continually important throughout my career. I have frequently called on Rochester alumni and colleagues for assistance with problem solving of one kind or another. Also, I've made several transitions during my career, but at every change of job I've been able to recall where colleagues I met at Rochester have helped me with making those changes successfully. The importance of the Rochester connection in my career also made me understand how important professional networking is, and how personally rewarding many of those professional relationships can become over the years."

"My education at Rochester developed my skills as a scientist and particularly my ability to read, write and think analytically." MICHAEL MCKENNA, PH.D.

LISA M. REGAN – Ph.D. 1994

In the fourth year of her graduate program and a year into her thesis work at the School of Medicine and Dentistry, Lisa Regan's advisor left the University, putting her somewhat adrift — but an opportunity soon developed. She recalls a day when Philip J. Fay, Ph.D. (PhD '82) professor of biochemistry and biophysics, stopped in the laboratory asking if the lab had ethylenediaminetetraacetic acid, or EDTA, that he could use. "No, but do you need a graduate student?" she said. That's how Regan became Fay's first graduate student. In his lab, her thesis work centered on the structure and function of Factor VIII, the protein that is deficient or defective in people with hemophilia A. "Dr. Fay taught me not only about Factor VIII, one of the most complicated proteins in the clotting cascade, but also how to think, how to solve problems and how to accomplish all this without losing an eye on the important things in life: family, friends and living well."

Today, Regan works at Bayer HealthCare in Berkeley, Calif. After a decade with Bayer, she is director of the Analytics Development and Support Department in the Global Biologics Development (GBD) group. GBD is responsible for the development of new therapeutic proteins in hematology, including new

Factor VIII therapies for hemophilia A. Regan oversees a group of 42 people who range from entry-level technicians to experienced Ph.D. level managers. The group supports the other GBD groups with biochemical and chemical assay work, which includes Phase I/II and Phase III clinical release testing, biochemical and chemical assay development and protein characterization for products in development and licensed biological products. The group also supports the Quality Control Department with assay development and optimization and Manufacturing/ Operations with incident resolution investigations.

"Dr. Fay is an amazingly patient and incredibly intelligent person," Regan said. "I am eternally grateful for his guidance and assistance in my career development and for the time I spent at the School of Medicine."

"Dr. [Philip] Fay taught me ... how to think, how to solve problems..."

LISA M. REGAN, Ph.D.



Medical school dean and pioneering neurologist elected to Institute of Medicine

David S. Guzick, M.D., Ph.D., dean of the University of Rochester School of Medicine and Dentistry, professor of obstetrics and gynecology and the director of the University's Clinical and Translational Science Institute, and Ira Shoulson, M.D., a neurologist who has pioneered research methods that have led to new treatments for Huntington's disease, Parkinson's disease and other neurodegenerative illnesses, have been elected to the prestigious Institute of Medicine (IOM), one of the nation's highest honors in the fields of medicine and health.

No more than 65 new members are elected annually to the IOM. The number of active

members is about 1,600. The University now has 16 faculty members or emeritus faculty in the institute.

"Election to the Institute of Medicine represents recognition by peers that a person has made major contributions to medicine and can provide important service to the nation," said University President Joel Seligman. "This is truly a great honor for Dean Guzick and Dr. Shoulson, but also for the University of Rochester as a salute to the quality of our faculty."

Bradford C. Berk, M.D., Ph.D., chief executive officer of the University of Rochester Medical Center, said election to the IOM is a "career highlight."

"Many aspire to the Institute of Medicine, not only because it represents national recognition by your colleagues, but because the IOM issues reports that determine the direction of future health policy," Berk said. "David Guzick and Ira Shoulson have the leadership and vision to participate in the planning for future health care, and we take great pride in their election."

Guzick said he is "extremely humbled by this honor, especially because clinical research is always a collaborative effort.

"My achievements reflect the profound influence of my clinical and research mentors, my collaborators, and the altruism of the many women and men who volunteered to participate in the research studies that my colleagues and I have conducted," he said.

Shoulson, who is the Louis C. Lasagna Professor of Experimental Therapeutics and professor of neurology, pharmacology and of medicine, shared a similar reaction to his election.

"I am especially honored because my contributions represent the work of hundreds of colleagues who engage in cooperative clinical research. My election is a fitting recognition of the group, in addition to the individual honor," he said. "I am buoyed by the fact that my achievements derive in large part from the dedicated work of my colleagues around the world in the Parkinson Study Group and Huntington Study Group, as well as the thousands of research participants who participate in our multi-center clinical trials."



"Election to the Institute of Medicine represents recognition by peers that a person has made major contributions to medicine and can provide important service to the nation. This is truly a great honor for Dean Guzick and Dr. Shoulson, but also for the University of Rochester as a salute to the quality of our faculty." Joel Seligman, University President



NCI selects Rochester for major lymphoma research grant

By Leslie White

The University of Rochester School of Medicine and Dentistry has received an \$11.5 million National Cancer Institute (NCI) grant to support the expansion of lymphoma research and clinical trials at the James P. Wilmot Cancer Center.

The highly competitive Specialized Programs of Research Excellence (SPORE) grant fuels translational research projects designed to quickly advance findings from the laboratory to the clinic setting to improve care and find cures.

NCI funds SPORE projects at the top academic institutions across the country focusing on brain, breast, gastrointestinal, genitourinary, gynecologic, head and neck, ovarian, pancreatic, prostate and skin cancers, as well as leukemia, lymphoma and myeloma.

"Earning this grant certainly credentials the Wilmot Cancer Center as a national leader for lymphoma research and care," said Richard I. Fisher, M.D., director of the center and vice president of the Medical Center. "It's a seal of approval from the National Cancer Institute for the program we've built."

This five-year grant is the first for the Wilmot Cancer Center, the only upstate institution to earn prestigious SPORE funding, which is awarded to institutions conducting collaborative novel cancer research programs. There are only four other lymphoma SPORE grants in the country: at the Johns Hopkins University, the University of Iowa, City of Hope and Baylor College of Medicine.

Wilmot's lymphoma team of more than 20 clinicians and scientists is one of the largest in the Northeast. Patients travel to Rochester

Wilmot's lymphoma team of more than 20 clinicians and scientists is one of the largest in the Northeast.

from throughout the country for the expertise and clinical studies available only at Wilmot.

Wilmot received the funding because of the reputation of its researchers, the promise of their integrated studies, collaborations with the Arizona Cancer Center and the Massey Cancer Center at Virginia Commonwealth University, and its leadership in the Southwest Oncology Group, a national cooperative clinical trials group that will help move new therapies to nationwide patient studies quickly.

"The SPORE grant pushes Wilmot's already strong translational research efforts in lymphoma to a new level, bringing together teams of scientists and physicians to study the disease from fresh angles," said David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry.

The SPORE grant "represents the first of what we hope to be several SPORE grants in the years to come," said Bradford C. Berk, M.D., Ph.D., Medical Center chief executive officer. "It confirms the caliber of our science and our ability to perform research that translates into life-extending cures."



Institute one step closer to reality

By Mark Michaud

The University of Rochester Medical Center (URMC) broke ground in October for the Clinical and Translational Science Building (CTSB) — a facility that will help accelerate scientific discoveries into new ways to understand, treat, prevent, and cure diseases.

New York Governor David Paterson and New York Assembly Speaker Sheldon Silver have said the state will provide \$50 million toward the construction of the building, which is part of a major investment that the Medical Center plans to make over the next several years in research, education, and clinical care. An estimated \$300 million will be spent on new facilities, including the CTSB which has a total project cost of \$76.4 million.

University President Joel Seligman said the University was deeply grateful to Silver, who attended the groundbreaking, Paterson, and the local Assembly delegation for their support for this critical project.

"This building will not only help transform medical science and improve health in Rochester and beyond, but it also represents

an important community investment in the type of research enterprise that can be a catalyst for regional economic growth," Seligman said.

In October 2006, the University of Rochester School of Medicine and Dentistry was one of the first 12 institutions in the nation to receive a Clinical and Translational Science Award from the National Institutes of Health (NIH). The \$40 million award, the largest NIH grant ever made to the School of Medicine and Dentistry, has enabled the University and its partner institutions to assemble technical and professional resources and build research networks necessary to support the development of new medical technologies and interventions.

"The NIH grant and the support from Albany will enable us to fundamentally re-engineer the way we conduct medical research in a manner that allows us to harness basic research to improve health," said David Guzik, M.D., Ph.D., dean of the School of Medicine and Dentistry and principal investigator of the Clinical and Translational Science Award.

The almost 200,000-square-foot, four-story building, which will be the first of its kind to be constructed in the nation, will be home to more than 600 scientists, physicians, nurses, statisticians, research administrators, and support staff. The building will contain several clinical research programs and resources that are currently scattered throughout the Medical Center.

The building will be connected to the adjacent School of Nursing's Helen Wood Hall. The CTSB is home to the University's National Center for Deaf Health Research. The ground floor will have a clinical research suite that is a satellite of a larger Clinical Research Center located across the street from the CTSB. This suite of exam rooms will enable researchers to see study participants on site. The upper floors will contain a number of research programs, including neurological disorders, cancer, pediatrics, biostatistics and bioinformatics, and cardiovascular disease. The building also will house the Department of Community and Preventive Medicine and the Clinical Trials Coordination Center, a division of the Department of Neurology that oversees an international network of clinical research sites. The building will bring together under one roof several important resources that help researchers write grants, design clinical trials, recruit participants, collect and evaluate data, and collaborate with industry and other partners. It will also serve as a hub for the Upstate New York Translational Research Network, a consortium of nine institutions that will develop and share clinical research resources. The building will also be home to the Institute's education programs, including several training and graduate degree programs in clinical and translational research.

Human stem cells show promise against fatal children's diseases

By Tom Rickey

Scientists have used human stem cells to dramatically improve the condition of mice with neurological condition similar to a set of diseases in children that are invariably fatal, according to an article in the June 2008 issue of the journal *Cell Stem Cell*.

With a one-time injection of stem cells just after birth, scientists were able to repair defective wiring throughout the brain and spinal cord of mutant "shiverer mice," so called because of the way they shake and wobble. The work marks an important step toward the day when stem cells become an option for the treatment of neurological diseases in people.



Neuroscientists at the University of Rochester Medical Center injected a type of fetal human stem cell known as glial stem cells into newborn mice born with a condition that normally claims their lives within about 20 weeks of birth, after a lifetime of seizures and other serious consequences. While most of the 26 mice that received transplanted glial stem cells still died, a group of six lived far beyond their usual lifespan, and four appeared to be completely cured, a first for shiverer mice. The scientists plan to gather more evidence before trying the approach in sick children.

"It's extremely exciting to think about not only treating but actually curing a disease, particularly an awful disease that affects children," said Steven Goldman, M.D., Ph.D., professor of neurosurgery and neurology. "Unfortunately, right now, we can do little more for many of these conditions besides tell parents to prepare for their kids to die."

Thousands of children with rare, fatal disorders known as pediatric leukodystrophies share a central problem with the shiverer mice:

Their brain cells lack sufficient myelin. In children, diseases of myelin go by a host of names but share the same features: a childhood and young adulthood that may include weakness, difficulty standing or walking, seizures, dementia, paralysis, and ultimately, death. These diseases, which include Tay-Sachs, Krabbe's, Canavan's, Pelizaeus-Merzbacher, Vanishing White Matter Disease and a host of others, are each rare, but collectively they kill thousands of children.

Goldman and first author and scientist Martha Windrem, M.A., have been working on shiverer mice for more than a decade. In work published in 2004 in *Nature Medicine*, the team restored myelin in a widespread area of an animal's brain by injecting human stem cells that eventually become oligodendrocytes, the cells that produce myelin. In those earlier experiments, the team attempted to repair cells in only certain parts of the brain. Although the methods produced myelin, the treatment didn't actually improve the health of the mice.

In the latest work, the team took advantage of the routes that cells commonly take to migrate from one region of the brain to another. They injected approximately 300,000 human stem cells into the brain of each mouse, choosing five particular spots because of their ability to serve as a kind of launch pad for stem cells to migrate from and colonize the entire brain and spinal cord.

And that's just what happened in some of the mice. In just two months, the glial stem cells multiplied and spread, covering nerve cells in almost the entire central nervous system, exactly mirroring their distribution in the brains of healthy mice. For several months after that, the cells produced myelin that coated nerve cells throughout the entire brain and spinal cord; from then on, the brain cells functioned normally, conducting impulses as quickly as in normal mice.

The six treated mice that lived longer recuperated to a degree hardly thought possible. The four mice that still survived one year after treatment improved rapidly, had no seizures and were practically symptom free.

National radiation oncology society honors Wilmot Cancer Center doctor

Louis S. Constine, M.D., was named a fellow of the American Society for Therapeutic Radiology and Oncology, a prestigious cancer organization of experts who specialize in treating patients with therapeutic radiation.

Constine, professor of radiation oncology at the University of Rochester School of Medicine and Dentistry and the James P. Wilmot Cancer Center, has more than 30 years of experience in radiation treatment. He is an international expert in the treatment of childhood and select adult cancers including lymphomas, in the long-term side effects of cancer therapy.

Constine serves on the advisory board of the Children's Cancer Survivor's Study, the National Cancer Institute's Pediatric Cancer editorial board, the Children's Oncology Group Survivorship Guidelines and the American College of Radiology Appropriateness Criteria for the Treatment of Hodgkin's Lymphoma.

A graduate of Stanford University, Constine earned his M.D. at the Johns Hopkins University School of Medicine. He completed his residencies at University of California and Stanford Medical Center and a fellowship at the University of Washington Medical Center. He is board certified in pediatrics, pediatric hematology/oncology and in radiation oncology.

Constine, who joined the Medical Center in 1981, has been honored by many local organizations for his commitment to quality, compassionate care, including Camp Good Days and Special Times, Gilda's Club/Cancer Action and the American Cancer Society.



University rated in top “Best Places to Work”

By Tom Rickey

Not only is the University of Rochester the region’s largest employer, it also is one of the best places in the nation for scientists to work, according to *The Scientist* magazine.

The University was rated among the top 10 non-profit institutions in the nation in the magazine’s annual ranking of “Best Places to Work” for scientists in the life sciences, which includes medical research and related areas such as biology.

“It’s gratifying to be recognized for the research environment that we’ve worked hard to create,” said Bradford C. Berk, M.D., Ph.D., chief executive officer of the Medical Center. “This is an institution founded on the principle of interdisciplinary collaboration. Our scientists’ satisfaction plays an important role in the ultimate success of our research enterprise, and helps us truly achieve ‘Medicine of the Highest Order.’”

The University has long been recognized for its collaborative environment, where people

from different disciplines come together to work effectively in addressing complex scientific questions. Scientists rated the University highly in this area, citing the professionalism and collegiality of their peers. The University also received high marks in the areas of teaching and mentoring, and the magazine prominently featured an example of strong mentoring.

“We’ve known all along that our scientists view the medical school as a great place to work,” said David Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry. “Why? The survey results speak for themselves — our own scientists report that the major strengths of the University of Rochester environment are the excellence of peers, the spirit of collaboration and the excellence of our teaching and mentoring. It’s great that the word is getting out.”

Developing the talents of younger scientists is crucial, said Stephen Dewhurst, Ph.D., the School’s senior associate dean for basic research.

“It’s part of the ethos of the University of Rochester that you look out for your colleagues,” said Dewhurst. “We have many programs to help scientists grow and develop and build their careers, such as a class to help scientists learn how to write grants to gain funding to do their work. The mentoring of young scientists is extremely important, and it’s something that is done well here.”

More than 2,300 scientists nationwide responded to the magazine’s annual survey, which included scientists working in educational, government-sponsored, or other non-commercial research institutions. Respondents were asked to assess their work environment according to 41 criteria in eight categories.

“It’s gratifying to be recognized for the research environment that we’ve worked hard to create,”

**Bradford C. Berk, M.D., Ph.D.,
URMC chief executive officer**

Mayo physician, an alumna, leads emergency medicine

Three department chairs and practice director also named

The University of Rochester School of Medicine and Dentistry has made several departmental appointments.

Latha G. Stead, M.D., became professor and chair of the Department of Emergency Medicine January 1. She had been chair of the Division of Emergency Medicine Research at the Mayo Medical School in Minnesota.



Stead replaces Sandra Scheneider, M.D., who chaired the department for 14 years before stepping down to devote time to her expanding responsibilities at several national emergency medicine organizations.

In her new position, Stead will manage operations at Strong Memorial Hospital’s Emergency Department, the state’s busiest ED outside of the New York City metropolitan area, logging more than 95,000 patients annually. In addition to her responsibilities as chief of service for the emergency department at Strong, Stead will be charged with further developing the research and educational missions of the department.

Stead’s connection to Rochester dates back to her undergraduate studies. She earned a bachelor’s degree in biochemistry from the University’s College of Arts and Sciences in 1990. She attended Columbia University’s College of Physicians & Surgeons and Ponce Medical School in Puerto Rico, interned at Mount Sinai School of Medicine, and completed her training through the Albert Einstein College of Medicine’s Jacobi-Montefiore Emergency

Medicine Residency program. She is also completing a biomedical sciences degree in clinical research from the Mayo Graduate School.

In October, **Steven Goldman**, M.D., Ph.D., who has been with the University since 2003, became the Edward A. and Alma Vollertsen Rykenboer Professor of Neurophysiology and chair of the Department of Neurology.

He follows Robert "Berch" Griggs, M.D. (R '71), who has led the department since 1986. During Griggs' tenure, yearly research funding in the department skyrocketed from about \$1 million to approximately \$28 million, and faculty size quadrupled. Griggs is continuing as professor of neurology, and will serve as president of the American Academy of Neurology, the nation's largest professional organization of neurologists.

Goldman is internationally recognized for advancing the understanding of stem cells and their use to treat human disease. He has created new ways to isolate stem cells and then re-create the molecular signals that direct their development as part of research that aims to use the cells to treat a variety of conditions, including Parkinson's and Huntington's diseases.

Goldman earned his bachelor's degree with honors in biology and psychology from the University of Pennsylvania, his medical degree at Cornell University, and his doctoral degree at Rockefeller University. From 1988 to 2003 he served on the faculty of Cornell University Medical College, where he was the Nathan Cummings Professor of Neurology and Neuroscience and where he continues to serve as adjunct professor. At Rochester, Goldman will continue as chief of the department's Division of Cell and Gene Therapy and as professor of neurological surgery.

Denham Ward, M.D., Ph.D., professor of biomedical engineering and of anesthesiology, and former chair of the Department of



Anesthesiology, returned as chair of the department for a three-year term in August.

He succeeds James Robotham, M.D., who stepped down to focus on his research.

An internationally recognized expert in the field of anesthesiology, Ward was recruited to Rochester in 1992 to lead the Department of Anesthesiology, a position he held for close to a decade. Ward stepped down as chair in 2001, and while on sabbatical at the University of Leiden in the Netherlands, continued his study on the control of breathing, and also edited a book, *Pharmacology and Pathophysiology of the Control of Breathing*.

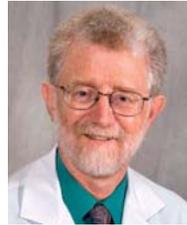
Ward holds a Ph.D. in systems science from the University of California at Los Angeles, as well as a medical degree from the University of Miami. He served his residency training in anesthesiology and subsequently held various clinical and administrative positions at UCLA, including director of its residency program in anesthesiology, before being recruited to Rochester.

In 2006, Ward was named associate dean for faculty development-medical education, charged with developing programs and training sessions to improve faculty teaching skills at the School of Medicine and Dentistry. He will continue in this role.

In July, **Susan Gross Fisher**, M.S., Ph.D., became chair of the Department of Community and Preventive Medicine.

An accomplished researcher and expert in cancer epidemiology, Fisher has been serving as interim chair of the department since July 2007. She succeeds Thomas Pearson, M.D., M.P.H., Ph.D., senior associate dean for clinical research, who led the department during the past decade through a period of tremendous growth. Pearson has been on sabbatical as a visiting scientist at the National Human Genome Research Institute.

Prior to her appointment, Fisher served as associate chair for research, director of the



doctoral program for epidemiology, and division chief of epidemiology in the Department of Community and Preventive Medicine. Under her leadership, New York state approved a doctoral program in epidemiology at Rochester that was developed by Fisher. In addition, Fisher is an independent National Institutes of Health investigator, with a research focus on viral etiologies of cancer.

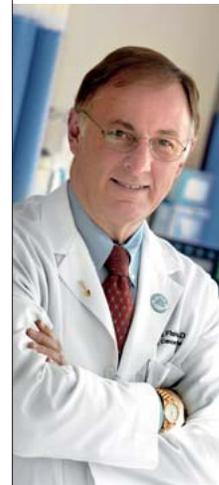
She earned her Ph.D. in cancer epidemiology at the University of Illinois, a master's degree in biostatistics from Georgetown University, and a bachelor's degree in nursing and business from Johns Hopkins University.

In June, **Richard I. Fisher**, M.D., was named senior associate dean for clinical affairs and director of the University of Rochester Medical Faculty Group (URMFG), Rochester's largest medical practice. As a result of this appointment, he also will serve as vice president of University of Rochester Medical Center.

Fisher, who is director of the James P. Wilmot Cancer Center, is an internationally known expert in research and treatment of lymphoma and is a nationally renowned cancer clinician, scientist and educator.

Fisher, director of the hematology/oncology division in the Department of Medicine and the Samuel E. Durand Professor of Medicine, oversees clinical cancer services at Strong Memorial Hospital and Highland Hospital. His research focuses on the biology and treatment of lymphoma, and has led national and international studies on Hodgkin's disease and non-Hodgkin's lymphoma. He was recruited to Rochester in 2001 from Loyola University's Cardinal Bernardin Cancer Center.

Fisher succeeds Kenneth E. DeHaven, M.D. who has served as URMFG director since 2004. With more than 900 physicians encompassing primary care, specialty doctors, and dentists who are part of the medical school faculty, URMFG is the area's largest medical practice. URMFG is a division of the University.



Three chiefs named at Medical Center

Marc Berliant, M.D. (R'81), a longtime Rochester clinician and educator, has been appointed chief of the Division of General Medicine at the University of Rochester Medical Center. A clinical professor of medicine, Berliant has been a member of the School of Medicine and Dentistry faculty since 1980. He most recently worked as an internist at Rochester Internal Medicine Associates, and with medical residents as a clinical professor and a mentor.

Berliant is a fellow of the American College of Physicians. He has been honored with the James M. Stewart Award of the Department of Medicine for Distinguished Clinical Teaching and the Art Bauman Award for Outstanding Housestaff Teaching.

He earned his medical degree from the University of Illinois, where he also did his undergraduate work. He completed his medical internship and served as chief resident during his postdoctoral training and residency at the University of Rochester Medical Center.

Stephen R. Hammes, M.D., Ph.D., has been appointed to lead the Division of Endocrinology, Department of Medicine.

Hammes received a bachelor's degree in chemistry from Cornell University, earned his M.D. and Ph.D. in microbiology and immunology at Duke University, and completed his training in endocrinology at the University of California at San Francisco. He most recently served as an associate professor in endocrinology and the W.W. Caruth Jr. Scholar in Biomedical Research at the University of Texas Southwestern Medical Center.

A member of the American Society for Clinical Investigation, Hammes serves on the editorial boards of the journals *Molecular Endocrinology* and *Biology of Reproduction*.

He has published in numerous journals and is a frequent presenter at national and international meetings.

Following a nationwide search, Susan L. Hyman, M.D., a renowned autism researcher and clinician, has been named chief of the Division of Neurodevelopmental and Behavioral Pediatrics, the renamed and refocused division formerly known as the Strong Center for Developmental Disabilities.

Hyman and Tristram Smith, Ph.D., are co-principal investigators of a prestigious initiative, the Autism Treatment Network site at the University of Rochester. Fifteen sites across the United States and Canada are collaborating to determine the standard of care for diagnosis and medical management for children with autism. A graduate of Alpert Medical School of Brown University, Hyman did her residency in pediatrics at North Carolina Memorial Hospital and a fellowship in developmental pediatrics at Kennedy Krieger Institute at the Johns Hopkins Hospital in Baltimore.

Hartmann wins national leadership award

The Accreditation Council for Graduate Medical Education (ACGME) has named Diane M. Hartmann, M.D. (M '87, R '91), a recipient of the organization's Parker J. Palmer Courage to Lead Award.



Hartmann, the University of Rochester School of Medicine and Dentistry's senior associate dean for graduate medical education and professor of obstetrics and gynecology, is one of three officials nationwide who will receive the award.

The Palmer award is given annually to officials who have created an exemplary environment for educational programs, facilitated residents' ethical, professional and personal development, and ensured safe and appropriate care of patients. The recipients are selected from a small community hospital, a large community hospital or a tertiary academic center.

According to the ACGME, bestowing the

The Palmer award is given annually to officials who have created an exemplary environment for educational programs, facilitated residents' ethical, professional and personal development, and ensured safe and appropriate care of patients.

Courage to Lead Award acknowledges the leadership and commitment of officials who foster an excellent educational environment for resident education.

Hartmann recently also was selected to lead the Council on Graduate Medical Education in Obstetrics and Gynecology (CREOG) as its chairperson for 2008–2010. The CREOG, a

council of the American College of Obstetricians and Gynecologists, is dedicated to the promotion and maintenance of excellence in residency and subspecialty fellowship education. The organization represents more than 250 residency programs in the United States and collaborates with resident training programs in Canada, Mexico and

Latin America.

Hartmann will receive the Palmer award at the ACGME annual educational conference in March in Texas.

A surer way to identify melanoma

By Leslie Orr

University of Rochester Medical Center researchers have found a new protein produced excessively in malignant melanoma, a discovery that is particularly relevant as skin cancer rates climb dramatically among young women.

The protein, IMP-3, is not over-expressed in harmless moles but is increased in the most dangerous types of skin cancer, and in a subset of lesions that can be difficult to predict called thin melanomas. The finding offers a potential target for treatment — but perhaps most importantly, it might give doctors a new, objective way to distinguish melanoma from some benign moles that look like melanoma but are not cancerous.

“We are very excited about our finding that IMP-3 is an important progression marker in malignant melanoma,” said first author Jennifer G. Pryor, M.D., a third-year resident in the Department of Pathology and Laboratory Medicine. “Although we have learned a lot about melanoma in recent years, it has unique biologic properties that sometimes make it difficult to diagnose and to plan the proper treatment. This protein may have a key role in helping us to understand and distinguish between various types of melanocytic lesions.”

The pilot study investigated samples of 56 biopsied lesions from 48 adults. The lesions fell into the category of cutaneous melanocytic neoplasms, a diverse group that includes benign moles; Spitz nevus, a type of mole seen in younger people that can be easily mistaken for melanoma but is not cancerous; and malignant melanoma, which has several phases of growth.

This study showed why IMP-3 might be an important tool for pathologists. Though none of the benign moles or the benign moles with

irregular features and some abnormal cells over-expressed the IMP-3 protein, the protein was produced excessively in most melanomas, and overly expressed more often in metastatic melanomas.

IMP-3 was also over-expressed in rare cases of invasive thin melanomas. This is significant because most thin melanomas have a good prognosis, but some act more aggressively; currently, there is no accurate way to distinguish between the types of thin lesions.

IMP-3 is an insulin-like growth factor-II mRNA binding protein. It is involved in cell proliferation and appears to play a role in tumor formation in a number of cancers. In previous studies expression of the IMP-3 protein has been linked to pancreas, kidney, ovary and lung cancers, but this is the first published study to demonstrate a connection to melanoma, Pryor said. The URMCM Department of Pathology and Laboratory Medicine funded the research, which was published in the journal *Modern Pathology*.

Professors win British book award

The British Medical Association (BMA) has named a new guide to cancer staging written by two University of Rochester Medical Center experts in oncology and anatomy the association's Medical Book of the Year.

The award honored Philip Rubin, M.D., professor and chair emeritus of radiation oncology, and John Hansen, Ph.D., professor of neurobiology and anatomy and the School of Medicine and Dentistry's associate dean for admissions, for *TNM Staging Atlas*. It represents the culmination of decades of research in oncoanatomy.

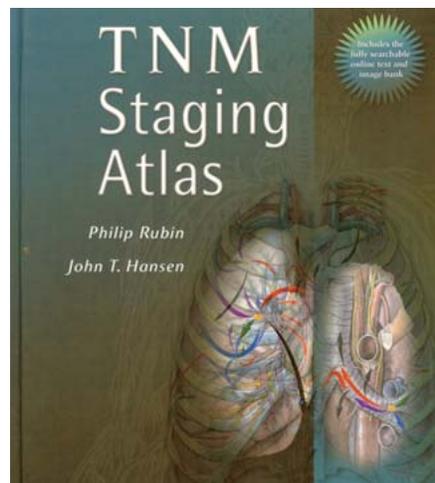
The book, which provides uniquely illustrated text depicting the different stages of cancer development, was described by BMA reviewers as one that will “find a long-term place” on bookshelves and be for “ongoing reference use for years.”

Rubin is considered a founder of the field of therapeutic radiation. His 50-year career focused on studying radiation, dating back to the Manhattan Project, the World War II code

name for the atomic bomb. Rubin analyzed the scientific data from the studies and published extensively on radiation tolerance, establishing the Medical Center as an international leader for studying late effects of radiation. He helped develop the field of using radiation therapeuti-

cally, serving as the first director of the Department of Radiation Oncology Services at the National Cancer Institute. At the Medical Center, he created the Department of Radiation Oncology, serving as chair from 1961 to 1995.

Hansen led research into peripheral and central dopaminergic systems and neural plasticity for more than two decades, before shifting to medical education. He was involved in the design of the School of Medicine and Dentistry's groundbreaking Double-Helix curriculum, which weaves basic and clinical sciences through all four years of medical education. In addition to about 100 research publications, Hansen also is coauthor of *Netter's Atlas of Human Physiology*, consulting editor of the *Atlas of Human Anatomy*, author of the *Essential Anatomy Dissector* and the *Netter Anatomy Flash Cards*, a consultant on the CD-ROM *Netter Presenter Human Anatomy Collection*, and coauthor of *Netter's Clinical Anatomy* textbook for first-year medical students.



An alumnus with a mission

Mark H. Weinstein, M.D. (BS '65, M '69), is the founder and director of Changing Children's Lives, Inc., a non-profit organization established to provide plastic surgical medical missions abroad. He is an assistant clinical professor of plastic and reconstructive surgery at Yale University School of Medicine and section chief of plastic surgery at the Hospital of St. Raphael, New Haven, Conn. In practice in New Haven, since 1977, Weinstein has performed missions abroad for more than 15 years, visiting Brazil, Honduras, Colombia, Vietnam, Thailand and China with experienced medical teams specializing in reconstructive surgery for congenital and acquired deformities in children. He discussed his missions recently.

How did you get interested in medical missions to other countries?

When I was in medical school in Rochester, my intern advisor was Seymour Schwartz. He recommended that I go to UCLA for my residency training. While I was at UCLA, I went on a trip with an organization for international surgery to Honduras. It was a very good experience.

I am not a researcher; I don't do basic science. But I love clinical medicine. We do cleft lips and palates. It is a very rewarding experience to operate on these children. You can give a lot of money to diabetes or cancer research, but take one child with a cleft lip and give one hour of surgery time and it is amazing how you can change a life. It might sound corny but it is very rewarding. In medicine and plastic surgery, you reach a point where you have satisfied your ego. You've satisfied your economics and you have satisfied your career choice. What is your legacy to the next generation? That is why I love to take residents and medical students on our missions. In one week, they get an experience they can't get in any other way.

Why did you start your own organization?

I formed Changing Children's Lives about two years ago. The organizations that I had been working with for the surgical trips can be difficult to deal with. They have a bureaucracy that took funds off the top of what I raised. One



Weinstein, left, operates in Colombia.

organization would not allow residents on the trips. With Changing Children's Lives, no money is taken off the top. These trips take a lot of organizing. It can take up to a year to put a trip together. We make sure we will be accepted by the medical community. The host has to accumulate enough patients. We need to make sure there are reasonable facilities to operate in and for staff to stay. My office does this work. All the money donated goes for taking care of the children and the people we help. We raise our own money, but we get major funding from Smile Train, which has been very supportive with grants.

How do the trips work?

I lead trips twice a year from Yale. In February, we will be return to Vietnam. We usually take 25 to 30 people — surgeons, anesthesiologists, pediatricians, nurses, plastic surgery residents. There are team members from Yale and from Johns Hopkins. On our trip in 2008 to China, Chin-To Fong [associate professor of pediatrics at Rochester] went with us. My son-in-law, Jonathan Black, who is a Rochester medical student, has been on missions, as have several other Rochester students. Everyone works pro bono and no one pays for the travel.

We can do 75 to 125 cases in a week, working in five or six operating rooms. We start around eight in the morning and work until five.

In the evening, we have dinner with our hosts and enjoy the culture. We don't just go into rural areas. We have worked in a university hospital in Thailand, military and university hospitals in China. All had plastic surgeons on staff. We communicate with their surgeons about how they do things. There is a back-and-forth dialogue between all the members of the team. There is an intellectual and educational exchange. It's better than going on the Internet or going to meetings or conferences.

Do you plan to continue the missions?

Yes. There is a lot to do. In Honduras at a site where medical missions have visited for 30 years, we operated on a 61-year-old woman with an unrepaired cleft lip. In Vietnam, one in every 400 births is a child with a cleft lip or palate. There is a huge backlog. If we take a team to Asia, it can cost as much as \$80,000, but we do work that would be valued in the United States at more than a half million dollars. You get a real philanthropic bang for your buck. And people want to do this work. It brings you back to your roots in medicine. Whether you are a nurse or a surgeon, you are rejuvenated because you spend the whole day treating and helping people and not dealing with bureaucracy and paperwork and insurance companies. You are doing what you were trained to do.

An alumnus changes fields, but not targets

Barry J. Goldstein, M.D., Ph.D., received his degrees from the School of Medicine and Dentistry in 1982, and completed his residency in Rochester in 1985. In September 2008, Merck & Co. Inc. announced it had named Goldstein vice president of diabetes and obesity clinical development at Merck Research Laboratories. Goldstein joined Merck after 16 years on staff at Jefferson Medical College of Thomas Jefferson University, where he most recently served as director of the division of endocrinology, diabetes and metabolic diseases and professor of medicine, biochemistry and molecular pharmacology. His recent research has focused on the mechanisms and regulation of insulin signal transduction, including the pathophysiology of insulin-resistant disease states.

Why did you switch from the world of clinical and academic medicine to industry?

There is a Rochester connection. When I was a Rochester M.D./Ph.D. student, John Amatruda (now a senior vice president at Merck) was on the School of Medicine faculty. My Ph.D. research mentor, James Livingston, and John sparked my interest in insulin action and diabetes research. When the position at Merck became available, John sought me out and made a compelling case for me to look seriously at the job. I had been at Jefferson for more than 16 years doing the triple duties of academia: teaching, seeing patients and running a very well-funded research effort, mostly in diabetes, and during that time I had never seriously looked at a position in industry. I considered what the job would entail, and, in particular, the positive aspects of being at Merck. They have done a fantastic job in creating a unique, dynamic research and development environment in metabolism research. Over the past several years, they have recruited a number of very successful academic leaders, with the intention of having them apply their research expertise toward the goal of developing new drugs, which are critically needed for diabetes and obesity. I found it enticing to see the



research strength and the way new targets are identified at Merck, including the application of genetic techniques to identify novel causes for Type 2 diabetes and obesity. They have amazing resources available for research that you don't have access to in academia.

Translational research needs to incorporate partnerships between industry and academia, as the two have complementary expertise. In general, the group with whom I'm involved at Merck is not that different from what I'm used to with my colleagues from academia. At Merck, we have a lot of scientific interactions and manage a global clinical research enterprise. My responsibilities are wide-ranging, including working with commercial issues around Januvia. My previous experiences in clinical trials and research helps, and I am enjoying learning a lot of new things.

What do you expect to be the biggest challenges of your change of worlds?

Obesity has been a difficult target, and companies have had major challenges in trying to come up with safe and clinically effective drugs that can help people lose significant amounts of weight. This is a major focus area at Merck. Everyone knows how difficult it is to lose weight on one's own. We also know how much Type 2 diabetes is connected to being overweight. For diabetes, we have medication available, but most patients need combinations of drugs, and many need insulin injections. It is still a struggle for patients to get their blood sugars as close to normal as possible in order to prevent complications. One thing that attracted me to Merck is Januvia, one of the newest products available to treat diabetes, and an important one. I like it conceptually. It lowers blood sugar, but it does not cause blood sugar to fall below the normal

range. Januvia is really innovative. We also have a strong pipeline of new targets in which we are aggressively looking for new medications.

Part of the reason for choosing this transition involved the profound changes we have recently experienced in academic medicine. Even though my own research work in academia has been continuously successful, everyone realizes it is now much more difficult to get grants. Clinically, there are many more patients without insurance who are juggling how they will pay for their health care and prescriptions. I think I assumed that my M.D./Ph.D. training would lead to a steady career in academic medicine. When I started, we had plenty of time to work with patients and teach students and had the luxury of time for research. In the last 20 years, the pressure to turn academic medicine into a business has taken hold at many institutions. Revenue from patient hours is monitored closely, and this has taken its toll on providing the time necessary for good patient care and excellent bedside teaching. At Rochester, I was deeply instilled with strong values for direct patient interactions and clinical teaching that I now find very disappointing to see challenged to this degree in academia.

Is there something from your Rochester education or training that prepared you for this new stage of your career?

I have always appreciated how the M.D./Ph.D. program at Rochester prepared me for my academic career. The medical education and residency training at Rochester gave me a very strong foundation in clinical care, which really helped me to complement my research career. I was lucky to work with John Amatruda and James Livingston. They provided tremendous mentoring. Of course, the weather was so bad we all just worked in the study halls, the lab and the hospital. While at Rochester, I married Susan Wieggers (M '81, R '84), another medical student. Her Rochester training at Strong also set her trajectory for a stellar career in cardiology. She now is associate professor of medicine at the University of Pennsylvania, director of clinical echocardiography, co-director of their top-ranked cardiology fellowship and also serves on the Medical Board of the Hospital of the University of Pennsylvania. Together, we have enjoyed a strong presence for Rochester medicine at the two major medical schools in Philadelphia.

Alumna, former faculty member, to lead school in Georgia

Barbara L. Schuster, M.D. (M '77, R '80), former University of Rochester School of Medicine and Dentistry faculty member, has been named dean of a new medical campus of the University of Georgia.



She will lead the Medical College of Georgia/University of Georgia Medical Partnership Campus in Athens. The Athens campus plans to enroll its first students in fall 2010 as part of the School of Medicine's plan to increase its class size 60 percent to a total enrollment of 1,200 by 2020 and help meet Georgia's need for physicians.

Schuster recently completed a year as a Robert G. Petersdorf Scholar-in-Residence at the Association of American Medical Colleges (AAMC). She served as professor and chair of the Department of Internal Medicine at Wright State University's Boonshoft School of Medicine in Ohio from 1995 until 2007. In addition, she was medical director of the University Medicine-Pediatrics Practice at Wright State University and president of Wright State's faculty practice plan.

At Rochester, Schuster served as residency program director for the primary care program in internal medicine and the combined internal medicine and pediatric program. She also was medical director of the University Health Service.

"Dr. Schuster is exactly the right person to lead this critical initiative to help address the shortage of physicians in Georgia," said University of Georgia President Michael F. Adams. "Her background and experience have prepared her for the challenge and opportunity of building the MCG/UGA Medical Partnership from the ground up."

Schuster chaired the AAMC's Council of Academic Societies from 2003 to 2004, served on the association's executive committee from 2002 to 2004 and received the AAMC's 2007 Distinguished Service Award. She is immediate past president of the Association of Professors of Medicine.

Samet named to head new USC institute

Jonathan Samet, M.D. (M '70), an internationally recognized expert on public health, has been named founding director of the new University of Southern California Institute for Global Health and chairman of the Department of Preventive Medicine at the Keck School of Medicine of USC.



Samet, an authority on the effects of smoking and air pollution, leaves the Johns Hopkins University Bloomberg School of Public Health, where he has served as professor and chairman of the Department of Epidemiology since 1994. For the last 10 years, he also has directed the Institute for Global Tobacco Control at Johns Hopkins.

Elected to the prestigious Institute of Medicine of the National Academy of Sciences in 1997, Samet has contributed to many of the U.S. Surgeon General's reports. He was the senior scientific editor for the 2004 and 2006 reports on active and passive smoking.

Samet hopes to establish multidisciplinary collaborations that extend across departments and schools. His decision to join the USC faculty, he has said, was based on the opportunity to chair the Department of Preventive Medicine, one of the leading such departments within the medical school, and at the same time to lead the development of a model institute for multidisciplinary collaboration in global health.

Among numerous honors, he has received two U.S. Surgeon General's Medallions in 1990 and 2006. In 2005, his work received international recognition with the Prince Mahidol Award in Public Health, named for the father of modern medicine and public health in Thailand. In 2006, Samet received the School Alumni Association Distinguished Alumni Award.

Hofstra names medical school founding dean

Hofstra University selected Lawrence G. Smith, M.D. (R '79), as the founding dean of the university's medical school established in partnership with the North Shore-Long Island Jewish (NS-LIJ) Health System.



The Hofstra University School of Medicine plans to open in fall 2011.

University President Stuart Rabinowitz told *Newsday* the dean had to come from inside the system.

"It became crystal clear that the dean of the medical school, in order for this to work well, has to have some significant control over the hospital side because the clinical teachers ... are giving patient care at the hospital," Rabinowitz said.

Smith is a native of Long Island who earned his medical degree from the New York University School of Medicine.

In addition to serving as dean of the new medical school, Smith will continue in his role as chief medical officer of the North Shore-LIJ Health System. He is the 15-hospital health system's senior physician, responsible for the overall professional management of clinical, education, research and operational issues related to all medical and clinical affairs. He has held the position since 2006. Before joining North Shore-LIJ, Smith was at the Mount Sinai School of Medicine, where he served as dean and chairman of medical education, founder and director of the school's Institute for Medical Education, professor of medicine and an attending physician. Prior to Mount Sinai, Smith practiced general medicine at the State University of New York's Stony Brook University Hospital, where he became a full-time faculty member and director of the hospital's residency program in internal medicine.

His residency at Strong Memorial Hospital was followed by military service as captain in the Army Medical Corps at Fitzsimmons Army Medical Center in Denver.

David Nash leads new school of health policy

Thomas Jefferson University in Philadelphia has established the Jefferson School of Health Policy and Population Health (JSHPPH), which will begin enrolling students for September 2009.

David B. Nash, M.D., M.B.A. (M '81), chair of the Department of Health Policy at Jefferson Medical College of Thomas Jefferson University, was named the school's founding dean.

The interdisciplinary curriculum design of the school allows medical, nursing and allied health students to take classes together to help them better prepare for and understand areas of health policy, population health and health care quality and safety. Classes will be offered both online and in a traditional classroom format.

"The need to address the health care crisis in the United States — its quality, safety, affordability and accessibility — is incontrovertible," said Nash, who also serves as the Dr. Raymond C. and Doris N. Grandon Professor of Health Policy at Jefferson. "It is no longer possible to prepare high-quality health care providers and educators without addressing these issues holistically from the perspective of population health and with the tools of health policy analysis."

The new school will offer master's degrees in chronic care management, health care quality and safety and health policy, as well as doctoral programs in health policy population health sciences. Certificate programs will also be offered in each area and new dual degree programs are planned as future additions to the school.

"In order to maintain our high level of scholarly integrity, we must make health policy a central focus in the education of our students in medicine and all the related health professions," Nash said.

Cleveland Clinic names alumnus director of space center

Angelo Licata, M.D., Ph.D. (M '73, PhD '73), a Cleveland Clinic endocrinologist who focuses on metabolic bone and skeletal problems, calcium disorders, renal stones and osteoporosis, has been appointed director of the Cleveland Clinic Center for Space Medicine.



The goal of the center is to contribute to the solution of medical problems experienced by humans during space flight so that humans can have a prolonged presence in space. The center provides a focal point for space-

related medical research and gives the center's researchers access to the network of more than 2,000 Cleveland Clinic physicians and scientists.

"I already see the fruits of the collaborative activity of this center and NASA, both the analog studies of weightlessness and bone function and my involvement in developing with NASA engineers a computer modeling system for estimating fracture risk for astronauts," Licata said. "This program has enormous potential for earth-based problems of osteoporosis. We anticipate continuing these types of interactions into the future."

The center is supported by a cooperative agreement with Cleveland's NASA Glenn Research Center (GRC), and works closely with engineers and scientists from GRC. Members of the center consult with NASA representatives on strategic planning and policy issues as NASA's mission evolves. The Center for Space Medicine also sponsors scientific meetings and public lectures on topics related to humans in space.

Alumni Awards Call for Nominations

The University of Rochester School of Medicine and Dentistry Alumni Council invites all alumni, including graduates of the MD, PhD, MS programs, and former residents, to submit nominations for alumni awards that are presented during Alumni Weekend each year. In 2009, the School of Medicine will bestow four awards. The Distinguished Alumnus(a) Award recognizes achievement that has had an impact on a national and global scale by individuals whose lives and work exemplify the standards and objectives of the school. The Alumni Service Award recognizes outstanding support, commitment, and service which have furthered the interests of the school. The Humanitarian Award recognizes those who serve the poor and underprivileged people of this world and attempt to make a difference to those in need. The Gold Medal Award for outstanding teaching receives nominations from students, faculty, and administration. To learn more about School of Medicine alumni awards and obtain nomination forms, visit www.urmc.rochester.edu/smd/alumni/alumniawards.cfm

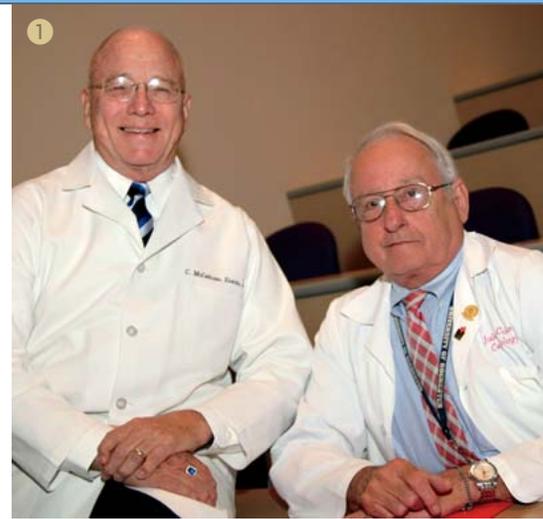


SCHOOL OF
**MEDICINE &
DENTISTRY**
UNIVERSITY of ROCHESTER
MEDICAL CENTER

School of Medicine and Dentistry alumni from across the country gathered in Rochester in September to celebrate reunion with their classmates.

They enjoyed the Whipple Dinner where the first John N. Wilder Award was given to Marc Fuchs, M.D., Betty Small Fuchs, M.D., Judith Small, M.D., and Ira Cohen, M.D., who helped establish the Small-Fuchs Family Scholarship Fund to support future generations of medical students at Rochester. Robert Brent, M.D., Ph.D., received the Distinguished Alumnus Award. Jules Cohen, M.D., gave the George L. Engel Memorial Lecture. The alumni dinner was held at the new Fairbank Alumni Lounge in the Alumni and Advancement Center.

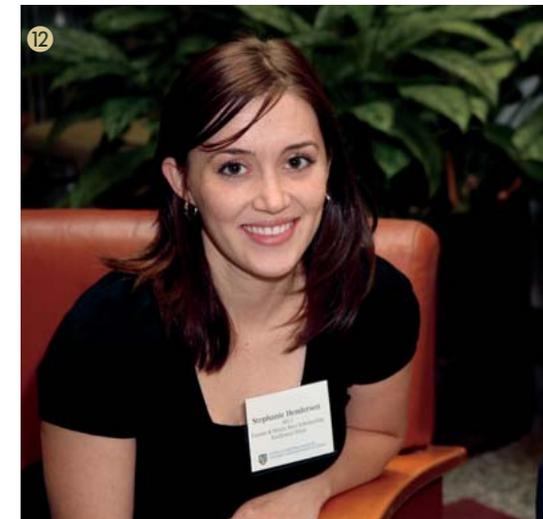
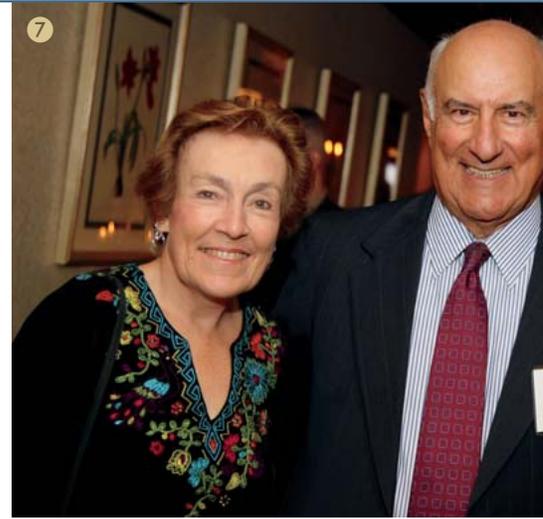
- ❶ C. McCollister Everts, M.D. (M'57, R'64) and Jules Cohen, M.D. (B'53, M'57) at the Engle Lecture
- ❷ Class of 1958. Front row: Tony Tartaglia, Hugh Ryan, Hill Gitelman and Dave Clough. Second row: Douglas Williams, Richard Braun, Lee Oxman, Bob Carrier, Chuck Winterling and Bill Calley. Third row: Jim Haggerty, Ann Doege, George Ballantyne Jr., Fuzzy Fendrick, Harry Cattell, Mike Lamm and Richard Frost. Fourth row: Ted Doege, Floyd Short, Cedric Bainton, Bob Hayes, Leo Stalbach and Bill Mast
- ❸ Don Hare, M.D. (MS'53, M'54) and James Haley, M.D. (M'85, R'88) and Rita Haley at the Engle Lecture
- ❹ Class of 1978. Front row: Elizabeth Almeyda, Helen Leibner and Jens Jorgensen. Back row: Steven Birnbaum, Judith Small, Tina Kurland and Mark Goldshein
- ❺ At the Distinguished Alumnus Lecture, from the left: Robert Scala, (MS '56, PhD), Lillian Brent, (B'50), Robert Brent, M.D. (BS'48, M'53, PhD'55), and David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry
- ❻ Paul Fine, M.D., (BS'57, M '61, R '65), Rochelle Fine and Steven Fine, M.D. (FLW'95) at the Scholarship Reception



2



- 7 Anthony Tartaglia, M.D. (M'58), and Jeanne Tartaglia at the Whipple Dinner
- 8 At the Whipple Dinner, from the left: David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry, Betsy Fuchs, M.D. (M'82), Marc Fuchs, M.D. (M'81), Judy Small, M.D. (M'78) and Ira Cohen
- 9 At the Scholarship Reception, from the left: John Hansen, Ph.D., professor of neurobiology and anatomy and the School of Medicine and Dentistry's associate dean for admissions, and medical students Emily Van Kouwenberg of the Class of 2012, Tegan Vay of the Class of 2011 and Michelle Coriddi of the Class of 2011
- 10 At the Young Alumni Picnic: Jimena Cubillos, M.D. (M'03), Shana Katzel-Dowell, M.D. (M'03) who is holding son Noah Dowell, and Evan Katzel, Class of 2010
- 11 At the Whipple dinner, from the left: Carol Nadelson, M.D. (M'61, R'62), Lee Caldwell, M.D. (R'73) and Robert Sutherland (PhD'66)
- 12 Stephanie Henderson of the School of Medicine and Dentistry Class of 2011 and Gordon Currie, M.D., at the Scholarship Reception
- 13 Henry Thiede, M.D. (R'56), Ellen Horey-Thiede and David Gandell, M.D. (R'82) at the Whipple Dinner







Pledge aimed at making School of Medicine tuition-free

On the 55th anniversary of his graduation from the University of Rochester School of Medicine and Dentistry, Robert Brent, M.D., Ph.D. (M '53, PhD '55), and his wife, Lillian, pledged \$2 million to match donations to a scholarship fund to make the medical school tuition free.

"It is our dream to make the School of Medicine and Dentistry a school free of tuition, or at least to markedly reduce the tuition costs," said Brent, an internationally known physician and researcher. "If you give scholarship money and it's spent, you can't do a lot, because you have to have a tremendous amount of money. But if we create an endowment, where the money is not spent for a scholarship but is invested, it means you can eventually have tuition-free medical school."

To start the fund, Brent and his wife donated \$1 million for medical school scholarships in 2006. The \$2 million pledge was announced at the 2008 School of Medicine and Dentistry reunion.

"Once again, the Brents have demonstrated extraordinary generosity and leadership," said David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry. "We must find a solution to the problem of growing student debt. One way to do this is to endow tuition. The Brents have developed a highly innovative approach to the endowment of tuition and have challenged other alumni to join them in ensuring the future of our medical school and our students."

The burden of debt is a major issue for medical students. Ninety percent of the medical students in the School of Medicine and Dentistry's Class of 2008, for example, borrowed money to attend the School. Their average debt at graduation was \$140,475.

The Brent gift calls for a novel reinvestment strategy. The income generated by the principal in the main fund will be allocated to a starting scholarship fund for each medical school class in their first year. The gift would become part of the endowment of the University and be invested. Each class then also would donate to the fund, thereby increasing its value. The money in the main fund would be retained to support successive class funds. The Brents will match the gifts up to a total of \$2 million.

Brent, a Rochester native, earned his bachelor's degree from the University of Rochester in 1948, his medical degree from the School of Medicine and Dentistry in 1953 and his doctorate in embryology and radiation biology in 1955. Lillian Brent, also a Rochester native, graduated from the University of Rochester in 1950.

Brent is the Distinguished Louis and Bess Stein Professor of Pediatrics, Radiology, and Pathology and head of the Clinical and Environmental Teratology Laboratory at duPont Hospital for Children. He also is emeritus chairman of the Department of Pediatrics at Jefferson Medical College in Philadelphia. He was chairman of the department for almost 30 years. He is a member of the Institute of Medicine of the National Academy of Sciences.

Brent, a frequently-consulted expert in the effects of radiation, drugs and chemicals on the developing embryo and child, has published more than 400 research articles. In 2008, Brent received the Alfred I. duPont Award for Excellence in Children's Health Care from Nemours, one of the nation's largest children's health systems, and the School of Medicine and Dentistry Alumni Association's Distinguished Alumni Award.

A former faculty member makes a surprising bequest

In December 1966, Thomas R. Noonan, M.D., left the University of Rochester School of Medicine and Dentistry faculty to become a

professor at the University of Tennessee Comparative Animal Research Laboratory in Oak Ridge.

But he maintained a quiet affection and connection to the School of Medicine and Dentistry even after a full career at Oak Ridge.

When Dr. Noonan died in October 2007 at the age of 95, he bequeathed to the School more than \$3 million, a gift from trusts for he and his wife, Ruth Noonan, that he had not informed the School about.

"This is an unexpected and remarkable gift," said David S. Guzick, M.D., Ph.D., dean of the School of Medicine and Dentistry. "Our School has a long history of faculty members who have a strong attachment to the School and their students. Dr. Noonan, though he has been gone from Rochester for decades, has created a legacy that will help students for decades."

A native of Buffalo and a graduate of the University of Buffalo School of Medicine, Dr. Noonan joined Rochester's medical school in 1939 as an assistant in physiology and then in 1940 as an instructor in physiology. He served in the U.S. Army Medical Corps in World War II.

In 1946, he returned to Rochester as an assistant professor of radiology and worked in the University's Atomic Energy Project. He left the School in 1949 to work for the then Upjohn Co. in Michigan, but returned a year later, becoming an associate professor in 1951.

Paul Rohwer, Ph.D., received his doctorate from the School in 1966 and was most likely Dr. Noonan's final graduate student at Rochester. He described Dr. Noonan as "very modest and unassuming."

"He had a great quest for knowledge," said Rohwer, a retired associate division director at Oak Ridge National Laboratory. "He had a wonderful attitude about education and was very helpful to students, which is probably why he made this gift. He was very helpful to me. I can't give him enough credit for whatever success I had there."

Dr. Noonan and his wife, who died in 2006, shared a love of reading and learning. He also was known as a storyteller with an extensive knowledge of American military history. Among his friends and fellow faculty members, he liked to start the day with a joke.

The School has established the Thomas and Ruth Noonan Scholarship.

"Helping students would please them very much," Rohwer said.

If you see any alumni whom you would like to contact, use the Online Directory at www.alumniconnections.com/URMC to find address information.

Submit your class notes to your class agent or to RochesterMedicineMagazine@urmc.rochester.edu.

Note: MD Alumni are listed alphabetically by class, Resident and Fellow alumni follow in alphabetical order, and Graduate Alumni are listed separately in alphabetical order.

MD Alumni

Class of 1944

Stuart Finch reports: "**Paul R. Schloerb** wrote in July that last October he fell into a swimming pool. The problem was that there was no water in the pool, so that he ended up with an open-eversion fracture-dislocation of his right ankle. After three months of wheelchair and crutches, the ankle was healed. He was well enough by spring to visit and spend some time at the Philmont Boy Scout ranch in New Mexico at an elevation of 7,000 feet. Paul now is an emeritus professor at the University of Kansas Medical School. He has an office and parking space at the school, where he continues to review manuscripts and give student lectures.

"**William H. Smith** (BA '41) moved into an assisted-living facility. He is a Type 1 diabetic survivor of many years' duration. Currently, he is working on year number 54 as a local Boy Scout master. During this time he has had 62 Eagle scouts in his troop. **Richard S. Wilson** in Florida is one of my more faithful correspondents. He mentioned in his most recent letter how fortunate we were to have attended Rochester medical school, where the feeling with one another when we were students was very collegial in contrast to the very competitive feeling among students at many other schools. Dick also reported that in April, he and Evelyn celebrated their 10th wedding anniversary with a trip to Hawaii. That was one of a total of 50 cruises for Dick and 70 for Evelyn."

Class of 1946

Bruce Hallett writes: "**Phillips L. Bates** retired from the practice of urology in 1968. This was a couple of years after the loss of Gree, his wife of some 42 years (I remember her dearly while in medical school). He remarried and found time

Maintaining Balance

Jeremy Hogan, M.D. (M'00) is an adult neurologist practicing with Sharp Rees-Stealy Medical Group in San Diego, Calif. He has a general neurology practice and also teaches as an assistant professor at the University of California at San Diego. "As a neurologist, I am interested in the way things are put together, and I think photography is a creative outlet that brings balance to a hectic clinical practice," he said. Hogan likes to photograph landscapes and architecture.

Athens, Greece



for golf, books and chess (learned most probably from **Eric Alling**, M.D., in Rochester, who was the stepfather of Wheelock Southgate). After another 15 years, he was widowed again. Phil regrets the loss of contact with many of our classmates. My wife, Connie, and I met Phil in the late 1990s, when we had a marvelous and refreshing visit in Henderson, N.C. **William C. Caccamise** (BA '44) is now retired and living in the Rochester area. His career was in ophthalmology with an early commitment in India and Nepal, 1951–1968, off and on, at the Kurji Holy Family Hospital on the banks of the Ganges. All this was followed by private practice in Rochester. A wonderful commitment, an opportunity to serve others, and one for which I applaud. How about you? He was married to his spouse, Irene, in 1952 while a fellow in ophthalmology at the Cleveland Clinic. He has been in need of the advanced technology of implant surgery, and now is doing well. His lifetime experience sets a great example for current students and residents.

"**James Monroe Cole** (BA '44), who resides in Danville, Pa., lost his wife to Alzheimer's a few years ago and now has reinvented himself as a traveler, among other things. Recent trips include Alaska, Guatemala (much fishing with positive results) and visits to children. He has abandoned most of his medical

tools, and concentrates on maintenance of some 35 acres of woods and grass. Plans include visits perhaps to Maine. Golf needs help! He hopes to come to our next get-together. His professional life was productive in clinical and research avenues. **William B. Forsyth** (BA '44) still resides in the Rochester area but recently moved to a retirement community. One of the consequences of the move was related to 'save or discard.' Many memories went out with the trash. After residency, Bill entered the practice of pediatrics for 15 years. Thereafter, he entered the field of state and county medicine as regional physician to many counties in the area. He then became a consultant to many industries such as Bausch & Lomb. He retired about 15 years ago. He is essentially well with the common infirmities that plague so many of us, such as back problems, most of which defy control.

"**John Arthur Frantz**, from Monroe, Wisc., was contacted by me for information on Afghanistan. As you may remember, he spent a couple of years there in the 1970s. Incidentally, he thought that the citizenry of Afghanistan failed to realize how bad the Taliban were, worse than the Russians. He and his wife, Mary, also an M.D., have never left the writing table. Their CV is long and interesting. John is now occupied in the preparation of a book, which

I hope he will share with us. **Robert Galambos** was our neighbor in Rochester. As you recall, he came to medical school already with a Ph.D. for work on ultrasound mechanisms used by bats and the like. Bob has spent his efforts in the academic world of research. Starting with Harvard and Yale, he ascended the ladder, resulting in a career at UC San Diego. He is now emeritus and recently was honored by past students and contemporaries for his efforts as teacher, researcher and advisor. His CV is enormous, and he is still working to enlarge same.

"**John G. Hamilton** (BA '44) felt that our medical school program was excellent training for his entry to the Naval Hospital in Philadelphia. He progressed to training back in Rochester in OB/GYN. His professional life was suffused in these specialties. He had a good marriage, his companion now deceased for some years. He inherited a large forested property later, and has become a tree farmer, along with his son, in Wayland, N.Y. This is now a going concern and something he treasures. This reminds me of **Ned Rendall**, who in later life became involved in conservation projects in Maine. Also, a bit like **Moe Cole**, who tends a substantial property in Pennsylvania. So life goes on and takes different pathways for many. Here is a wonderful medical yarn Hamilton recounted, and I thought it should be shared. In our first year, we had a histology course in the spring. He and **Scotty Pratt** appeared late for class, and it so happened that Dean George Whipple dropped by. He inquired how things were progressing. Scotty apologized for being tardy for the class that day. He commented that they had been chipping golf balls on the hospital lawn, and reported that the grass needed cutting (for better golf). Dr. Whipple left the classroom and perhaps a half hour later, the sounds of motors were heard. Yes, a peek out the window confirmed that the new 'golf course' lawn was being cut! Wow! Next stop, Genesee Valley Golf Course.

"**John H. Kennell** (BA '44) and his wife have moved onto a retirement community in Cleveland. John continues some work projects, going into his office regularly. His career has been noteworthy in the study of maternal/newborn bonding. He is an international expert. He has been a regular at reunions, and, in a word, is a great asset to our class. **John Andrew King III** (BA '44) and his wife Martie continue retirement in Ojai, Calif., where paramount activities are family oriented. John has had a varied career, including Rochester (Larry

North Lake Tahoe, Calif.



Kohn and Ernie Millard) and eventually with the Permanente group. His wife assuages many of his current physical problems, Parkinson's. Reunions are not feasible, so we wish John and Martie our best.

"**Robert B. King**, as you may know, is one of our outstanding contributors in our class. As chief of neurosurgery at Syracuse, he has added a truckload of papers, presented guest lectures, traveled to almost every continent, etc. (hardly a word mentioned to me in his current correspondence of the accomplishments). He and Molly have shared much of this together, making recall of these adventures memorable. He is currently reviewing patients who have undergone lumbar laminectomies for spinal stenosis. He and Molly have been fairly regular attendees at reunions in recent years. Two daughters with children pursuing challenging careers complete the picture. **Robert E. Nye Jr.** and his wife, Fran, approaching their 60th wedding anniversary, are enjoying a good life in Norwich, Vt. They have three sons. David, a neurologist at the Midelfort Clinic in Eau Claire, Wisc., and his wife, an emergency room nurse, have two sons adopted from Korea, two daughters adopted from Arkansas and one biological daughter. Christopher, a geologist, and his wife, a retired superintendent of the Alaska State Parks, have fraternal twins (a boy and girl) and live in Fairbanks. Peter, a computer

programmer with PIXAR, and his long-time partner live in Berkeley, Calif."

Class of 1954

Chloe Alexson writes: "The Class of '54 can claim a true patriarch. **Harold Brodell** practiced internal medicine for thirty years in Warren, Ohio. He has been followed by a good portion of his family. His son **Bob**, a graduate of the class of '79, did two years of internal medicine training at Strong, and now practices dermatology in Warren. His daughter-in-law, **Linda**, a member of the Class of '81, is an ophthalmologist in Warren. Though active in a number of academic and community activities, Bob and Linda are most proud of their five children, one of whom, Lindsey, is a third year student at the University of Rochester School of Medicine and Dentistry. And that's not all. Harold's son, Jim, who also practices in Warren, did his orthopedic residency at Rochester under Dr. Mac Evarts.

"**Don Hunton** reported in July that he and Jean had just returned from taking the whole family on a cruise to Norway. At that point they were still suffering from jet lag and up at 3 a.m. so I gave him a few days and asked how the trip was. They had a wonderful time but he and Jean are quite sure they have had enough overseas flights. In September, Jean joined him in the 80's club and, he said, 'We deserve to slow down, but we have not



stopped.’ The jet lag seems to have cleared; his report in August said: ‘Oil has made Norway one of the wealthiest nations. It is a very beautiful country and Jean keeps asking – Why in the world did your ancestors ever leave it? Answer: they wanted to have money and food to eat. We think the very best thing we can leave our children and especially our two grandsons is the memory of adventures like this. Their enthusiasm is enormous.’

“**Muriel Kowlessar, M.D.**, is the widow of **Dhodanand Kowlessar** of the Class of ‘55, but he is considered part of our class because he started with us. She writes: ‘I have tremendous admiration and affection for your class and have shared great times with the group. This past July I moved to a retirement community in Massachusetts to be near my daughter. When Dhod died in 1992, our daughter Indrani and I endowed a prize in his memory at Jefferson Medical College, where he taught for 30 years. Every year when the award is presented to honor a graduating resident in internal medicine who has distinguished himself or herself during training, I try to meet the recipient. Dhod would have been pleased with the caliber of the recipients.’

“**Dave Ohlwiler**, after 35 years as a plastic surgeon, retired to a Christmas tree farm in North Carolina. After a few years, he harvested the trees and replaced them with

orchards, which became too much of a chore. He is now 6,000 feet up an old mountain trail on 18 acres originally acquired by the Vanderbilts from the Cherokee. He had to trade in his Corvette for a pickup truck and high school girls don’t attack him any more, but he still carries a pocket full of pebbles to toss at the barefoot mountain maidens when they get too close! For excitement, he and his son, Eric, a check pilot for Delta, have a sailplane and a twin Beech Bonanza that he flies occasionally. Playing with kites and RC model airplanes with his grandkids also provides enjoyment. He enjoyed his life as a plastic surgeon, liked his patients and particularly enjoyed his charity work in Central America. There were many patients – both adults and children from all parts of the country – needing cleft lip and palate repairs. Local doctors and patients taught the team about new diseases and treatments, like the “stun gun” for relief of the severe pain of killer bee stings. Many children came with large contracted scars and crippling immobility from untreated kerosene burns, which needed grafting. Since sterile dressings were unavailable, amnions preserved in sodium hypochlorite were a great substitute for the many dressings to the recipient areas and the donor sites – all with a great reduction in the usual pain involved in these procedures. Patients from outlying villages often arrived on

foot with severe lacerations packed with sterile coffee grounds for hemostasis, and even arterial hemorrhage was arrested with spider web pledgets. Fortunately, during seven years and several hundred patients with no antibiotics, there were no wound infections. Dave says: ‘Half my two dozen hummingbirds have headed south and autumn is in the air so stop up if you’re ever down this way.’

“We received a delightful note from **Ruth Phillips**, widow of **Clay Phillips**, ‘54. She sends ‘a few words from the Cape on a foggy summer afternoon. Moving to Cape Cod in 1996, Clay and I added a new definition to the word retirement. You do not withdraw, you move forward ... to a new adventure. For Clay, it was too brief when he succumbed in 2000 to the cancer gene that pervaded his mother’s family. Our married offspring live in Michigan and Maine, our bachelor in Rochester, where we maintain a small condo. Alone, I wear different titles: Lucky-Grandma-by-the Sea, ‘Mayor’ of Harborview Beach (environmental preserver), Church-Lady-who-really-gets-things-done, political maverick at times, and a dinosaur who doesn’t do computers. My grandkids (6) range from Dylan at Georgetown, with an interest in surgery, to Katrina who wows the preschoolers in Maine, all ‘above average,’ of course. My teapot is steaming, the wine is chilled – stop by.’

“**Marcia Seeger**, widow of **Joe Seeger**,

says that the only news she has is her cruise on the *Crystal Serenity* in June. They went from Barcelona to Venice, with seven land side trips along on the way, and somehow that sounds like pretty impressive news. She also reports that her main avocation (or is it a vocation?) is playing duplicate bridge four times a week. We wish her luck. She enjoys reading the Class Notes and other class mailings."

Class of 1958

Theodore C. Doege has edited and published a collection of almost 1,300 letters written by his father, the Rev. Arthur Doege, when he was a chaplain in the U.S. Army during World War II. The book is titled *Letters of a Soldier's Chaplain*.

Class of 1963

Joseph L. Andrews Jr. spent two weeks visiting Japan in November 2007. "The trip was organized by Keisuke Ono, Yoko Ono's brother, for 40 fellow classmates, family and friends of Scarsdale High School's Class of 1955," he writes. "We visited major Japanese cities, as well as remote mountain farming villages. The most impressive visit was to Hiroshima."

Merrill C. Oaks and his wife of 49-plus years are retired and serving the Church of Jesus Christ of Latter-day Saints on a three-year assignment to preside over the church's temple in Omaha, Neb., at the site where the Mormon Pioneers spent time preparing for the trip to the Rocky Mountains. Since his retirement in 1996, Oaks and his wife have fulfilled church assignments in Seattle, the Philippines and in Utah. They will return to their home in North Salt Lake, Utah, in November 2010.

Class of 1969

Robert Olsen Crapo received the Legacy of Life Award at the Intermountain Medical Center in April.

Class of 1972

Arthur R. Schlosser continues to write and perform original songs under the stage name Dean Dobbins. At age 62, Arthur/Dean posted his first YouTube video. A tribute, of sorts, to Sarah Palin, the song is called "I'm a Woman." It is found easily at www.youtube.com. Just search for either Palin Dobbins or Dobbins Palin. Schlosser works at the Kaiser Permanente Department of Pediatrics in Panorama City, Calif.



Burgundy, France

Class of 1973

Albert John Sargent has been named vice chair for child and adolescent psychiatry in the Department of Psychiatry at Tufts University School of Medicine and chief of child psychiatry at the Floating Hospital for Children at Tufts Medical Center. Sargent had been professor of psychiatry and pediatrics at Baylor College of Medicine and director of child and adolescent psychiatry at Ben Taub Hospital in Houston. Before joining the Baylor faculty, he was the director of education and research, and dean of the Karl Menninger School of Psychiatry and Mental Health Sciences. In 2009, he will serve as president of the American Family Therapy Academy.

Class of 1974

Paul Mintz was elected to the inaugural class of the National Blood Foundation (NBF) Hall of Fame in recognition of his research and leadership in transfusion medicine. The NBF is a leading grant-funding organization in transfusion medicine research. Mintz continues as chief of the Division of Clinical Pathology at the University of Virginia Health System. Every February, you can spot him riding as a Knight in the Krewe of Babylon during the New Orleans Mardi Gras parades.

Class of 1975

Dale Morse is the chair of the Centers for Disease Control Advisory Committee on Immunization Practices and assistant commissioner, Office of Science, at the New York State Department of Health. He also was profiled in a

chapter of the 2007 book, *Moments in Leadership: Case Studies in Public Health Policy and Practice*.

Class of 1983

William Rodgers has been named chairman of pathology at Lenox Hill Hospital. He was chairman of the pathology committee of the Gynecology Oncology Group, a federally funded organization that develops cancer treatments. He also served as director of anatomic pathology at the University of Maryland Medical System and as director of the pathology biorepository at the university's Greenebaum Cancer Center.

Class of 1984

Stephen McLeod-Bryant (BA '80) is the 2009 recipient of the Jeanne Spurlock Minority Fellowship Achievement Award from the American Psychiatric Association. He will receive the award at the May 2009 APA annual meeting. McLeod-Bryant practices in Charleston, S.C.

Class of 1988

Abby A. Smith writes: "Greetings to former classmates. I am enjoying my OB/GYN private practice in Roanoke, Va. We currently have four partners and are looking for another associate, so please contact me if you know anyone looking to move south! Roanoke is a wonderful place to raise a family."

Class of 1992

Kym Orsetti Furney recently published her first

book, *When the Diagnosis is Multiple Sclerosis: Help, Hope and Insights from an Affected Physician*. Furney was diagnosed with MS in 2000 and has been fortunate to do extremely well. She continues to practice internal medicine on a part-time basis in Charlotte, N.C., while raising her two children. Her book is a message of hope for those who are newly diagnosed with MS that also addresses some of the challenges that emerge along the way.

KYM ORSETTI FURNEY, MD

When the Diagnosis Is MULTIPLE SCLEROSIS

*Help, Hope, and Insights from
an Affected Physician*



Class of 1996

David W. Toth reports: "It's a little belated, but Renee and I welcomed Nadia Elise on October 24, 2006. Her begrudgingly adoring big brother Brayden is 6 and in kindergarten. I switched practices, mainly because a large (over 250 physician) multispecialty group was looking for an endocrinologist, and their office is six blocks from my house. This essentially cut my commute time by 97 percent, and allows me to (occasionally) go home for lunch to be with my daughter, and volunteer at Brayden's school (which included a lively debate in his class on whether or not Pop-Tarts are a fruit). Needless to say, I love the fact that I can incorporate more parenting into my schedule!"

Class of 1999

Heather L. Evans writes: "I'm very happy to report that I started my new position as assistant professor in the Department of Surgery at the University of Washington in Seattle, having just finished my Surgical Critical Care/Trauma

fellowship here at Harborview Medical Center. My clinical practice will focus on general surgery, trauma and surgical critical care, and I will continue to pursue my research interests in surgical infectious disease. Thanks to all the wonderful teachers and mentors that made it possible!"

Class of 2000

Jeremy Hogan and **Shannon Hogan** are proud to announce the birth of their first child, Jackson Douglas, on April 23, 2008. Amazingly, Jackson was born within a few days of children of Jeremy's classmates Ellena Linden, Nicholas Dang and Jonathan Pak.



Class of 2002

Kelli J. Harding and her husband, Padraic Casey, welcomed their first child, Max, on Dec. 2, 2007. Harding is finishing up a Biological Psychiatry Research Fellowship at Columbia University Medical Center in New York City and staying on as faculty in the Department of Medical Education.



Class of 2006

Lenard Lesser was elected Academic Chief Resident for the Tufts University Family Medicine Residency at Cambridge Health Alliance.

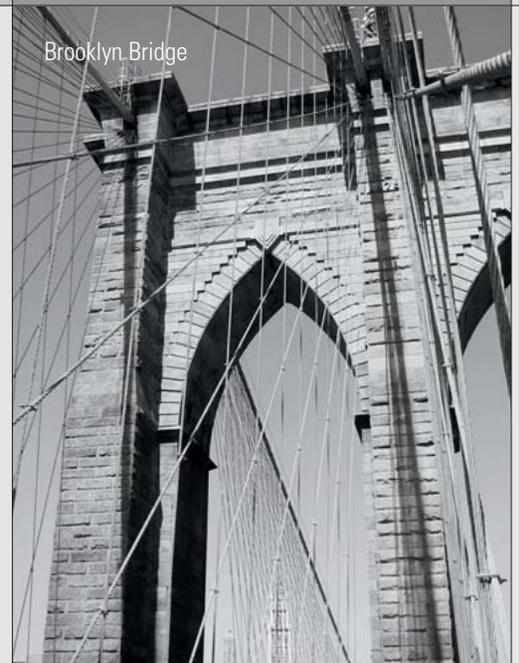
Howard J. O'Rourke reports that Howard Timothy O'Rourke was born to him and Amber O'Rourke on February 7, 2008, weighing eight pounds and two ounces.

GRADUATE ALUMNI

(Arranged alphabetically)

Edmund S. Copeland (MS '61, PhD '64) writes: "My 50th reunion at Cornell is coming up in June. I'm also hoping to make my 50th at the U of R in 2014. I'm retired, remarried to Candy and

Brooklyn Bridge



living in Crozet, Va. I'm reminded of the U of R on being asked to welcome two newly accepted Virginians to Rochester."

William Rodgers (PhD '79, MD '83, R '85) – See *M.D. Class of 1983*.

RESIDENTS/ FELLOW ALUMNI

(Arranged alphabetically)

Steven P. Meyers, Ph.D. (FLW '94) is professor of imaging sciences and neurosurgery, and full-time faculty member at the University of Rochester School of Medicine and Dentistry. He also is the author of a new book, *MRI of Bone and Soft Tissue Tumors and Tumorlike Lesions, Differential Diagnosis and Atlas*, published by Thieme. The publisher's Web page about his new book can be reached by visiting: www.thieme.com/SID00000000000000/products/subpages/pubid-1146042502.html.

Dale Morse (MD '75, R '80) - See *M.D. Class of 1975*.

Robert E. Nye Jr. (MD '46, FLW'51) – See *M.D. Class of 1946*.

William Rodgers (PhD '79, MD '83, R '85) – See *M.D. Class of 1983*.

Ralph W. Prince, M.D.

Ralph Weedon Prince, M.D., an outstanding internist known for the care he provided his patients, died of cancer Dec. 2 at his home in Pittsford, N.Y. He was 89.

A native of Rochester, Dr. Prince earned his medical degree from the University of Rochester in 1943, where his mentor was George H. Whipple. Dr. Prince remained loyal to the University and Strong Memorial Hospital throughout his career and was honored in 1999 with the establishment of the Ralph W. Prince Chair in Internal Medicine. Funded by a generous gift from the estate of Dr. Prince's friend and patient, Mary Whipple Clark, it was created to promote the practice and teaching of exemplary medical care by supporting the efforts of an outstanding physician-educator in primary care medicine.

Paul Levy, M.D., who serves as vice chair of the Department of Medicine, currently holds the Prince Chair. "Dr. Prince was one of Rochester's finest," Levy said. "He was an outstanding internist who truly cared about his patients and bettered our community. Personally, I feel very privileged to have known him over the years."

Dr. Prince enjoyed a long and distinguished medical career. Following an internship in pathology at Strong, he served in the U.S. Army as commanding officer of a general medical laboratory in Kyoto, Japan. After the war, he was named the Harvey Cushing Fellow in Surgery at Harvard's Peter Bent Brigham Hospital. He then changed fields to complete a residency in internal medicine at the Cleveland Clinic.

Dr. Prince returned to Rochester to establish a private practice and was appointed a clinical assistant professor at the University in 1951. Beloved by his patients, Dr. Prince practiced until 1987, when he asked the dean of the School of Medicine and Dentistry to recommend an internal medicine resident to whom he could entrust his practice.

Robert Kerper, M.D., said it was a privilege to be chosen to assume the care of Dr. Prince's patients. "Ralph cared so much for his patients and wanted to

entrust his practice and the continuity of his patients' care to a University of Rochester-trained physician who would continue to serve his patients as he did," said Kerper. "He was the consummate gentleman and internist — the ultimate professional — who will be missed by many people."

A long-time supporter and volunteer at Planned Parenthood of Rochester, Dr. Prince served as acting medical director and worked in its clinic. In his later years, Dr. Prince became a member of Christ Church, Pittsford, at which he and Jane Steinhausen celebrated a service of commitment.

Dr. Prince was predeceased by his wife, Marcelle Sybil Mason. He also was predeceased by a brother, Charlton Prince, and a daughter, Brenda Patton.

In addition to Ms. Steinhausen, Dr. Prince is survived by a sister, Nancy Dean of Rochester, and a brother, George Prince of Weston, Mass., a daughter, Lorraine Harper of Allentown, Pa., a son, Craig Prince of Honeoye Falls, N.Y. five grandchildren and two great-grandchildren.

Donations may be made to Planned Parenthood, 470 W. Main St., Rochester, NY 14608, Christ Episcopal Church, 36 South Main St., Pittsford, NY 14534, or to the charity of your choice.

Samuel W. Hunter, M.D.

Samuel W. Hunter (M'46), a heart surgeon who made significant contributions to the development of the pacemaker, died Oct. 22. Hunter, of Mendota Heights, Minn., was 86.

A native of Belfast, Ireland, who grew up on Staten Island, Hunter spent most of his medical career in Minnesota.

In 1957, Earl Bakken, co-founder of medical technology company Medtronic, and C. Walton Lillehei, M.D., Ph.D., of the University of Minnesota developed the first battery-powered external pacemaker. Hunter worked with Medtronic engineer Norman Roth to devise a component that allowed a pacemaker to be attached for years to a patient's heart. The early recipients

of Medtronic's were pediatric patients, but Hunter's development opened the technology to adults.

"Dr. Sam Hunter — he ought to be given a lot of credit," Bakken told the *St. Paul Pioneer Press* in a 2007 interview. "He started this long-term pacing."

In an interview with the *Pioneer Press* in 2007, Dr. Hunter told how what came to be known as the Hunter-Roth electrode was implanted in a 72-year-old patient at Bethesda Hospital in St. Paul patient in a last-ditch attempt to save a life.

The patient had a heart rhythm problem that could kill him. Doctors decided a trial of the pacemaker was the patient's only chance. When Dr. Hunter first attached the heart device and turned it on, it didn't work. Dr. Hunter then increased the power.

"The heart started with a gallop, and it just kept going like a washing machine — vroom, vroom, vroom," Dr. Hunter said in the interview. "Immediately, his heart and all his tissues in the chest changed from a slate gray-blue color, a sure sign of death, to a bright red, because blood was circulating."

Then the patient suddenly roared and woke up.

"We hadn't given him an anesthesia, because he had been essentially dead and we didn't think about it. We were working as fast as we could," Dr. Hunter said. He told the anesthesiologist to put him to sleep.

"And suddenly we realized: Yes, a big human heart ... can be driven with an electrical current," he said.

The patient lived another seven years. An exhibit in Bethesda Hospital commemorates the surgery.

Dr. Hunter was an accomplished athlete. He briefly played professional basketball with the Rochester Royals during medical school, until the medical school provided a scholarship. He continued his love of sport throughout his life, playing golf and skiing. He was a trustee of several arts and professional organizations.

Dr. Hunter and his wife of 64 years, Thelma Emile Hunter, had six sons, four of whom became doctors. One son died at age 32 in a climbing accident. In addition to his wife and five sons, Hunter is survived by nine grandchildren. Contributions can be made in his memory to the Medical Student

Scholarship Fund — Samuel Hunter, M.D., Minnesota Medical Foundation, McNamara Alumni Center, 200 Oak St. S.E., Suite 300, Minneapolis, MN 55455, or to Westminster Presbyterian Church, 1200 Marquette Ave., Minn.

J. Ward Kennedy, M.D.

J. Ward Kennedy, (M '59), professor emeritus of medicine at the University of Washington, died June 8 of lung cancer. He was 74.

Dr. Kennedy pioneered the study of heart function and trained many cardiologists. Working with colleague Harold Dodge, M.D., in the 1960s and 1970s, he helped develop quantitative measures of heart valves and function. By injecting radiopaque dyes directly into the pumping heart chambers, they were able to assess heart function directly. Dr. Kennedy also studied the safety of sexual activity among patients with cardiac disease, the comparison of surgery to medical therapy for coronary artery disease, and the testing of blood-clot-busting thrombolytic drugs in treating heart attack.

He served in many leadership positions at the University of Washington and in the field of cardiology, including as president of the American College of Cardiology (ACC).

Dr. Kennedy was raised in Amherst, Mass., where his father was professor of philosophy at Amherst College, and graduated from Bowdoin College in 1955. He completed an internship and residency in medicine and a fellowship in cardiology at the University of Washington, before serving as a Peace Corps physician in India in 1962–1963.

His entire academic career was spent as a University of Washington faculty member. He served as the chief of cardiology at the Seattle Veterans Hospital from 1967 to 1982 and was chair of the University of Washington division of cardiology from 1982 to 1997.

Dr. Kennedy played in several bands, including a physician jazz band called Ain't No Heaven Seven.

“Ward Kennedy was a very special

person and a mentor to me and many others,” said ACC President W. Douglas Weaver, M.D. “He was an innovative thinker, an inspiration to young faculty and selfless when it came to helping others. For those of us who were privileged to know and work with him, we will never forget him or the sound of his trombone welcoming new fellows at the convocation receptions.”

Dr. Kennedy is survived by his wife, Kathryn Davis Kennedy; sister, Margaret Kennedy Gogerty; and three children, three stepchildren and eight grandchildren.

An endowed professorship has been established to honor Dr. Kennedy. The family asked that memorial contributions be made to the University of Washington Foundation for the J. Ward Kennedy Chair, Box 358045, Seattle, Wash. 98195, or to the Union Gospel Mission, 3800 S. Othello Street., Seattle, Wash. 98118.

J. Lowell Orbison, M.D.

J. Lowell Orbison, M.D., former dean of the University of Rochester School of Medicine and Dentistry and former director of the University's Medical Center, died June 10 at Nottingham Village, Northumberland, Pa. He was 93.

Dr. Orbison, the medical school's third dean, was appointed in 1967 and served as dean and director until his retirement in 1979. He led the School of Medicine and Dentistry and the Medical Center at a time of significant change. The number of medical school students in a class grew from 74 to 96 as the construction of an education wing was completed. Research facilities and programs for independent study were expanded.

During his tenure, the Medical Center developed its initial cancer center, expanded the psychiatric wing and completed construction of a new Strong Memorial Hospital, said Bradford C. Berk, M.D., Ph.D., chief executive officer of the Medical Center.

“Dr. Orbison served the School of Medicine and Rochester well in a challenging time,” Berk said. “He played a



major role in long-range capital planning and led the expansion of the medical school and the hospital while maintaining the quality and the standards the students and the community deserve. We are grateful for what he accomplished, and extend our sympathies to his family.”

Dr. Orbison came to Rochester in 1955 after serving on the faculty for eight years of what was then called Western Reserve University School of Medicine in Cleveland. He had a major role in the development of a new medical curriculum there. In Rochester, he was appointed the first George Hoyt Whipple Professor of Pathology, succeeding the legendary founder of the School of Medicine and Dentistry as chairman of the department.

“From his days as a faculty member, chair of pathology and as dean, Dr. Orbison is remembered as an inspiring mentor by his students for his scientific insight, his support and his high ideals,” said David S. Guzick, dean of the School of Medicine and Dentistry. “His presided over the School at a time of rapid scientific progress as well as growth.”

Dr. Orbison, a native of Bronson, Kan., graduated from Ottawa University in Kansas, earned a master's degree in chemistry at Michigan State University, and, in 1944, received his medical degree from Northwestern University in Chicago.

He served in the U.S. Army Medical Corps from 1945 to 1947.

In research, Dr. Orbison focused on blood pressure, vascular disease and the composition of connective tissue. He served as president of the International Academy of Pathology and also secretary-treasurer and then president of the American Association of Pathologists and Bacteriologists.

“He was the best Socratic teacher that I have ever known,” said Edward D. Miller, M.D., a 1968 graduate of the School of Medicine and Dentistry who is now dean and chief executive officer of Johns Hopkins Medicine. “He would do a pathophysiology lecture and use the Socratic Method. Every student loved it because he taught you in such a way that treated you with respect even though you might not know the answer or explain the pathophysiology. He was very soft-spoken but was strong in voice and character. He exuded the very best; anyone would like to emulate him.”

When he retired, Dr. Orbison and his wife moved to Asheville, N.C., where he served on the executive committee of the board of directors of the North Carolina Division of the American Cancer Society and the board of directors of the University of North Carolina — Asheville Botanical Gardens. He and his wife moved to Northumberland in 2004. Dr. Orbison was an avid botanist, naturalist and world traveler. At the School of Medicine and Dentistry, he also was known for his fine tenor voice.

His survivors include: his wife, Olga; a daughter, Margaret Graham, and her husband, Joseph Graham, of Dansville, N.Y.; a son, James Orbison, of Lewisburg, Pa.; and three grandsons. Contributions in his memory may be made to The Botanical Gardens at Asheville, 151 W.T. Weaver Road, Asheville, N.C. 28804.

IN MEMORIAM

Lewis B. Anderson (MD '51)
 Howard S. Axelrod (BA '44, MA '49, MD '58, R '62)
 Burton Leonard Berson (MD '59)
 Ellen C. Binckley (MD '44)
 Robert V. Blackmore (PHD '63)
 Ethel M. Bonn (R '53)
 R. Scott Borrus (FLW '85)
 Francis Browning (R '52)
 Daniel B. Carroll (MD '48, R '61)
 Henry T. Clark (MD '44)
 Louis C. Clarke (MD '52)
 Molly Papazian Coulter (MD '48)
 Harry E. Dascomb (MD '43)
 D. Joseph Demis (PHD '53)
 John E. Edwards (MD '44)
 Robert F. Ehinger (MD '47)
 Gertrude Falk (PhD '52)
 Myron Buckley Franks (MD '40, R '41)
 Herbert C. Getman (MD '56)
 Marvin Norman Goldstein (R '68)
 Norman Gong-Guy (MS '84)
 Barry Anthony Gray (MD '64)
 Robert Hiram Greenlaw (MD '52, FLW '57, R '58)
 Crystie C. Halsted (MD '62)
 David R. Hawkins (MD '46)
 Hugh Hayward (MD '55)
 Robert Albert Henry (MD '52)
 Maurice L. Kelley, Jr. (MD '49)
 Jesse Ward Kennedy (MD '59)
 William G. Kenney (R '60)
 Theodore I. Koulourides (MS '58, PDC '58)
 Kenneth W. Lajewski (R '77)
 Thomas M. Laz (MS '83, PHD '88)
 Howard Lehman (MD '44)
 Milton N. Luria (FLW '58, R '58)
 George Richard McGovern (R '60)
 Edward B. McKenzie (MD '51)
 Harold A. Neufeld (PHD '53)
 J. Lowell Orbison (HNR '99)
 Salvador P. Perez (BS '46, R '74)
 Ralph W. Prince (MD '43)
 Gordon V. Reid (MD '64)
 Clifford C. Roosa (MD '49)
 Richard J. Sarkis (BA '54, MD '58)
 John L. Shaw (MD '53)
 Frederick Sherwood (BA '38, MD '41)
 James N. Shively (MS '56, R '81)
 F. Miles Skultety (BA '44, MD '46)
 Arthur M. Smith (R '70)
 John Oscar Strom (MD '51)
 Virginia Till (MD '49)
 Jean Watkeys (B '32, MD '36)
 William T. West (PHD '56)
 Jean Gertrude White (BA '49, MD '53)

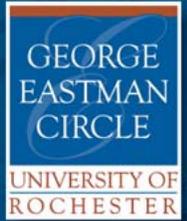


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